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1 DOCUMENT-LEVEL TEMPLATES

Table 1: Required and Optional Sections for Each Document Type

Document Type	Required Sections	Optional Sections
Outpatient Procedure Component Denominator for Procedure Report (V2) urn:hl7ii:2.16.840.1.113883.10.20.5.56:2022-04-01	Procedure Details Section in an OPC Denominator for Procedure Infection Risk Factors Section in an OPC Denominator for Procedure	NHSN Comment Section
Antimicrobial Resistance Option (ARO) Summary Report (V3) urn:hl7ii:2.16.840.1.113883.10.20.5.46:2019-04-01	Summary Data Section (ARO) (V3)	Report No Events Section NHSN Comment Section
Antimicrobial Use (AUP) Summary Report (V2) urn:hl7ii:2.16.840.1.113883.10.20.5.44:2015-04-01	Summary Data Section (AUP) (V2)	N/A
HAI AUR Antimicrobial Resistance Option (ARO) Report (V6) urn:hl7ii:2.16.840.1.113883.10.20.5.31:2022-04-01	Findings Section in an ARO Report (V4)	N/A
HAI Bloodstream Infection Report (BSI) (V5) urn:hl7ii:2.16.840.1.113883.10.20.5.32:2022-04-01	Infection Risk Factors Section in a BSI Report (V3) Infection Details Section in a BSI Report Findings Section in an Infection-Type Report COVID-19 Section (V2)	NHSN Comment Section
HAI Central-Line Insertion Practice Numerator Report (V3) urn:hl7ii:2.16.840.1.113883.10.20.5.36:2022-04-01	Infection Risk Factors Section in a CLIP Report (V2) Procedure Details Section in a CLIP Report	N/A
HAI Evidence of Infection (Dialysis) Report (V7) urn:hl7ii:2.16.840.1.113883.10.20.5.37:2022-04-01	Risk Factors Section in an Evidence of Infection (Dialysis) Report (V3) Details Section in an Evidence of Infection (Dialysis) Report (V6)	Findings Section in an Infection-Type Report
HAI Laboratory-Identified	Findings Section in a LIO	N/A

Document Type	Required Sections	Optional Sections
Organism (LIO) Report (V3) urn:hl7ii:2.16.840.1.113883.10.20.5.38:2022-04-01	Report (V2) Encounters Section in a LIO Report (V2)	
HAI Population Summary Report Generic Constraints urn:oid:2.16.840.1.113883.10.20.5.4.28	N/A	N/A
HAI Procedure Denominator Report (V3) urn:hl7ii:2.16.840.1.113883.10.20.5.35.2:2022-04-01	Procedure Details Section in a Procedure Report (V2) Infection Risk Factors Section in a Procedure Report	N/A
HAI Single-Person Report Generic Constraints (V2) urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01	NHSN Social History Section	N/A
HAI Surgical Site Infection Report (SSI) (V4) urn:hl7ii:2.16.840.1.113883.10.20.5.33.2:2022-04-01	Infection Details Section in an SSI Report (V2) Findings Section in an Infection-Type Report COVID-19 Section (V2)	N/A
HAI Urinary Tract Infection Numerator Report (UTI) (V3) urn:hl7ii:2.16.840.1.113883.10.20.5.34:2022-04-01	Infection Risk Factors Section in a UTI Report Infection Details Section in a UTI Report Findings Section in an Infection-Type Report COVID-19 Section (V2)	N/A
Healthcare Associated Infection Report urn:oid:2.16.840.1.113883.10.20.5.4.25	N/A	N/A
Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report urn:hl7ii:2.16.840.1.113883.10.20.5.50:2017-04-01	Summary Data Section (HP-FLU)	NHSN Comment Section
Hemovigilance (HV) Summary Report (V2) urn:hl7ii:2.16.840.1.113883.10.20.5.49:2016-08-01	Summary Data Section (HV) (V2)	N/A
Intensive Care Unit (ICU) Summary Report (V3) urn:hl7ii:2.16.840.1.113883.10.20.5.40:2018-04-01	Summary Data Section	Report No Events Section

Document Type	Required Sections	Optional Sections
Late Onset Sepsis/Meningitis Denominator (LOS/Men Denom) Report (V2) urn:hl7ii:2.16.840.1.113883.10.20.5.58:2022-04-01	Risk Factors Section in a LOS/Men Denominator Encounters Section in a LOS/Men Denominator	NHSN Comment Section
Late Onset Sepsis/Meningitis Event (LOS) Report (V3) urn:hl7ii:2.16.840.1.113883.10.20.5.53:2022-04-01	Infection Details in Late Onset Sepsis Report Risk Factors Section in a LOS/Men Event (V2) NHSN Comment Section	Findings Section in an Infection-Type Report
Neonatal Intensive Care Unit (NICU) Summary Report (V3) urn:hl7ii:2.16.840.1.113883.10.20.5.41:2018-04-01	Summary Data Section (NICU) (V2)	Report No Events Section
Outpatient Procedure Component Denominator for Same Day Outcome Measures Report urn:hl7ii:2.16.840.1.113883.10.20.5.55:2019-04-01	Summary Data Section	Report No Events Section NHSN Comment Section
Outpatient Procedure Component Same Day Outcome Measures Event Report (V2) urn:hl7ii:2.16.840.1.113883.10.20.5.54:2022-04-01	Same Day Outcome Measures Event Details Section	NHSN Comment Section
Outpatient Procedure Surgical Site Infection (SSI) Event Report (V2) urn:hl7ii:2.16.840.1.113883.10.20.5.57:2022-04-01	Infection Details Section in an OPC SSI Report Findings Section in an OPC SSI Report	NHSN Comment Section
Prevention Process and Outcome Measures (POM) Summary Report (V4) urn:hl7ii:2.16.840.1.113883.10.20.5.43:2022-04-01	Summary Data Section (POM) (V3)	Report No Events Section
Specialty Care Area (SCA) Summary Report (V3) urn:hl7ii:2.16.840.1.113883.10.20.5.42:2018-04-01	Summary Data Section	Report No Events Section
Vascular Access Type Report (VAT) Summary Report (V3) urn:hl7ii:2.16.840.1.113883.10	Summary Data Section (VAT)	Report No Events Section NHSN Comment Section

Document Type	Required Sections	Optional Sections
.20.5.45:2018-04-01		
Ventilator Associated Event (VAE) Report (V3) urn:hl7ii:2.16.840.1.113883.10 .20.5.51:2022-04-01	Infection Details Section in a VAE Report Findings Section in an Infection-Type Report Risk Factors Section in a VAE Report COVID-19 Section (V2)	NHSN Comment Section

1.1 Healthcare Associated Infection Report

[ClinicalDocument: identifier urn:oid:2.16.840.1.113883.10.20.5.4.25 (open)]

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Release 1 - US Realm

This template records constraints on all NHSN Healthcare Associated Infection Reports (generic constraints). Further constraints are found in the specialization templates for single-patient and population summary reports, and in the templates for specific report types.

Annotations before some constraints provide additional information for the implementer.

Elements required by CDA that are not further constrained in this guide are not presented as HAI-specific constraints.

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Table 2: Healthcare Associated Infection Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.25)					
realmCode	1..1	SHALL		86-18431	
@code	1..1	SHALL	CD	86-18432	US
typeId	1..1	SHALL		86-18463	
@root	1..1	SHALL		86-18464	2.16.840.1.113883.1.3
@extension	1..1	SHALL		86-18465	POCD_HD000040
templateId	1..1	SHALL		86-18460	
@root	1..1	SHALL		86-18461	2.16.840.1.113883.10.20.5.4.25
@extension	0..0	SHALL NOT		86-18462	
id	1..1	SHALL		86-18466	
@root	0..1	MAY		86-18467	
@extension	0..1	MAY		86-18468	
code	1..1	SHALL		86-18433	
@code	1..1	SHALL		86-18434	51897-7
@codeSystem	1..1	SHALL		86-27413	urn:oid:2.16.840.1.113883.6.1 (LOINC)
title	1..1	SHALL		86-18435	
effectiveTime	1..1	SHALL		86-18436	
confidentialityCode	1..1	SHALL		86-18437	
@code	1..1	SHALL	CD	86-18438	urn:oid:2.16.840.1.113883.5.25 (HL7Confidentiality) = N
languageCode	1..1	SHALL		86-18439	
@code	1..1	SHALL		86-18440	en-US
setId	1..1	SHALL		86-18441	
versionNumber	1..1	SHALL		86-18442	
recordTarget	1..*	SHALL		86-18472	
author	1..*	SHALL		86-18473	
custodian	1..1	SHALL		86-18443	
assignedCustodian	1..1	SHALL		86-18444	
representedCustodianOrganization	1..1	SHALL		86-18445	
id	1..1	SHALL		86-18446	
@root	1..1	SHALL		86-18447	2.16.840.1.114222.4.3.2.11
legalAuthenticator	0..1	SHOULD		86-18474	
relatedDocument	0..*	MAY		86-18469	
@typeCode	1..1	SHALL		86-18470	urn:oid:2.16.840.1.113883.5.1

XPath	Card.	Verb	Data Type	CONF#	Value
					002 (HL7ActRelationshipType) = RPLC
parentDocument	1..1	SHALL		86-28401	
id	1..*	SHALL		86-28402	
component	1..1	SHALL		86-18448	
structuredBody	1..1	SHALL		86-18449	
component	1..*	SHALL		86-18475	

1. **SHALL** contain exactly one [1..1] **realmCode** (CONF:86-18431).
 - a. This realmCode **SHALL** contain exactly one [1..1] **@code="US"** (CONF:86-18432).
2. **SHALL** contain exactly one [1..1] **typeId** (CONF:86-18463).
 - a. This typeId **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.1.3"** (CONF:86-18464).
 - b. This typeId **SHALL** contain exactly one [1..1] **@extension="POCD_HD000040"** (CONF:86-18465).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-18460) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.4.25"** (CONF:86-18461).
 - b. **SHALL NOT** contain [0..0] **@extension** (CONF:86-18462).

CDA requires a ClinicalDocument/id element representing a unique identifier for the document. The id may be represented by either @root or @root plus @extension, so long as the resulting id is globally unique.

CDA provides id, setId, versionNumber, and relatedDocument elements to support succession management (document versioning).

The id element identifies the CDA document instance (the electronic file). It is independent of the setId and versionNumber elements.

4. **SHALL** contain exactly one [1..1] **id** (CONF:86-18466).
 - a. This id **MAY** contain zero or one [0..1] **@root** (CONF:86-18467).
 - b. This id **MAY** contain zero or one [0..1] **@extension** (CONF:86-18468).
5. **SHALL** contain exactly one [1..1] **code** (CONF:86-18433).
 - a. This code **SHALL** contain exactly one [1..1] **@code="51897-7"** Healthcare Associated Infection Report (CONF:86-18434).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-27413).

The preferred title content for each report type is given with the constraints for each report type.

6. **SHALL** contain exactly one [1..1] **title** (CONF:86-18435).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-18436).

CDA requires a confidentiality code that indicates the sensitivity of the document. All HAI submissions carry the same value of "normal". Note that this designation does not affect local policy on safeguarding confidentiality of patient-identifiable personal health information.

8. **SHALL** contain exactly one [1..1] **confidentialityCode** (CONF:86-18437).
 - a. This confidentialityCode **SHALL** contain exactly one [1..1] @code="N" Normal (CodeSystem: HL7Confidentiality urn:oid:2.16.840.1.113883.5.25 **STATIC**) (CONF:86-18438).
9. **SHALL** contain exactly one [1..1] **languageCode** (CONF:86-18439).
 - a. This languageCode **SHALL** contain exactly one [1..1] @code="en-US" (CONF:86-18440).
10. **SHALL** contain exactly one [1..1] **setId** (CONF:86-18441).
11. **SHALL** contain exactly one [1..1] **versionNumber** (CONF:86-18442).

CDA requires a recordTarget element that must contain a patientRole element. This is represented differently in single-person and population summary reports. See the templates for generic single-person and population summary reports for details of how to represent the patient or group subject.

12. **SHALL** contain at least one [1..*] **recordTarget** (CONF:86-18472).

In a single-person report, the author may be software or may be a person in the role of infection control professional (ICP). In a population summary report, the author will be the software forming the message. The effect of the CDA Release 2.0 requirements is:

An author element shall be present. The author element shall contain a time element that represents the time of authoring of the information, and an assignedAuthor element that represents the author of the information. The assignedAuthor element shall contain an id element.

When the report author is vendor software, it can record the Synthetic Data Set (SDS) Validation Id, or, if not participating in SDS, a software installation id. It can also record the vendor software name, the version and release of the software, and the vendor name. For further guidance, see the example at the end of this template.

13. **SHALL** contain at least one [1..*] **author** (CONF:86-18473).

CDA requires that the document custodian be recorded. The NHSN is the custodian of NHSN HAI Reports.

14. **SHALL** contain exactly one [1..1] **custodian** (CONF:86-18443).
 - a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:86-18444).
 - i. This assignedCustodian **SHALL** contain exactly one [1..1] **representedCustodianOrganization** (CONF:86-18445).
 1. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **id** (CONF:86-18446).
 - a. This id **SHALL** contain exactly one [1..1] @root="2.16.840.1.114222.4.3.2.11" (CONF:86-18447).

CDA requires that a legalAuthenticator element be present if the document has been legally authenticated. Local policy may delegate the function of legal authentication to a device or system that generates the CDA document. In these cases, the legal authenticator must still be

a person accepting responsibility for the document content, not the device or system. The effect of the CDA Release 2.0 requirements is:

The legalAuthenticator element shall contain a time element that represents the time of authentication of the document, a signatureCode element where the value of @code is S, and an assignedEntity element that represents the authenticator of the document. The assignedEntity element shall contain an id element.

HAI Reports are not signed reports and do not require a legalAuthenticator.

15. **SHOULD** contain zero or one [0..1] **legalAuthenticator** (CONF:86-18474).

16. **MAY** contain zero or more [0..*] **relatedDocument** (CONF:86-18469).

- a. The relatedDocument, if present, **SHALL** contain exactly one [1..1] **@typeCode="RPLC"** replace (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-18470).
- b. The relatedDocument, if present, **SHALL** contain exactly one [1..1] **parentDocument** (CONF:86-28401).
 - i. This parentDocument **SHALL** contain at least one [1..*] **id** (CONF:86-28402).
 1. The value of id **SHALL** be populated with the ClinicalDocument/id of the document being replaced (CONF:86-28403).
- c. If versionNumber/@value is greater than 1, a relatedDocument element **SHALL** be present (CONF:86-18471).

17. **SHALL** contain exactly one [1..1] **component** (CONF:86-18448).

- a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:86-18449).
 - i. This structuredBody **SHALL** contain at least one [1..*] **component** (CONF:86-18475).
 - ii. The structuredBody element **SHALL** contain a component element for each section required by the particular report type. Additional sections may be present, but their content will not be processed by NHSN (CONF:86-18450).

Figure 1: Software Author Example

```
<author>
  <!-- The time the document was authored -->
  <time value="20080701" />
  <assignedAuthor>
    <!-- root=vendor OID; extension may be the Synthetic Data Set (SDS)
    Validation ID assigned by NHSN AUR subject matter expert (SME);
    if not participating in SDS, vendor may use a software ID -->
    <id root="2.111.111.111.10008" extension="SDS validation ID" />
    <assignedAuthoringDevice>
      <!-- Optional-Vendor software name -->
      <manufacturerModelName>vendor software name</manufacturerModelName>
      <!-- Optional-version and release of the software-->
      <softwareName>vendor software version</softwareName>
    </assignedAuthoringDevice>
    <!-- Optional-Vendor Name -->
    <representedOrganization>
      <name>vendor name</name>
    </representedOrganization>
  </assignedAuthor>
</author>
```

1.1.1.1 HAI Population Summary Report Generic Constraints

[ClinicalDocument: identifier urn:oid:2.16.840.1.113883.10.20.5.4.28 (open)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 1 - US Realm

A Population Summary Report records summary data for a group, such as the patients in a particular ward, during a specified period. This report type differs in several ways from the HAI single-person reports.

These report types are used to record many different data sets. The basic structure of the body templates for this report type are:

- A Summary Data Section:

- o A Summary Encounter records the location to which the data pertain.

- o Various Summary Data Observations record data as code-value pairs.

A population-summary report must conform to the Healthcare Associated Infection Report above. In addition:

- The patient identifier (required by CDA) is recorded with a nullFlavor.

- A participant element records that the subject of the report is a group.

- A second participant element records the reporting facility. (The in-facility unit identifier and type to which the data pertain are recorded in the Summary Encounter Section of the document body.)

- In the documentationOf/serviceEvent element,

- o The effectiveTime element records the first and last days of the period reported.

- o The code element records the type of summary data reported. This corresponds to the NHSN form type.

The data set being reported is identified by a code in the CDA header; for example, the cdcNHSN concept “1887-9” identifies the data set “Summary data reporting Antimicrobial Usage”. The codes for

these data sets are listed in value set NHSNPopulationSummaryReportTypeCode (2.16.840.1.114222.4.11.3595).

Note that a few data sets are stratified. For example, the NICU (Neonatal Intensive Care Unit) data set is stratified by birthweight; the Antimicrobial Usage data set is stratified by antimicrobial and by route of administration. The stratifying factor is recorded as a CDA element in the Summary Encounter or Summary Data Observation. For example, in an Antimicrobial Use report, the antimicrobial information is represented as a participant. The requirements for each data set are provided in the relevant Summary Data Observation.

Most of the concepts reported are defined for the NHSN protocol and are not expected to see widespread external use: the codes for these concepts come from the NHSN code system.

Key encounter data:

- Facility identifier is required. This represents the reporting facility; the location to which the data pertain, such as a unit, is recorded with the data in the Summary Encounter.
- A code identifying the data set is required.
- The period reported is required.

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Table 3: HAI Population Summary Report Generic Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28)					
templateId	1..1	SHALL		86-22431	
@root	1..1	SHALL		86-22432	2.16.840.1.113883.10.20.5.4.28
recordTarget	1..1	SHALL		86-22433	
patientRole	1..1	SHALL		86-22434	
id	1..1	SHALL		86-22435	
@nullFlavor	1..1	SHALL		86-22436	NA
participant	1..1	SHALL		86-22437	
@typeCode	1..1	SHALL		86-22438	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = SBJ
@contextControlCode	1..1	SHALL	CS	86-22439	urn:oid:2.16.840.1.113883.5.1057 (HL7ContextControl) = OP
associatedEntity	1..1	SHALL		86-22440	
@classCode	1..1	SHALL		86-22441	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PRS
code	1..1	SHALL		86-22442	
@code	1..1	SHALL		86-22443	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 389109008
participant	1..1	SHALL		86-22444	
@typeCode	1..1	SHALL		86-22445	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
associatedEntity	1..1	SHALL		86-22447	
@classCode	1..1	SHALL		86-22448	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = SDLOC
id	1..1	SHALL		86-22449	
@root	1..1	SHALL		86-22450	
documentationOf	1..1	SHALL		86-22451	
serviceEvent	1..1	SHALL		86-22452	
@classCode	1..1	SHALL		86-22453	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CASE
code	1..1	SHALL		86-22454	urn:oid:2.16.840.1.114222.4.11.3595 (NHSNPopulationSummaryReportTypeCode)
effectiveTime	1..1	SHALL		86-22456	
low	1..1	SHALL		86-22457	
high	1..1	SHALL		86-22458	

1. Conforms to [Healthcare Associated Infection Report](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.25).
 2. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22431) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.4.28" (CONF:86-22432).
 3. **SHALL** contain exactly one [1..1] **recordTarget** (CONF:86-22433).
 - a. This recordTarget **SHALL** contain exactly one [1..1] **patientRole** (CONF:86-22434).
 - i. This patientRole **SHALL** contain exactly one [1..1] **id** (CONF:86-22435).
 1. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" not applicable (CONF:86-22436).
 4. **SHALL** contain exactly one [1..1] **participant** (CONF:86-22437) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SBJ" Subject (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:86-22438).
 - b. **SHALL** contain exactly one [1..1] **@contextControlCode**="OP" (CodeSystem: HL7ContextControl urn:oid:2.16.840.1.113883.5.1057 **STATIC**) (CONF:86-22439).
 - c. **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:86-22440).
 - i. This associatedEntity **SHALL** contain exactly one [1..1] **@classCode**="PRS" Person (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:86-22441).
 - ii. This associatedEntity **SHALL** contain exactly one [1..1] **code** (CONF:86-22442).
 1. This code **SHALL** contain exactly one [1..1] **@code**="389109008" Group (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:86-22443).
 5. **SHALL** contain exactly one [1..1] **participant** (CONF:86-22444) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:86-22445).
 - b. **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:86-22447).
 - i. This associatedEntity **SHALL** contain exactly one [1..1] **@classCode**="SDLOC" Service delivery location (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:86-22448).
 - ii. This associatedEntity **SHALL** contain exactly one [1..1] **id** (CONF:86-22449).
- The value of @root must be the NHSN assigned Facility OID.
1. This id **SHALL** contain exactly one [1..1] **@root** (CONF:86-22450).
6. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:86-22451).
 - a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:86-22452).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **@classCode**="CASE" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22453).

- ii. This serviceEvent **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNPopulationSummaryReportTypeCode](#) urn:oid:2.16.840.1.114222.4.11.3595 **DYNAMIC** (CONF:86-22454).
 - iii. This serviceEvent **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-22456).
 - 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:86-22457).
 - 2. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:86-22458).
7. The author **SHALL** represent the software forming the message (CONF:86-22459).

Table 4: NHSNPopulationSummaryReportTypeCode

Value Set: NHSNPopulationSummaryReportTypeCode urn:oid:2.16.840.1.114222.4.11.3595 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the type of population summary report.),(Data Element Scope: A code describing the population category associated with the data being reported.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 9/16/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3595/expansion			
Code	Code System	Code System OID	Print Name
1657-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Summary data reporting outpatient procedure component events at a facility
1879-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Summary data reporting catheter and ventilator use in a ICU/other
1880-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Summary data reporting catheter and ventilator use in a SCA
1881-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Summary data reporting catheter and ventilator use in a NICU
1884-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Summary data reporting active surveillance testing (AST)
1887-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Summary data reporting antimicrobial usage
1891-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Summary data reporting MDRO and CDI LabID Event for LTCF
2316-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Summary data reporting vascular access types for chronic hemodialysis patients
2410-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Summary data reporting antimicrobial resistance patterns at a facility
2543-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Hemovigilance module - monthly reporting denominator
...			

1.1.2 Antimicrobial Resistance Option (ARO) Summary Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.46:2019-04-01 (closed)]

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Release 3, STU 4 - US Realm

Table 5: Antimicrobial Resistance Option (ARO) Summary Report (V3) Contexts

Contained By:	Contains:
	NHSN Comment Section (optional) Report No Events Section (optional) Summary Data Section (ARO) (V3) (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

The preferred title for the CDA document is “Denominator for Antimicrobial Resistance Option (ARO)”. The tables below show the data required at the time of publication.

The ARO Report extends the simple pattern for Summary Encounter. Required data elements are recorded as entries within the Summary Encounter, with a specified location based on the protocol.

Table 6: Antimicrobial Resistance Option (ARO) Summary Report (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.46:2019-04-01)					
templateId	1..1	SHALL		4395-28301	
@root	1..1	SHALL		4395-28302	2.16.840.1.113883.10.20.5.7.3.4
templateId	1..1	SHALL		4395-22969	
@root	1..1	SHALL		4395-2970	2.16.840.1.113883.10.20.5.46
@extension	1..1	SHALL		4395-30544	2019-04-01
title	1..1	SHALL		4395-22971	
documentationOf	1..1	SHALL		4395-22972	
serviceEvent	1..1	SHALL		4395-22973	
code	1..1	SHALL		4395-22974	
@code	1..1	SHALL		4395-22975	2410-9
@codeSystem	1..1	SHALL		4395-22976	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
component	1..1	SHALL		4395-22977	
structuredBody	1..1	SHALL		4395-22978	
component	1..1	SHALL		4395-22979	
section	1..1	SHALL		4395-22980	Summary Data Section (ARO) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.52:2019-04-01)
component	0..1	MAY		4395-30545	
section	1..1	SHALL		4395-30546	Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01)
component	0..1	MAY		4395-30547	
section	1..1	SHALL		4395-30548	NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01)

XPath	Card.	Verb	Data Type	CONF#	Value
					0.20.5.5.61:2017-04-01

1. Conforms to [HAI Population Summary Report Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-28301) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.3.4" (CONF:4395-28302).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-22969) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.46" (CONF:4395-2970).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30544).

Preferred document title: "Denominator for Antimicrobial Resistance Option (ARO)".

4. **SHALL** contain exactly one [1..1] **title** (CONF:4395-22971).
5. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:4395-22972).
 - a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:4395-22973).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **code** (CONF:4395-22974).
 1. This code **SHALL** contain exactly one [1..1] **@code**="2410-9" Summary data reporting antimicrobial resistance patterns at a facility (CONF:4395-22975).
 2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:4395-22976).
6. **SHALL** contain exactly one [1..1] **component** (CONF:4395-22977).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4395-22978).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4395-22979) such that it
 1. **SHALL** contain exactly one [1..1] [Summary Data Section \(ARO\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.52:2019-04-01) (CONF:4395-22980).
 - ii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:4395-30545) such that it
 1. **SHALL** contain exactly one [1..1] [Report No Events Section](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01) (CONF:4395-30546).
 - iii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:4395-30547) such that it

1. **SHALL** contain exactly one [1..1] [NHSN Comment Section](#)
(identifier:
urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01)
(CONF:4395-30548).

1.1.3 Antimicrobial Use (AUP) Summary Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.44:2015-04-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 2 - US Realm

Table 7: Antimicrobial Use (AUP) Summary Report (V2) Contexts

Contained By:	Contains:
	Summary Data Section (AUP) (V2) (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

The required title for the CDA document is the “Antimicrobial Use, Pharmacy Option (AUP) Summary Report”.

NHSN reporting requires:

- Patient presence:
 - o If the reporting location is a single unit such as a ward, Number of Patient-Present Days, or
 - o If the encounter location is facility-wide rather than a single unit, Number of Admissions and Number of Patient-present Days.
- Antimicrobial usage: for each antimicrobial reported,
 - o Number of Therapy Days for the antimicrobial (this is not a simple total of the stratified data; consult the NHSN protocol for the calculation)
 - o Number of Therapy Days for the antimicrobial stratified by route of actual administration (four observations, one for each route)

Table 8: Antimicrobial Use (AUP) Summary Report (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.44:2015-04-01)					
templateId	1..1	SHALL		1181-28303	
@root	1..1	SHALL		1181-28304	2.16.840.1.113883.10.20.5.7.2
templateId	1..1	SHALL		1181-22898	
@root	1..1	SHALL		1181-22899	2.16.840.1.113883.10.20.5.44
@extension	1..1	SHALL		1181-30543	2015-04-01
title	1..1	SHALL		1181-22900	Antimicrobial Use, Pharmacy Option (AUP) Summary Report
documentationOf	1..1	SHALL		1181-22901	
serviceEvent	1..1	SHALL		1181-22902	
code	1..1	SHALL		1181-22903	
@code	1..1	SHALL		1181-22904	1887-9
@codeSystem	1..1	SHALL		1181-22905	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
component	1..1	SHALL		1181-22906	
structuredBody	1..1	SHALL		1181-22907	
component	1..1	SHALL		1181-22908	
section	1..1	SHALL		1181-22909	Summary Data Section (AUP) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.51:2015-04-01)

1. Conforms to [HAI Population Summary Report Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1181-28303) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.2" (CONF:1181-28304).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1181-22898) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.44" (CONF:1181-22899).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-01" (CONF:1181-30543).
- 4. **SHALL** contain exactly one [1..1] **title**="Antimicrobial Use, Pharmacy Option (AUP) Summary Report" (CONF:1181-22900).
- 5. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:1181-22901).
 - a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1181-22902).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **code** (CONF:1181-22903).
 - 1. This code **SHALL** contain exactly one [1..1] **@code**="1887-9" Summary data reporting antimicrobial usage (CONF:1181-22904).
 - 2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1181-22905).
- 6. **SHALL** contain exactly one [1..1] **component** (CONF:1181-22906).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1181-22907).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1181-22908).
 - 1. This component **SHALL** contain exactly one [1..1] [Summary Data Section \(AUP\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.51:2015-04-01) (CONF:1181-22909).

1.1.4 Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.50:2017-04-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 3, STU 2 - US Realm

Table 9: Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report Contexts

Contained By:	Contains:
	Summary Data Section (HP-FLU) (required) NHSN Comment Section (optional)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Preferred document title: “Healthcare Personnel Influenza Vaccination Summary”.

The HP-FLU Summary Report further constrains the location participant to include a location code from the NHSNInfluenzaVaccinationSetting value set.

The HP-FLU Summary Report records the number of healthcare personnel (HCP) in each vaccination category for the influenza season being tracked.

Table 10: Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.50:2017-04-01)					
templateId	1..1	SHALL		3311-1	
@root	1..1	SHALL		3311-10	2.16.840.1.113883.10.20.5.7.3.2
templateId	1..1	SHALL		3311-8	
@root	1..1	SHALL		3311-13	2.16.840.1.113883.10.20.5.50
@extension	1..1	SHALL		3311-14	2017-04-01
title	1..1	SHALL		3311-28468	
participant	1..1	SHALL		3311-28424	
@typeCode	1..1	SHALL		3311-28427	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
associatedEntity	1..1	SHALL		3311-28425	
@classCode	1..1	SHALL		3311-28429	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = SDLOC
id	1..1	SHALL		3311-28426	
@root	0..1	MAY		3311-28430	
code	1..1	SHALL		3311-28431	urn:oid:2.16.840.1.113883.10.20.5.9.7 (NHSNInfluenzaVaccinationSetting)
@nullFlavor	0..1	MAY		3311-28467	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA
documentationOf	1..1	SHALL		3311-2	
serviceEvent	1..1	SHALL		3311-3	
code	1..1	SHALL		3311-4	
@code	1..1	SHALL		3311-11	86558-4
@codeSystem	1..1	SHALL		3311-12	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
effectiveTime	1..1	SHALL		3311-16	
low	1..1	SHALL		3311-28416	
@value	1..1	SHALL		3311-28418	
high	1..1	SHALL		3311-28417	

XPath	Card.	Verb	Data Type	CONF#	Value
@value	1..1	SHALL		3311-28419	
component	1..1	SHALL		3311-5	
structuredBody	1..1	SHALL		3311-6	
component	1..1	SHALL		3311-7	
section	1..1	SHALL		3311-9	Summary Data Section (HP-FLU) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.58:2017-04-01)
component	0..1	MAY		3311-28422	
section	1..1	SHALL		3311-28423	NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01)

1. Conforms to [HAI Population Summary Report Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3311-1) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.3.2" (CONF:3311-10).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3311-8) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.50" (CONF:3311-13).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-04-01" (CONF:3311-14).

Preferred document title: "Healthcare Personnel Influenza Vaccination Summary"

4. **SHALL** contain exactly one [1..1] **title** (CONF:3311-28468).
5. **SHALL** contain exactly one [1..1] **participant** (CONF:3311-28424) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3311-28427).
 - b. **SHALL** contain exactly one [1..1] **associatedEntity** (CONF:3311-28425).
 - i. This associatedEntity **SHALL** contain exactly one [1..1] **@classCode**="SDLOC" Service delivery location (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3311-28429).
 - ii. This associatedEntity **SHALL** contain exactly one [1..1] **id** (CONF:3311-28426).
Note: Facility Id
 1. This id **MAY** contain zero or one [0..1] **@root** (CONF:3311-28430).
 - iii. This associatedEntity **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNInfluenzaVaccinationSetting](#)

urn:oid:2.16.840.1.113883.10.20.5.9.7 **DYNAMIC** (CONF:3311-28431).
Note: Location

1. This code **MAY** contain zero or one [0..1] **@nullFlavor="NA"**
(CodeSystem: HL7NullFlavor
urn:oid:2.16.840.1.113883.5.1008) (CONF:3311-28467).
6. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:3311-2).
 - a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:3311-3).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **code** (CONF:3311-4).
 1. This code **SHALL** contain exactly one [1..1] **@code="86558-4"**
Healthcare Personnel Influenza Vaccination Summary (CONF:3311-11).
 2. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:3311-12).
 - ii. This serviceEvent **SHALL** contain exactly one [1..1] **effectiveTime**
(CONF:3311-16).

Note: Influenza season (e.g. 2016-2017). Both effectiveTime/low/@value and effectiveTime/high/@value must contain a 4-digit year, fewer or more digits will fail Schematron validation.

 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:3311-28416).
 - a. This low **SHALL** contain exactly one [1..1] **@value** (CONF:3311-28418).
 - i. DocumentationOf/serviceEvent/effectiveTime/low/@value **SHALL** contain a 4-digit year (CONF:3311-28420).
 2. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:3311-28417).
 - a. This high **SHALL** contain exactly one [1..1] **@value**
(CONF:3311-28419).
 - i. DocumentationOf/serviceEvent/effectiveTime/high/@value **SHALL** contain a 4-digit year (CONF:3311-28421).
 7. **SHALL** contain exactly one [1..1] **component** (CONF:3311-5).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:3311-6).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component**
(CONF:3311-7) such that it
 1. **SHALL** contain exactly one [1..1] Summary Data Section (HP-FLU)
(identifier:
urn:hl7ii:2.16.840.1.113883.10.20.5.5.58:2017-04-01)
(CONF:3311-9).
 - ii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:3311-28422) such that it
 1. **SHALL** contain exactly one [1..1] NHSN Comment Section
(identifier:

urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01)
(CONF:3311-28423).

Table 11: NHSNInfluenzaVaccinationSetting

Value Set: NHSNInfluenzaVaccinationSetting urn:oid:2.16.840.1.113883.10.20.5.9.7 This value set contains codes describing the location where the influenza vaccination was given. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.7/expansion			
Code	Code System	Code System OID	Print Name
1263-3	HSLOC	urn:oid:2.16.840.1.113883.6.25 9	Non-CMS Hospital Unit(s)
1265-8	HSLOC	urn:oid:2.16.840.1.113883.6.25 9	Inpatient Psychiatric Facility Unit(s)
1264-1	HSLOC	urn:oid:2.16.840.1.113883.6.25 9	Inpatient Rehabilitation Facility Unit(s)

1.1.5 Hemovigilance (HV) Summary Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.49:2016-08-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 3, DSTU 1.1 - US Realm

Table 12: Hemovigilance (HV) Summary Report (V2) Contexts

Contained By:	Contains:
	Summary Data Section (HV) (V2) (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

The required title for the CDA document is the “Hemovigilance Module - Monthly Reporting Denominator”.

The HV Summary Report records monthly summary data for a facility.

Table 13: Hemovigilance (HV) Summary Report (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.49:2016-08-01)					
templateId	1..1	SHALL		3247-30738	
@root	1..1	SHALL		3247-30608	2.16.840.1.113883.10.20.5.7.3.1.1
templateId	1..1	SHALL		3247-30606	
@root	1..1	SHALL		3247-30611	2.16.840.1.113883.10.20.5.49
@extension	1..1	SHALL		3247-30612	2016-08-01
title	1..1	SHALL		3247-30613	
documentationOf	1..1	SHALL		3247-30600	
serviceEvent	1..1	SHALL		3247-30739	
code	1..1	SHALL		3247-30740	
@code	1..1	SHALL		3247-30609	2543-7
@codeSystem	1..1	SHALL		3247-30610	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
component	1..1	SHALL		3247-30741	
structuredBody	1..1	SHALL		3247-30604	
component	1..1	SHALL		3247-30605	
section	1..1	SHALL		3247-30607	Summary Data Section (HV) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.57:2016-08-01)

1. Conforms to [HAI Population Summary Report Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3247-30738) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.3.1.1" (CONF:3247-30608).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3247-30606) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.49" (CONF:3247-30611).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2016-08-01" (CONF:3247-30612).
- Preferred document title: "Hemovigilance Module - Monthly Reporting Denominator"
- 4. **SHALL** contain exactly one [1..1] **title** (CONF:3247-30613).
 - 5. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:3247-30600).
 - a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:3247-30739).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **code** (CONF:3247-30740).
 - 1. This code **SHALL** contain exactly one [1..1] **@code**="2543-7" Hemovigilance Module - Monthly Reporting Denominator (CONF:3247-30609).
 - 2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3247-30610).
 - 6. **SHALL** contain exactly one [1..1] **component** (CONF:3247-30741).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:3247-30604).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3247-30605).
 - 1. This component **SHALL** contain exactly one [1..1] [Summary Data Section \(HV\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.57:2016-08-01) (CONF:3247-30607).

1.1.6 Intensive Care Unit (ICU) Summary Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.40:2018-04-01 (closed)]

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Table 14: Intensive Care Unit (ICU) Summary Report (V3) Contexts

Contained By:	Contains:
	Summary Data Section (required) Report No Events Section (optional)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Preferred document title: “Denominator for Intensive Care Unit (ICU)/Other Locations (not NICU or SCA) Report”.

Table 15: Intensive Care Unit (ICU) Summary Report (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.40:2018-04-01)					
templateId	1..1	SHALL		3357-28321	
@root	1..1	SHALL		3357-28322	2.16.840.1.113883.10.20.5.7.3.3
templateId	1..1	SHALL		3357-22793	
@root	1..1	SHALL		3357-22794	2.16.840.1.113883.10.20.5.40
@extension	1..1	SHALL		3357-30596	2018-04-01
title	1..1	SHALL		3357-30866	
documentationOf	1..1	SHALL		3357-22800	
serviceEvent	1..1	SHALL		3357-22801	
code	1..1	SHALL		3357-22802	
@code	1..1	SHALL		3357-22803	1879-6
@codeSystem	1..1	SHALL		3357-22804	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
component	1..1	SHALL		3357-22795	
structuredBody	1..1	SHALL		3357-22796	
component	1..1	SHALL		3357-22797	
section	1..1	SHALL		3357-22798	Summary Data Section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.47)
component	0..1	MAY		3357-30854	
section	1..1	SHALL		3357-30855	Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01)

1. Conforms to [HAI Population Summary Report Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-28321) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-28322).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-22793) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.40" (CONF:3357-22794).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2018-04-01" (CONF:3357-30596).

Preferred document title: "Denominator for Intensive Care Unit (ICU)/Other Locations (not NICU or SCA) Report".

4. **SHALL** contain exactly one [1..1] **title** (CONF:3357-30866).
5. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:3357-22800).
 - a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:3357-22801).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **code** (CONF:3357-22802).
 1. This code **SHALL** contain exactly one [1..1] **@code**="1879-6" Summary data reporting catheter and ventilator use in an ICU (CONF:3357-22803).
 2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-22804).
6. **SHALL** contain exactly one [1..1] **component** (CONF:3357-22795).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:3357-22796).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3357-22797) such that it
 1. **SHALL** contain exactly one [1..1] Summary Data Section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.47) (CONF:3357-22798).
 - ii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:3357-30854) such that it
 1. **SHALL** contain exactly one [1..1] Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01) (CONF:3357-30855).

1.1.7 Neonatal Intensive Care Unit (NICU) Summary Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.41:2018-04-01 (closed)]

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Release 3, STU 3 - US Realm

Table 16: Neonatal Intensive Care Unit (NICU) Summary Report (V3) Contexts

Contained By:	Contains:
	Summary Data Section (NICU) (V2) (required) Report No Events Section (optional)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Preferred document title: “Denominator for Neonatal Intensive Care Unit (NICU)”.

Table 17: Neonatal Intensive Care Unit (NICU) Summary Report (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.41:2018-04-01)					
templateId	1..1	SHALL		3357-28323	
@root	1..1	SHALL		3357-28324	2.16.840.1.113883.10.20.5.7.3.3
templateId	1..1	SHALL		3357-22805	
@root	1..1	SHALL		3357-22806	2.16.840.1.113883.10.20.5.41
@extension	1..1	SHALL		3357-30595	2018-04-01
title	1..1	SHALL		3357-30867	
documentationOf	1..1	SHALL		3357-22808	
serviceEvent	1..1	SHALL		3357-22809	
code	1..1	SHALL		3357-22810	
@code	1..1	SHALL		3357-22811	1881-2
@codeSystem	1..1	SHALL		3357-22812	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
component	1..1	SHALL		3357-22813	
structuredBody	1..1	SHALL		3357-22814	
component	1..1	SHALL		3357-22815	
section	1..1	SHALL		3357-22816	Summary Data Section (NICU) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.48:2018-04-01)
component	0..1	MAY		3357-30612	
section	1..1	SHALL		3357-30613	Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01)

1. Conforms to [HAI Population Summary Report Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-28323) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-28324).
 3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-22805) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.41" (CONF:3357-22806).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2018-04-01" (CONF:3357-30595).
- Preferred document title: "Denominator for Neonatal Intensive Care Unit (NICU)".
4. **SHALL** contain exactly one [1..1] **title** (CONF:3357-30867).
 5. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:3357-22808).
 - a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:3357-22809).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **code** (CONF:3357-22810).
 1. This code **SHALL** contain exactly one [1..1] **@code**="1881-2" Summary data reporting catheter and ventilator use in a NICU (CONF:3357-22811).
 2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-22812).
 6. **SHALL** contain exactly one [1..1] **component** (CONF:3357-22813).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:3357-22814).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3357-22815) such that it
 1. **SHALL** contain exactly one [1..1] Summary Data Section (NICU) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.48:2018-04-01) (CONF:3357-22816).
 - ii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:3357-30612) such that it
 1. **SHALL** contain exactly one [1..1] Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01) (CONF:3357-30613).

1.1.8 Outpatient Procedure Component Denominator for Same Day Outcome Measures Report

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.55:2019-04-01 (closed)]

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Release 3, STU 4 - US Realm

Table 18: Outpatient Procedure Component Denominator for Same Day Outcome Measures Report Contexts

Contained By:	Contains:
	Summary Data Section (required) NHSN Comment Section (optional) Report No Events Section (optional)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Preferred document title: “Outpatient Procedure Component Denominator for Same Day Outcome Measures”.

The OPC Summary Report uses the simple pattern for Summary Encounter. Required data elements are recorded as entries within the Summary Encounter.

Table 19: Outpatient Procedure Component Denominator for Same Day Outcome Measures Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.55:2019-04-01)					
templateId	1..1	SHALL		4395-55	
@root	1..1	SHALL		4395-64	2.16.840.1.113883.10.20.5.7.3.4
templateId	1..1	SHALL		4395-63	
@root	1..1	SHALL		4395-68	2.16.840.1.113883.10.20.5.55
@extension	1..1	SHALL		4395-69	2019-04-01
title	1..1	SHALL		4395-67	
documentationOf	1..1	SHALL		4395-30898	
serviceEvent	1..1	SHALL		4395-30899	
code	1..1	SHALL		4395-30900	
@code	1..1	SHALL		4395-30901	1657-6
@codeSystem	1..1	SHALL		4395-30902	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
component	1..1	SHALL		4395-59	
structuredBody	1..1	SHALL		4395-60	
component	1..1	SHALL		4395-61	
section	1..1	SHALL		4395-62	Summary Data Section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.47)
component	0..1	MAY		4395-30936	
section	1..1	SHALL		4395-30937	Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01)
component	0..1	MAY		4395-30938	
section	1..1	SHALL		4395-30939	NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01)

1. Conforms to [HAI Population Summary Report Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-55) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.3.4" (CONF:4395-64).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-63) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.55" (CONF:4395-68).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-69).

Preferred document title: "Outpatient Procedure Component Denominator for Same Day Outcome Measures".

4. **SHALL** contain exactly one [1..1] **title** (CONF:4395-67).
5. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:4395-30898).
 - a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:4395-30899).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **code** (CONF:4395-30900).
 1. This code **SHALL** contain exactly one [1..1] **@code**="1657-6" Summary data reporting outpatient procedure component events at a facility (CONF:4395-30901).
 2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:4395-30902).
6. **SHALL** contain exactly one [1..1] **component** (CONF:4395-59).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4395-60).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4395-61) such that it
 1. **SHALL** contain exactly one [1..1] Summary Data Section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.47) (CONF:4395-62).
 - ii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:4395-30936) such that it
 1. **SHALL** contain exactly one [1..1] Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01) (CONF:4395-30937).
 - iii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:4395-30938) such that it
 1. **SHALL** contain exactly one [1..1] NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01) (CONF:4395-30939).

1.1.9 Prevention Process and Outcome Measures (POM) Summary Report (V4)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.43:2022-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection Reports Release 4, STU 2 - US Realm

Table 20: Prevention Process and Outcome Measures (POM) Summary Report (V4) Contexts

Contained By:	Contains:
	Report No Events Section (optional) Summary Data Section (POM) (V3) (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Preferred document title: “Prevention Process and Outcome Measures (POM) Monthly Monitoring”.

The POM Report records summary data for a location during a specified period. It can be submitted at the facility-wide level or at the unit level.

Table 21: Prevention Process and Outcome Measures (POM) Summary Report (V4) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.43:2022-04-01)					
templateId	1..1	SHALL		4523-30549	
@root	1..1	SHALL		4523-30550	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-22886	
@root	1..1	SHALL		4523-22887	2.16.840.1.113883.10.20.5.43
@extension	1..1	SHALL		4523-30476	2022-04-01
title	1..1	SHALL		4523-31026	
documentationOf	1..1	SHALL		4523-22889	
serviceEvent	1..1	SHALL		4523-22890	
code	1..1	SHALL		4523-22891	
@code	1..1	SHALL		4523-22892	1884-6
@codeSystem	1..1	SHALL		4523-22893	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
component	1..1	SHALL		4523-22894	
structuredBody	1..1	SHALL		4523-22895	
component	1..1	SHALL		4523-22896	
section	1..1	SHALL		4523-30433	Summary Data Section (POM) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2022-04-01)
component	0..1	MAY		4523-30858	
section	1..1	SHALL		4523-30859	Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01)

1. Conforms to [HAI Population Summary Report Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-30549) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30550).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-22886) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.43" (CONF:4523-22887).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-30476).

Preferred document title: "Prevention Process and Outcome Measures (POM) Monthly Monitoring".

4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-31026).
5. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:4523-22889).
 - a. This **documentationOf** **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:4523-22890).
 - i. This **serviceEvent** **SHALL** contain exactly one [1..1] **code** (CONF:4523-22891).
 1. This **code** **SHALL** contain exactly one [1..1] **@code**="1884-6" Summary data reporting Active Surveillance Testing (CONF:4523-22892).
 2. This **code** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:4523-22893).
6. **SHALL** contain exactly one [1..1] **component** (CONF:4523-22894).
 - a. This **component** **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-22895).
 - i. This **structuredBody** **SHALL** contain exactly one [1..1] **component** (CONF:4523-22896) such that it
 1. **SHALL** contain exactly one [1..1] Summary Data Section (POM) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2022-04-01) (CONF:4523-30433).
 - ii. This **structuredBody** **MAY** contain zero or one [0..1] **component** (CONF:4523-30858) such that it
 1. **SHALL** contain exactly one [1..1] Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01) (CONF:4523-30859).

1.1.10 Specialty Care Area (SCA) Summary Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.42:2018-04-01 (closed)]

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Release 3, STU 3 - US Realm

Table 22: Specialty Care Area (SCA) Summary Report (V3) Contexts

Contained By:	Contains:
	Summary Data Section (required) Report No Events Section (optional)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Preferred document title: “Denominator for Specialty Care Area (SCA)”.

This summary report uses the basic pattern for Summary Encounter and Summary Data Observation. Consult the NHSN protocol for which data to report.

Table 23: Specialty Care Area (SCA) Summary Report (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.42:2018-04-01)					
templateId	1..1	SHALL		3357-28327	
@root	1..1	SHALL		3357-28328	2.16.840.1.113883.10.20.5.7.3.3
templateId	1..1	SHALL		3357-22843	
@root	1..1	SHALL		3357-22844	2.16.840.1.113883.10.20.5.42
@extension	1..1	SHALL		3357-30594	2018-04-01
title	1..1	SHALL		3357-30869	
documentationOf	1..1	SHALL		3357-22846	
serviceEvent	1..1	SHALL		3357-22847	
code	1..1	SHALL		3357-22848	
@code	1..1	SHALL		3357-22849	1880-4
@codeSystem	1..1	SHALL		3357-22850	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
component	1..1	SHALL		3357-22851	
structuredBody	1..1	SHALL		3357-22852	
component	1..1	SHALL		3357-22853	
section	1..1	SHALL		3357-22854	Summary Data Section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.47)
component	0..1	MAY		3357-30856	
section	1..1	SHALL		3357-30857	Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01)

1. Conforms to [HAI Population Summary Report Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-28327) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-28328).
 3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-22843) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.42" (CONF:3357-22844).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2018-04-01" (CONF:3357-30594).
- Preferred document title: "Denominator for Specialty Care Area (SCA)".
4. **SHALL** contain exactly one [1..1] **title** (CONF:3357-30869).
 5. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:3357-22846).
 - a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:3357-22847).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **code** (CONF:3357-22848).
 1. This code **SHALL** contain exactly one [1..1] **@code**="1880-4" Summary data reporting catheter and ventilator use in a SCA (CONF:3357-22849).
 2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-22850).
 6. **SHALL** contain exactly one [1..1] **component** (CONF:3357-22851).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:3357-22852).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3357-22853) such that it
 1. **SHALL** contain exactly one [1..1] Summary Data Section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.47) (CONF:3357-22854).
 - ii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:3357-30856) such that it
 1. **SHALL** contain exactly one [1..1] Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01) (CONF:3357-30857).

1.1.11 Vascular Access Type Report (VAT) Summary Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.45:2018-04-01 (closed)]

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Table 24: Vascular Access Type Report (VAT) Summary Report (V3) Contexts

Contained By:	Contains:
	<u>Summary Data Section (VAT)</u> (required)

Contained By:	Contains:
	NHSN Comment Section (optional) Report No Events Section (optional)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Preferred document title: “Maintenance Hemodialysis Patients Stratified by Vascular Access Type Report”.

Table 25: Vascular Access Type Report (VAT) Summary Report (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.45:2018-04-01)					
templateId	1..1	SHALL		3357-28329	
@root	1..1	SHALL		3357-28330	2.16.840.1.113883.10.20.5.7.3.3
templateId	1..1	SHALL		3357-22921	
@root	1..1	SHALL		3357-22922	2.16.840.1.113883.10.20.5.45
@extension	1..1	SHALL		3357-30860	2018-04-01
title	1..1	SHALL		3357-30870	
documentationOf	1..1	SHALL		3357-22924	
serviceEvent	1..1	SHALL		3357-22925	
code	1..1	SHALL		3357-22926	
@code	1..1	SHALL		3357-22927	2316-8
@codeSystem	1..1	SHALL		3357-22928	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
component	1..1	SHALL		3357-22929	
structuredBody	1..1	SHALL		3357-22930	
component	1..1	SHALL		3357-22931	
section	1..1	SHALL		3357-22932	Summary Data Section (VAT) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.50)
component	0..1	MAY		3357-30861	
section	1..1	SHALL		3357-30862	Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01)
component	0..1	MAY		3357-30911	
section	1..1	SHALL		3357-30912	NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01)

XPath	Card.	Verb	Data Type	CONF#	Value
					0.20.5.5.61:2017-04-01

1. Conforms to [HAI Population Summary Report Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-28329) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-28330).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-22921) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.45" (CONF:3357-22922).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2018-04-01" (CONF:3357-30860).

Preferred document title: "Maintenance Hemodialysis Patients Stratified by Vascular Access Type Report".

4. **SHALL** contain exactly one [1..1] **title** (CONF:3357-30870).
5. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:3357-22924).
 - a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:3357-22925).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **code** (CONF:3357-22926).
 1. This code **SHALL** contain exactly one [1..1] **@code**="2316-8" Summary dialysis data reporting vascular access types in maintenance (chronic) hemodialysis patients (CONF:3357-22927).
 2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-22928).
6. **SHALL** contain exactly one [1..1] **component** (CONF:3357-22929).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:3357-22930).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:3357-22931) such that it
 1. **SHALL** contain exactly one [1..1] [Summary Data Section \(VAT\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.50) (CONF:3357-22932).
 - ii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:3357-30861) such that it
 1. **SHALL** contain exactly one [1..1] [Report No Events Section](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01) (CONF:3357-30862).
 - iii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:3357-30911) such that it

1. **SHALL** contain exactly one [1..1] [NHSN Comment Section](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01)
(CONF:3357-30912).

1.1.12 HAI Single-Person Report Generic Constraints (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01 (open)]

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Table 26: HAI Single-Person Report Generic Constraints (V2) Contexts

Contained By:	Contains:
	NHSN Social History Section (required)

This template records the constraints for HAI single-person reports. It is used by all numerator reports covered by this guide. It is also used by the Procedure Denominator Report.

A single-person report must conform to the Healthcare Associated Infection Report template. In addition, key data about the patient are recorded in the recordTarget element.

- A patient identifier representing the facility-assigned patient ID is required. Other identifiers for the person can also be present, such as a United States Social Security Number (id/@root = 2.16.840.1.113883.4.1), a Medicare beneficiary identifier (id/@root = 2.16.840.1.113883.4.338), or secondary patient IDs (id/@root = the appropriate facility OID for patient IDs). If there isn't an available "other" identifier, then there should not be an id present for that type of identifier.
- The patient name is optional; consult the NHSN reporting protocol and requirements.
- Patient gender and birthdate are required.

The report-specific requirements specify the encounter data to record for each single-person report type. These data always include an identifier for the reporting facility, and usually include the encounter type (inpatient or outpatient), the admission date or encounter date, and the facility unit identifier and type.

The NHSN Social History section contains the Birth Sex Observation (required) and the Gender Identity Observation (optional).

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Table 27: HAI Single-Person Report Generic Constraints (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)					
templateId	1..1	SHALL		4523-22415	
@root	1..1	SHALL		4523-22416	2.16.840.1.113883.10.20.5.4.27
@extension	1..1	SHALL		4523-30795	2022-04-01
recordTarget	1..1	SHALL		4523-22417	
patientRole	1..1	SHALL		4523-22418	
id	1..*	SHALL		4523-22419	
@root	1..1	SHALL		4523-22420	
@extension	1..1	SHALL		4523-22421	
patient	1..1	SHALL		4523-22422	
name	0..1	MAY		4523-22423	
administrativeGenderCode	1..1	SHALL		4523-22424	
@code	1..1	SHALL		4523-22425	urn:oid:2.16.840.1.113883.1.11.1 (Administrative Gender (HL7 V3))
birthTime	1..1	SHALL		4523-22426	
@value	1..1	SHALL		4523-22427	
raceCode	0..1	MAY		4523-22428	urn:oid:2.16.840.1.113883.3.2074.1.1.3 (Race Category Excluding Nulls)
ethnicGroupCode	0..1	MAY		4523-22429	urn:oid:2.16.840.1.114222.4.11.837 (Ethnicity)
component	1..1	SHALL		4523-22431	
structuredBody	1..1	SHALL		4523-22432	
component	1..*	SHALL		4523-22433	
section	1..1	SHALL		4523-22434	NHSN Social History Section (identifier: urn:hl7ii:2.16.840.1.113883.1

XPath	Card.	Verb	Data Type	CONF#	Value
					0.20.5.5.81:2022-04-01

1. Conforms to [Healthcare Associated Infection Report](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.25).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-22415) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.4.27" (CONF:4523-22416).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-30795).
3. **SHALL** contain exactly one [1..1] **recordTarget** (CONF:4523-22417).
 - a. This recordTarget **SHALL** contain exactly one [1..1] **patientRole** (CONF:4523-22418).
 - i. This patientRole **SHALL** contain at least one [1..*] **id** (CONF:4523-22419).
Note: A patient identifier representing the facility-assigned patient ID is required. Other identifiers for the person can also be present, such as a United States Social Security Number (id/@root = 2.16.840.1.113883.4.1), a Medicare beneficiary identifier (id/@root = 2.16.840.1.113883.4.338), or secondary patient IDs (id/@root = the appropriate facility OID for patient IDs). If there isn't an available "other" identifier, then there should not be an id present for that type of identifier.
 1. Such ids **SHALL** contain exactly one [1..1] **@root** (CONF:4523-22420).
 2. Such ids **SHALL** contain exactly one [1..1] **@extension** (CONF:4523-22421).
 - ii. This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:4523-22422).

In the name element, the sub-elements should be in the following order: family, given, and optionally a second given representing the middle name(s). A name element is not allowed to contain mixed content.

1. This patient **MAY** contain zero or one [0..1] **name** (CONF:4523-22423).
2. This patient **SHALL** contain exactly one [1..1] **administrativeGenderCode** (CONF:4523-22424).
 - a. This administrativeGenderCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [Administrative Gender \(HL7 V3\)](#) urn:oid:2.16.840.1.113883.1.11.1 **DYNAMIC** (CONF:4523-22425).
3. This patient **SHALL** contain exactly one [1..1] **birthTime** (CONF:4523-22426).
 - a. This birthTime **SHALL** contain exactly one [1..1] **@value** (CONF:4523-22427).
4. This patient **MAY** contain zero or one [0..1] **raceCode**, which **SHALL** be selected from ValueSet [Race Category Excluding Nulls](#)

urn:oid:2.16.840.1.113883.3.2074.1.1.3 **DYNAMIC** (CONF:4523-22428).

5. This patient **MAY** contain zero or one [0..1] **ethnicGroupCode** (ValueSet: [Ethnicity](#) urn:oid:2.16.840.1.114222.4.11.837 **DYNAMIC**) (CONF:4523-22429).
4. **SHALL** contain exactly one [1..1] **component** (CONF:4523-22431).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-22432).
 - i. This structuredBody **SHALL** contain at least one [1..*] **component** (CONF:4523-22433) such that it
 1. **SHALL** contain exactly one [1..1] [NHSN Social History Section](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.81:2022-04-01) (CONF:4523-22434).
5. The ClinicalDocument/author **MAY** be software or **MAY** be a person in the role of infection control professional (ICP) (CONF:4523-22430).

Table 28: Administrative Gender (HL7 V3)

Value Set: Administrative Gender (HL7 V3) urn:oid:2.16.840.1.113883.1.11.1 (Clinical Focus: The gender of a person used for administrative purposes (as opposed to clinical gender)),(Data Element Scope:),(Inclusion Criteria: All codes in the HL7 V3 AdministrativeGender code system),(Exclusion Criteria:)			
This value set was imported on 9/29/2020 with a version of Latest.			
Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.1/expansion			
Code	Code System	Code System OID	Print Name
F	Administrative Gender	urn:oid:2.16.840.1.113883.5.1	Female
M	Administrative Gender	urn:oid:2.16.840.1.113883.5.1	Male
UN	Administrative Gender	urn:oid:2.16.840.1.113883.5.1	Undifferentiated

Table 29: Race Category Excluding Nulls

<p>Value Set: Race Category Excluding Nulls urn:oid:2.16.840.1.113883.3.2074.1.1.3 (Clinical Focus: The top-level "Race" concepts as defined by US Office of Management and Budget (OMB), excluding "Other race". All "Race" concepts in the Race and Ethnicity - CDC code system roll-up to one of these codes.), (Data Element Scope: Demographic categorization of a person's race (can be multiple).), (Inclusion Criteria: Direct children of the "1000-9 Race" concept in the Race and Ethnicity Code system.), (Exclusion Criteria: Specifically exclude "2131-1 Other Race" and any descendant of the concepts defined in the inclusion criteria.)</p> <p>This value set was imported on 6/18/2020 with a version of Latest.</p> <p>Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.2074.1.1.3/expansion</p>			
Code	Code System	Code System OID	Print Name
1002-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	American Indian or Alaska Native
2028-9	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Asian
2054-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Black or African American
2076-8	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Native Hawaiian or Other Pacific Islander
2106-3	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	White

Table 30: Ethnicity

<p>Value Set: Ethnicity urn:oid:2.16.840.1.114222.4.11.837 (Clinical Focus:), (Data Element Scope:), (Inclusion Criteria:), (Exclusion Criteria:)</p> <p>This value set was imported on 10/14/2020 with a version of Latest.</p> <p>Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.837/expansion</p>			
Code	Code System	Code System OID	Print Name
2135-2	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Hispanic or Latino
2186-5	Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238	Not Hispanic or Latino

1.1.13 Outpatient Procedure Component Denominator for Procedure Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.56:2022-04-01 (closed)]

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Table 31: Outpatient Procedure Component Denominator for Procedure Report (V2) Contexts

Contained By:	Contains:
	NHSN Comment Section (optional) Procedure Details Section in an OPC Denominator for Procedure (required) Infection Risk Factors Section in an OPC Denominator for Procedure (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report records an outpatient procedure performed.

Preferred document title: “Outpatient Procedure Component Denominator for Procedure Report”.

Key encounter data:

- The facility id is required. Unit identifier and unit type are not reported.

Other dates and locations:

- The date of the procedure is recorded as effectiveTime in the Procedure Details in an OPC Denominator for Procedure.

Other notes: The procedure id is recorded in the id of the Procedure Details in an OPC Denominator for Procedure template. NHSN uses this to establish a link between OPC Procedure for Denominator and OPC SSI Reports.

Table 32: Outpatient Procedure Component Denominator for Procedure Report (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.56:2022-04-01)					
templateId	1..1	SHALL		4523-30619	
@root	1..1	SHALL		4523-30632	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-30631	
@root	1..1	SHALL		4523-30638	2.16.840.1.113883.10.20.5.56
@extension	1..1	SHALL		4523-30641	2022-04-01
title	1..1	SHALL		4523-30713	
componentOf	1..1	SHALL		4523-30620	
encompassingEncounter	1..1	SHALL		4523-30621	
code	1..1	SHALL		4523-30633	
@code	1..1	SHALL		4523-30642	AMB
@codeSystem	1..1	SHALL		4523-30643	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
effectiveTime	1..1	SHALL		4523-30639	
low	1..1	SHALL		4523-30640	
@value	1..1	SHALL		4523-30644	
location	1..1	SHALL		4523-30622	
healthCareFacility	1..1	SHALL		4523-30623	
id	1..1	SHALL		4523-30624	
@root	1..1	SHALL		4523-30634	
@extension	0..1	MAY		4523-30635	
code	0..1	MAY		4523-30636	urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocati

XPath	Card.	Verb	Data Type	CONF#	Value
					onCode)
component	1..1	SHALL		4523-30625	
structuredBody	1..1	SHALL		4523-30626	
component	1..1	SHALL		4523-30627	
section	1..1	SHALL		4523-30628	Procedure Details Section in an OPC Denominator for Procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.67:2019-04-01)
component	1..1	SHALL		4523-30629	
section	1..1	SHALL		4523-30630	Infection Risk Factors Section in an OPC Denominator for Procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.68:2019-04-01)
component	0..1	MAY		4523-30665	
section	1..1	SHALL		4523-30666	NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01)

1. Conforms to [HAI Single-Person Report Generic Constraints \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-30619) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30632).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-30631) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.56" (CONF:4523-30638).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-30641).
4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-30713).
Note: Preferred document title: "Outpatient Procedure Component Denominator for Procedure".
5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:4523-30620).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:4523-30621).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **code** (CONF:4523-30633).

1. This code **SHALL** contain exactly one [1..1] **@code="AMB"** Outpatient (CONF:4523-30642).
2. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4523-30643).
- ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4523-30639).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4523-30640).
 - a. This low **SHALL** contain exactly one [1..1] **@value** (CONF:4523-30644).
Note: Admission Date
- iii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:4523-30622).
 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:4523-30623).
 - a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:4523-30624).

The value of **@root** must be the NHSN assigned Facility OID.

- i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4523-30634).

The value of **@extension**, if supplied, must be a value registered with NHSN.

- ii. This id **MAY** contain zero or one [0..1] **@extension** (CONF:4523-30635).
 - b. This healthCareFacility **MAY** contain zero or one [0..1] **code**, which **SHALL** be selected from ValueSet [NHSNHealthcareServiceLocationCode](#) urn:oid:2.16.840.1.113883.13.19 **DYNAMIC** (CONF:4523-30636).
6. **SHALL** contain exactly one [1..1] **component** (CONF:4523-30625).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-30626).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-30627) such that it
 1. **SHALL** contain exactly one [1..1] [Procedure Details Section in an OPC Denominator for Procedure](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.67:2019-04-01) (CONF:4523-30628).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-30629) such that it
 1. **SHALL** contain exactly one [1..1] [Infection Risk Factors Section in an OPC Denominator for Procedure](#) (identifier:

urn:hl7ii:2.16.840.1.113883.10.20.5.5.68:2019-04-01)
(CONF:4523-30630).

iii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:4523-30665) such that it

1. **SHALL** contain exactly one [1..1] [NHSN Comment Section](#)

(identifier:

urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01)
(CONF:4523-30666).

Table 33: NHSNHealthcareServiceLocationCode

Value Set: NHSNHealthcareServiceLocationCode urn:oid:2.16.840.1.113883.13.19 (Clinical Focus: NHSN surveillance reporting: A classification of patient care locations within healthcare facilities for public health surveillance purposes.),(Data Element Scope: Code identifying the type of service location in a health care facility.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.19/expansion			
Code	Code System	Code System OID	Print Name
1005-8	HSLOC	urn:oid:2.16.840.1.113883.6.259	Cardiac Catheterization Room/Suite
1007-4	HSLOC	urn:oid:2.16.840.1.113883.6.259	Endoscopy Suite
1008-2	HSLOC	urn:oid:2.16.840.1.113883.6.259	Radiology
1009-0	HSLOC	urn:oid:2.16.840.1.113883.6.259	Pulmonary Function Testing
1010-8	HSLOC	urn:oid:2.16.840.1.113883.6.259	General Laboratory
1011-6	HSLOC	urn:oid:2.16.840.1.113883.6.259	Clinical Chemistry Laboratory
1012-4	HSLOC	urn:oid:2.16.840.1.113883.6.259	Hematology Laboratory
1013-2	HSLOC	urn:oid:2.16.840.1.113883.6.259	Histology-Surgical Pathology Laboratory
1014-0	HSLOC	urn:oid:2.16.840.1.113883.6.259	Microbiology Laboratory
1015-7	HSLOC	urn:oid:2.16.840.1.113883.6.259	Serology Laboratory
...			

1.1.14 HAI AUR Antimicrobial Resistance Option (ARO) Report (V6)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.31:2022-04-01 (closed)]

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Table 34: HAI AUR Antimicrobial Resistance Option (ARO) Report (V6) Contexts

Contained By:	Contains:
	Findings Section in an ARO Report (V4) (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report records the antimicrobial susceptibility testing results for one pathogen isolate from an individual inpatient subject. Each report records a single organism.

Preferred document title: “Antimicrobial Resistance Option (ARO) Report”

Key encounter data:

- The encounter type (inpatient or outpatient) is required.
- An admission date is required.
- The facility identifier is required. Unit identifier and unit type are not recorded in the header.

Other dates and locations:

- Date of specimen collection is recorded in the effectiveTime element of the Specimen Collection Procedure (V2) template.

Table 35: HAI AUR Antimicrobial Resistance Option (ARO) Report (V6) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.31:2022-04-01)					
templateId	1..1	SHALL		4523-30540	
@root	1..1	SHALL		4523-30541	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-21951	
@root	1..1	SHALL		4523-21952	2.16.840.1.113883.10.20.5.31
@extension	1..1	SHALL		4523-30542	2022-04-01
title	1..1	SHALL		4523-30794	
componentOf	1..1	SHALL		4523-21139	
encompassingEncounter	1..1	SHALL		4523-21140	
code	1..1	SHALL		4523-21141	urn:oid:2.16.840.1.113883.13.1 (NHSNEncounterTypeCode)
effectiveTime	1..1	SHALL		4523-21143	
low	1..1	SHALL		4523-21144	
@value	1..1	SHALL		4523-21145	
location	1..1	SHALL		4523-21146	
healthCareFacility	1..1	SHALL		4523-21147	
id	1..1	SHALL		4523-21148	
@root	1..1	SHALL		4523-21149	
component	1..1	SHALL		4523-21150	
structuredBody	1..1	SHALL		4523-21151	
component	1..1	SHALL		4523-21152	
section	1..1	SHALL		4523-21153	Findings Section in an ARO Report (V4) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.32:2020-04-01)

1. Conforms to [HAI Single-Person Report Generic Constraints \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-30540) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30541).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-21951) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.31" (CONF:4523-21952).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-30542).

Preferred document title: "Antimicrobial Resistance Option (ARO) Report"

4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-30794).
5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:4523-21139).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:4523-21140).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNEncounterTypeCode](#) urn:oid:2.16.840.1.113883.13.1 **DYNAMIC** (CONF:4523-21141).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4523-21143).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4523-21144).
 - a. This low **SHALL** contain exactly one [1..1] **@value** (CONF:4523-21145).

Note: Admission Date
 2. The value of the admission date **SHALL NOT** be earlier than January 1, 1986; **SHALL NOT** be earlier than the date of birth; and **SHALL NOT** be later than the event date (CONF:4523-23358).
 - iii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:4523-21146).
 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:4523-21147).
 - a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:4523-21148).

The value of **@root** must be the NHSN assigned Facility OID.

- i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4523-21149).
6. **SHALL** contain exactly one [1..1] **component** (CONF:4523-21150).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-21151).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-21152) such that it

1. **SHALL** contain exactly one [1..1] [Findings Section in an ARO Report \(V4\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.32:2020-04-01) (CONF:4523-21153).

Table 36: NHSN EncounterTypeCode

Value Set: NHSN EncounterTypeCode urn:oid:2.16.840.1.113883.13.1 (Clinical Focus:),(Data Element Scope:),(Inclusion Criteria:),(Exclusion Criteria:)			
This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.1/expansion			
Code	Code System	Code System OID	Print Name
AMB	HL7ActCode	urn:oid:2.16.840.1.113883.5.4	ambulatory
IMP	HL7ActCode	urn:oid:2.16.840.1.113883.5.4	inpatient encounter

1.1.15 HAI Bloodstream Infection Report (BSI) (V5)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.32:2022-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection Reports Release 4, STU 2 - US Realm

Table 37: HAI Bloodstream Infection Report (BSI) (V5) Contexts

Contained By:	Contains:
	Infection Details Section in a BSI Report (required) Findings Section in an Infection-Type Report (required) NHSN Comment Section (optional) Infection Risk Factors Section in a BSI Report (V3) (required) COVID-19 Section (V2) (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report type records a bloodstream infection event.

Preferred document title: “Bloodstream Infection Report (BSI)”.

Key encounter data:

- A value for admission date is required.
- A value for discharge date may be recorded.
- The facility id, unit identifier, and unit type are required.

Other dates and locations:

- The date of the infection event is recorded as effectiveTime in the Infection-Type Observation.

Table 38: HAI Bloodstream Infection Report (BSI) (V5) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.32:2022-04-01)					
templateId	1..1	SHALL		4523-28307	
@root	1..1	SHALL		4523-28308	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-22460	
@root	1..1	SHALL		4523-22461	2.16.840.1.113883.10.20.5.32
@extension	1..1	SHALL		4523-28432	2022-04-01
title	1..1	SHALL		4523-30865	
componentOf	1..1	SHALL		4523-22462	
encompassingEncounter	1..1	SHALL		4523-22463	
effectiveTime	1..1	SHALL		4523-22464	
low	1..1	SHALL		4523-22465	
@value	1..1	SHALL		4523-22466	
high	0..1	MAY		4523-22467	
@value	1..1	SHALL		4523-22468	
location	1..1	SHALL		4523-22469	
healthCareFacility	1..1	SHALL		4523-22470	
id	1..1	SHALL		4523-22471	
@root	1..1	SHALL		4523-22472	
@extension	1..1	SHALL		4523-22473	
code	1..1	SHALL		4523-22474	urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode)
component	1..1	SHALL		4523-22476	
structuredBody	1..1	SHALL		4523-	

XPath	Card.	Verb	Data Type	CONF#	Value
				22477	
component	1..1	SHALL		4523-22478	
section	1..1	SHALL		4523-22479	Infection Risk Factors Section in a BSI Report (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2018-04-01)
component	1..1	SHALL		4523-30866	
section	1..1	SHALL		4523-30867	COVID-19 Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01)
component	1..1	SHALL		4523-22480	
section	1..1	SHALL		4523-22481	Infection Details Section in a BSI Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.38)
component	1..1	SHALL		4523-22482	
section	1..1	SHALL		4523-22483	Findings Section in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45)
component	0..1	MAY		4523-28411	
section	1..1	SHALL		4523-28412	NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01)

1. Conforms to [HAI Single-Person Report Generic Constraints \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-28307) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-28308).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-22460) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.32" (CONF:4523-22461).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-28432).

Preferred document title: "Bloodstream Infection Report (BSI)".

4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-30865).
5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:4523-22462).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:4523-22463).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4523-22464).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4523-22465).
 - a. This low **SHALL** contain exactly one [1..1] **@value** (CONF:4523-22466).
Note: Admission Date
 2. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4523-22467).
 - a. The high, if present, **SHALL** contain exactly one [1..1] **@value** (CONF:4523-22468).
Note: Discharge Date
 3. The value of the admission date **SHALL NOT** be earlier than January 1, 1986; **SHALL NOT** be earlier than the date of birth; and **SHALL NOT** be later than the event date (CONF:4523-23359).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:4523-22469).
 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:4523-22470).
 - a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:4523-22471).

The value of @root must be the NHSN assigned Facility OID.

- i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4523-22472).

The value of @extension must be a value registered with NHSN.

- ii. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:4523-22473).
 - b. This healthCareFacility **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNHealthcareServiceLocationCode](#) urn:oid:2.16.840.1.113883.13.19 **DYNAMIC** (CONF:4523-22474).
6. **SHALL** contain exactly one [1..1] **component** (CONF:4523-22476).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-22477).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-22478) such that it
 1. **SHALL** contain exactly one [1..1] [Infection Risk Factors Section in a BSI Report \(V3\)](#) (identifier:

- urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2018-04-01)
(CONF:4523-22479).
- ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-30866) such that it
 1. **SHALL** contain exactly one [1..1] [COVID-19 Section \(V2\)](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01)
(CONF:4523-30867).
 - iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-22480) such that it
 1. **SHALL** contain exactly one [1..1] [Infection Details Section in a BSI Report](#) (identifier:
urn:oid:2.16.840.1.113883.10.20.5.5.38) (CONF:4523-22481).
 - iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-22482) such that it
 1. **SHALL** contain exactly one [1..1] [Findings Section in an Infection-Type Report](#) (identifier:
urn:oid:2.16.840.1.113883.10.20.5.5.45) (CONF:4523-22483).
 - v. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:4523-28411) such that it
 1. **SHALL** contain exactly one [1..1] [NHSN Comment Section](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01)
(CONF:4523-28412).

1.1.16 HAI Central-Line Insertion Practice Numerator Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.36:2022-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection Reports Release 4, STU 2 - US Realm

Table 39: HAI Central-Line Insertion Practice Numerator Report (V3) Contexts

Contained By:	Contains:
	Procedure Details Section in a CLIP Report (required) Infection Risk Factors Section in a CLIP Report (V2) (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report records whether the steps in a central-line insertion practice protocol were followed in the required order.

Preferred document title: “Central-Line Insertion Practices (CLIP) Report”

Key encounter data:

- Admission date is recorded as nullFlavor NI (no information).

- Facility id, unit identifier, and unit type are required.

Other dates and locations: None

Table 40: HAI Central-Line Insertion Practice Numerator Report (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.36:2022-04-01)					
templateId	1..1	SHALL		4523-30543	
@root	1..1	SHALL		4523-30544	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-22553	
@root	1..1	SHALL		4523-22554	2.16.840.1.113883.10.20.5.36
@extension	1..1	SHALL		4523-30284	2022-04-01
title	1..1	SHALL		4523-30609	
componentOf	1..1	SHALL		4523-22555	
encompassingEncounter	1..1	SHALL		4523-22556	
effectiveTime	1..1	SHALL		4523-22557	
low	1..1	SHALL		4523-22558	
@nullFlavor	1..1	SHALL	CS	4523-22559	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI
location	1..1	SHALL		4523-22560	
healthCareFacility	1..1	SHALL		4523-22561	
id	1..1	SHALL		4523-22562	
@root	1..1	SHALL		4523-22563	
@extension	1..1	SHALL		4523-22564	
code	1..1	SHALL		4523-22565	urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode)
component	1..1	SHALL		4523-22567	
structuredBody	1..1	SHALL		4523-22568	
component	1..1	SHALL		4523-22569	
section	1..1	SHALL		4523-	Infection Risk Factors Section

XPath	Card.	Verb	Data Type	CONF#	Value
				30424	in a CLIP Report (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.34:2014-12-01)
component	1..1	SHALL		4523-22571	
section	1..1	SHALL		4523-22572	Procedure Details Section in a CLIP Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.42)

1. Conforms to [HAI Single-Person Report Generic Constraints \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-30543) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30544).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-22553) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.36" (CONF:4523-22554).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-30284).

Preferred document title: "Central-Line Insertion Practices (CLIP) Report"

4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-30609).
5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:4523-22555).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:4523-22556).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4523-22557).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4523-22558).
 - a. This low **SHALL** contain exactly one [1..1] **@nullFlavor**="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008 **STATIC**) (CONF:4523-22559).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:4523-22560).
 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:4523-22561).
 - a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:4523-22562).

The value of @root must be the NHSN assigned Facility OID.

- i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4523-22563).

The value of **@extension** must be a value registered with NHSN.

- ii. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:4523-22564).
- b. This **healthCareFacility** **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNHealthcareServiceLocationCode](#) urn:oid:2.16.840.1.113883.13.19 **DYNAMIC** (CONF:4523-22565).
6. **SHALL** contain exactly one [1..1] **component** (CONF:4523-22567).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-22568).
 - i. This **structuredBody** **SHALL** contain exactly one [1..1] **component** (CONF:4523-22569) such that it
 1. **SHALL** contain exactly one [1..1] [Infection Risk Factors Section in a CLIP Report \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.34:2014-12-01) (CONF:4523-30424).
 - ii. This **structuredBody** **SHALL** contain exactly one [1..1] **component** (CONF:4523-22571) such that it
 1. **SHALL** contain exactly one [1..1] [Procedure Details Section in a CLIP Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.42) (CONF:4523-22572).

1.1.17 HAI Evidence of Infection (Dialysis) Report (V7)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.37:2022-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection Reports Release 4, STU 2 - US Realm

Table 41: HAI Evidence of Infection (Dialysis) Report (V7) Contexts

Contained By:	Contains:
	Findings Section in an Infection-Type Report (optional) Details Section in an Evidence of Infection (Dialysis) Report (V6) (required) Risk Factors Section in an Evidence of Infection (Dialysis) Report (V3) (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

The report records evidence of infection in a chronic hemodialysis patient.

Preferred document title: “Evidence of Infection, Dialysis Report (EOID)”

Key encounter data:

- Encounter type is recorded as outpatient (AMB).
- Admission date is recorded as nullFlavor NA (not applicable).
- Facility id, unit identifier, and unit type are required.

Other dates and locations: None

Table 42: HAI Evidence of Infection (Dialysis) Report (V7) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.37:2022-04-01)					
templateId	1..1	SHALL		4523-30674	
@root	1..1	SHALL		4523-30675	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-22573	
@root	1..1	SHALL		4523-30254	2.16.840.1.113883.10.20.5.37
@extension	1..1	SHALL		4523-30285	2022-04-01
title	1..1	SHALL		4523-30983	
componentOf	1..1	SHALL		4523-22575	
encompassingEncounter	1..1	SHALL		4523-22576	
code	1..1	SHALL		4523-22577	
@code	1..1	SHALL		4523-22578	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = AMB
effectiveTime	1..1	SHALL		4523-22579	
low	1..1	SHALL		4523-22580	
@nullFlavor	1..1	SHALL		4523-22581	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA
location	1..1	SHALL		4523-22582	
healthCareFacility	1..1	SHALL		4523-22583	
id	1..1	SHALL		4523-22584	
@root	1..1	SHALL		4523-22585	
@extension	1..1	SHALL		4523-22586	
code	1..1	SHALL		4523-22587	urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode)
component	1..1	SHALL		4523-22589	
structuredBody	1..1	SHALL		4523-	

XPath	Card.	Verb	Data Type	CONF#	Value
				22590	
component	1..1	SHALL		4523-22591	
section	1..1	SHALL		4523-22592	Risk Factors Section in an Evidence of Infection (Dialysis) Report (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.37:2022-04-01)
component	1..1	SHALL		4523-22593	
section	1..1	SHALL		4523-30253	Details Section in an Evidence of Infection (Dialysis) Report (V6) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.41:2019-04-01)
component	0..1	MAY		4523-23302	
section	1..1	SHALL		4523-23303	Findings Section in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45)

1. Conforms to [HAI Single-Person Report Generic Constraints \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-30674) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30675).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-22573) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.37" (CONF:4523-30254).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-30285).

Preferred document title: "Evidence of Infection, Dialysis Report (EOID)"

4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-30983).
5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:4523-22575).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:4523-22576).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **code** (CONF:4523-22577).
 1. This code **SHALL** contain exactly one [1..1] **@code**="AMB" Ambulatory (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4 **STATIC**) (CONF:4523-22578).

- ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4523-22579).
 - 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4523-22580).
 - a. This low **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008 **STATIC**) (CONF:4523-22581).
- iii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:4523-22582).
 - 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:4523-22583).
 - a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:4523-22584).

The value of @root must be the NHSN assigned Facility OID.

- i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4523-22585).

The value of @extension must be a value registered with NHSN.

- ii. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:4523-22586).
 - b. This healthCareFacility **SHALL** contain exactly one [1..1] **code** (ValueSet: [NHSNHealthcareServiceLocationCode](#) urn:oid:2.16.840.1.113883.13.19 **DYNAMIC**) (CONF:4523-22587).
6. **SHALL** contain exactly one [1..1] **component** (CONF:4523-22589).
- a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-22590).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-22591) such that it
 - 1. **SHALL** contain exactly one [1..1] [Risk Factors Section in an Evidence of Infection \(Dialysis\) Report \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.37:2022-04-01) (CONF:4523-22592).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-22593) such that it
 - 1. **SHALL** contain exactly one [1..1] [Details Section in an Evidence of Infection \(Dialysis\) Report \(V6\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.41:2019-04-01) (CONF:4523-30253).
 - iii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:4523-23302) such that it

1. **SHALL** contain exactly one [1..1] [Findings Section in an Infection-Type Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45) (CONF:4523-23303).
- iv. If a positive blood culture was obtained (Positive Blood Culture Observation/@negationInd="false") the component containing Findings Section in an Infection-Type Report **SHALL** be present (CONF:4523-30984).

1.1.18 HAI Laboratory-Identified Organism (LIO) Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.38:2022-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection Reports Release 4, STU 2 - US Realm

Table 43: HAI Laboratory-Identified Organism (LIO) Report (V3) Contexts

Contained By:	Contains:
	Encounters Section in a LIO Report (V2) (required) Findings Section in a LIO Report (V2) (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report records the laboratory identification of a microorganism in a specimen. This is not an infection-type report: the presence of the organism is not equivalent to the presence of an infection. These reports are submitted if the facility is monitoring the organism identified. Each report records a single organism.

Preferred document title: “Laboratory-identified Organism Report (LIO)”

Key encounter data:

- The encounter type (inpatient/outpatient) is required.
- An admission date or encounter date is required. (If the patient is an outpatient, the date of specimen collection is also used in the header as the date of admission.)
- The facility identifier is required. Unit identifier and unit type are not recorded in the header.

Other dates and locations:

- The date of admission to the in-facility location where the specimen was collected is recorded in encompassingEncounter/effectiveTime.
- The date of specimen collection (also recorded as admission date if the patient was an outpatient) is recorded in effectiveTime in the Specimen Collection Procedure (LIO) template.

Table 44: HAI Laboratory-Identified Organism (LIO) Report (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.38:2022-04-01)					
templateId	1..1	SHALL		4523-30547	
@root	1..1	SHALL		4523-30548	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-22597	
@root	1..1	SHALL		4523-22598	2.16.840.1.113883.10.20.5.38
@extension	1..1	SHALL		4523-30286	2022-04-01
title	1..1	SHALL		4523-30610	
componentOf	1..1	SHALL		4523-22599	
encompassingEncounter	1..1	SHALL		4523-22600	
code	1..1	SHALL		4523-22601	urn:oid:2.16.840.1.113883.13.1 (NHSNEncounterTypeCode)
effectiveTime	1..1	SHALL		4523-22603	
low	1..1	SHALL		4523-22604	
@nullFlavor	0..1	MAY		4523-23305	
@value	0..1	MAY		4523-22605	
location	1..1	SHALL		4523-22606	
healthCareFacility	1..1	SHALL		4523-22607	
id	1..1	SHALL		4523-22608	
@root	1..1	SHALL		4523-22609	
component	1..1	SHALL		4523-22610	
structuredBody	1..1	SHALL		4523-22611	
component	1..1	SHALL		4523-22612	
section	1..1	SHALL		4523-30420	Findings Section in a LIO Report (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1

XPath	Card.	Verb	Data Type	CONF#	Value
					0.20.5.5.46:2014-12-01
component	1..1	SHALL		4523-22614	
section	1..1	SHALL		4523-30421	Encounters Section in a LIO Report (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.44:2014-12-01)

1. Conforms to [HAI Single-Person Report Generic Constraints \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-30547) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30548).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-22597) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.38" (CONF:4523-22598).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-30286).

Preferred document title: "Laboratory-identified Organism Report (LIO)"

4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-30610).
5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:4523-22599).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:4523-22600).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSN Encounter Type Code](#) urn:oid:2.16.840.1.113883.13.1 **DYNAMIC** (CONF:4523-22601).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4523-22603).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4523-22604).
 - a. This low **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:4523-23305).
 - b. This low **MAY** contain zero or one [0..1] **@value** (CONF:4523-22605).
Note: Admission Date
 - c. If encounter type is IMP, effectiveTime/low/@value is required; if encounter type is AMB, effectiveTime/low/@value is required (use (copy) Date Specimen Collected) (CONF:4523-23306).
 2. The value of the admission date **SHALL NOT** be earlier than January 1, 1986; **SHALL NOT** be earlier than the date of birth; and **SHALL NOT** be later than the event date (CONF:4523-23360).

- iii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:4523-22606).
 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:4523-22607).
 - a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:4523-22608).
 - i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4523-22609).
6. **SHALL** contain exactly one [1..1] **component** (CONF:4523-22610).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-22611).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-22612) such that it
 1. **SHALL** contain exactly one [1..1] [Findings Section in a LIO Report \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.46:2014-12-01) (CONF:4523-30420).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-22614) such that it
 1. **SHALL** contain exactly one [1..1] [Encounters Section in a LIO Report \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.44:2014-12-01) (CONF:4523-30421).

1.1.19 HAI Procedure Denominator Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.35.2:2022-04-01 (closed)]

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Table 45: HAI Procedure Denominator Report (V3) Contexts

Contained By:	Contains:
	Infection Risk Factors Section in a Procedure Report (required) Procedure Details Section in a Procedure Report (V2) (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report records a procedure performed.

Preferred document title: “Denominator for Procedure Report”

Key encounter data:

- The encounter type (inpatient or outpatient) is required.
- If the patient was an inpatient, a value for admission date is required.

- The facility id is required. Unit identifier and unit type are not reported.

Other dates and locations:

- The date of the procedure is recorded as effectiveTime in the Procedure Details Clinical Statement in a Procedure Report (V2).

Other notes: The procedure id is recorded in the Procedure Details Clinical Statement in a Procedure Report (V2). NHSN uses this to establish a link between Procedure and SSI Reports.

Table 46: HAI Procedure Denominator Report (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.35.2:2022-04-01)					
templateId	1..1	SHALL		4523-30309	
@root	1..1	SHALL		4523-30310	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-22531	
@root	1..1	SHALL		4523-30255	2.16.840.1.113883.10.20.5.35.2
@extension	1..1	SHALL		4523-31027	2022-04-01
title	1..1	SHALL		4523-30315	
componentOf	1..1	SHALL		4523-22533	
encompassingEncounter	1..1	SHALL		4523-22534	
code	1..1	SHALL		4523-22535	urn:oid:2.16.840.1.113883.13.1 (NHSNEncounterTypeCode)
location	1..1	SHALL		4523-22537	
healthCareFacility	1..1	SHALL		4523-22538	
id	1..1	SHALL		4523-22539	
@root	1..1	SHALL		4523-22540	
@extension	0..1	MAY		4523-22541	
code	0..1	MAY		4523-22542	urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode)
component	1..1	SHALL		4523-22545	
structuredBody	1..1	SHALL		4523-22546	
component	1..1	SHALL		4523-22547	
section	1..1	SHALL		4523-30256	Procedure Details Section in a Procedure Report (V2) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.43.2)

XPath	Card.	Verb	Data Type	CONF#	Value
component	1..1	SHALL		4523-22551	
section	1..1	SHALL		4523-22552	Infection Risk Factors Section in a Procedure Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.35)

1. Conforms to [HAI Single-Person Report Generic Constraints \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-30309) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30310).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-22531) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.35.2" (CONF:4523-30255).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-31027).

Preferred document title: "Denominator for Procedure Report"

4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-30315).
5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:4523-22533).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:4523-22534).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **code** (ValueSet: [NHSNEncounterTypeCode](#) urn:oid:2.16.840.1.113883.13.1 **DYNAMIC**) (CONF:4523-22535).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:4523-22537).
 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:4523-22538).
 - a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:4523-22539).

The value of **@root** must be the NHSN assigned Facility OID.

- i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4523-22540).

The value of **@extension**, if supplied, must be a value registered with NHSN.

- ii. This id **MAY** contain zero or one [0..1] **@extension** (CONF:4523-22541).
- b. This healthCareFacility **MAY** contain zero or one [0..1] **code**, which **SHALL** be selected from ValueSet [NHSNHealthcareServiceLocationCode](#)

urn:oid:2.16.840.1.113883.13.19 **DYNAMIC** (CONF:4523-22542).

- iii. If the patient is an inpatient (code/@code='IMP'), admission date is recorded: An effectiveTime element **SHALL** be present. This effectiveTime **SHALL** [1..1] contain a low element. This low element **SHALL** [1..1] contain @value (CONF:4523-22544).

6. **SHALL** contain exactly one [1..1] **component** (CONF:4523-22545).

a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-22546).

i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-22547) such that it

1. **SHALL** contain exactly one [1..1] [Procedure Details Section in a Procedure Report \(V2\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.43.2) (CONF:4523-30256).

ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-22551) such that it

1. **SHALL** contain exactly one [1..1] [Infection Risk Factors Section in a Procedure Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.35) (CONF:4523-22552).

1.1.20 HAI Surgical Site Infection Report (SSI) (V4)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.33.2:2022-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection Reports Release 4, STU 2 - US Realm

Table 47: HAI Surgical Site Infection Report (SSI) (V4) Contexts

Contained By:	Contains:
	Findings Section in an Infection-Type Report (required) Infection Details Section in an SSI Report (V2) (required) COVID-19 Section (V2) (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report type records a surgical site infection event.

Preferred document title: “Surgical Site Infection Report (SSI)”.

Key encounter data:

- The encounter type (inpatient or outpatient) is required.
- A value for admission date is required.
- A discharge date may be recorded.
- The facility id is required.

Other dates and locations:

- The date of the infection is recorded as effectiveTime in the Infection-Type Observation.

Other notes: The procedure id is recorded in the Procedure Details Clinical Statement in an Infection-Type Report. NHSN uses this to establish a link between Procedure and SSI Reports.

Table 48: HAI Surgical Site Infection Report (SSI) (V4) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.33.2:2022-04-01)					
templateId	1..1	SHALL		4523-30311	
@root	1..1	SHALL		4523-30312	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-22484	
@root	1..1	SHALL		4523-30276	2.16.840.1.113883.10.20.5.33.2
@extension	0..1	SHALL		4523-30868	2022-04-01
title	1..1	SHALL		4523-30316	
componentOf	1..1	SHALL		4523-22486	
encompassingEncounter	1..1	SHALL		4523-22487	
code	1..1	SHALL		4523-22488	urn:oid:2.16.840.1.113883.13.1 (NHSNEncounterTypeCode)
effectiveTime	1..1	SHALL		4523-22490	
low	1..1	SHALL		4523-27762	
@value	1..1	SHALL		4523-27763	
high	0..1	MAY		4523-22491	
@value	1..1	SHALL		4523-22492	
location	1..1	SHALL		4523-22493	
healthCareFacility	1..1	SHALL		4523-22494	
id	1..1	SHALL		4523-22495	
@root	1..1	SHALL		4523-22496	
@extension	0..1	MAY		4523-22497	
code	0..1	MAY		4523-22498	urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode)
component	1..1	SHALL		4523-	

XPath	Card.	Verb	Data Type	CONF#	Value
				22501	
structuredBody	1..1	SHALL		4523-22502	
component	1..1	SHALL		4523-22503	
section	1..1	SHALL		4523-22504	Infection Details Section in an SSI Report (V2) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.39.2)
component	1..1	SHALL		4523-30869	
section	1..1	SHALL		4523-30870	COVID-19 Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01)
component	1..1	SHALL		4523-22505	
section	1..1	SHALL		4523-22506	Findings Section in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45)

1. Conforms to [HAI Single-Person Report Generic Constraints \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-30311) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30312).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-22484) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.33.2" (CONF:4523-30276).
 - b. **SHALL** contain zero or one [0..1] **@extension**="2022-04-01" (CONF:4523-30868).

Preferred document title: "Surgical Site Infection Report (SSI)".

4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-30316).
5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:4523-22486).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:4523-22487).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **code** (ValueSet: [NHSN Encounter Type Code](#) urn:oid:2.16.840.1.113883.13.1 DYNAMIC) (CONF:4523-22488).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4523-22490).

1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4523-27762).
 - a. This low **SHALL** contain exactly one [1..1] **@value** (CONF:4523-27763).
Note: Admission Date
2. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4523-22491).
 - a. The high, if present, **SHALL** contain exactly one [1..1] **@value** (CONF:4523-22492).
Note: Discharge Date
- iii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:4523-22493).
 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:4523-22494).
 - a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:4523-22495).

The value of @root must be the NHSN assigned Facility OID.

- i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4523-22496).

The value of @extension, if supplied, must be a value registered with NHSN.

- ii. This id **MAY** contain zero or one [0..1] **@extension** (CONF:4523-22497).
 - b. This healthCareFacility **MAY** contain zero or one [0..1] **code** (ValueSet: [NHSNHealthcareServiceLocationCode](#) urn:oid:2.16.840.1.113883.13.19 **DYNAMIC**) (CONF:4523-22498).
6. **SHALL** contain exactly one [1..1] **component** (CONF:4523-22501).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-22502).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-22503) such that it
 1. **SHALL** contain exactly one [1..1] [Infection Details Section in an SSI Report \(V2\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.39.2) (CONF:4523-22504).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-30869) such that it
 1. **SHALL** contain exactly one [1..1] [COVID-19 Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01) (CONF:4523-30870).
 - iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-22505) such that it

1. **SHALL** contain exactly one [1..1] [Findings Section in an Infection-Type Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45) (CONF:4523-22506).

1.1.21 HAI Urinary Tract Infection Numerator Report (UTI) (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.34:2022-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection Reports Release 4, STU 2 - US Realm

Table 49: HAI Urinary Tract Infection Numerator Report (UTI) (V3) Contexts

Contained By:	Contains:
	Infection Risk Factors Section in a UTI Report (required) Infection Details Section in a UTI Report (required) Findings Section in an Infection-Type Report (required) COVID-19 Section (V2) (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report records a urinary tract infection event.

Preferred document title: “Urinary Infection Report (UTI)”

Key encounter data:

- A value for admission date is required.
- A discharge date may be recorded.
- The facility id, unit identifier, and unit type are required.

Other dates and locations:

- The date of the infection is recorded as effectiveTime in the Infection-Type Observation.

Table 50: HAI Urinary Tract Infection Numerator Report (UTI) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.34:2022-04-01)					
templateId	1..1	SHALL		4523-28319	
@root	1..1	SHALL		4523-28320	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-22507	
@root	1..1	SHALL		4523-27433	2.16.840.1.113883.10.20.5.34
@extension	1..1	SHALL		4523-30873	2022-04-01
title	1..1	SHALL		4523-28408	
componentOf	1..1	SHALL		4523-22509	
encompassingEncounter	1..1	SHALL		4523-22510	
effectiveTime	1..1	SHALL		4523-22511	
low	1..1	SHALL		4523-22512	
@value	1..1	SHALL		4523-22513	
high	0..1	MAY		4523-22514	
@value	1..1	SHALL		4523-22515	
location	1..1	SHALL		4523-22516	
healthCareFacility	1..1	SHALL		4523-22517	
id	1..1	SHALL		4523-22518	
@root	1..1	SHALL		4523-22519	
@extension	1..1	SHALL		4523-22520	
code	1..1	SHALL		4523-22521	urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode)
component	1..1	SHALL		4523-22523	
structuredBody	1..1	SHALL		4523-	

XPath	Card.	Verb	Data Type	CONF#	Value
				22524	
component	1..1	SHALL		4523-22525	
section	1..1	SHALL		4523-22526	Infection Risk Factors Section in a UTI Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.36)
component	1..1	SHALL		4523-30871	
section	1..1	SHALL		4523-30872	COVID-19 Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01)
component	1..1	SHALL		4523-22527	
section	1..1	SHALL		4523-22528	Infection Details Section in a UTI Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.40)
component	1..1	SHALL		4523-22529	
section	1..1	SHALL		4523-22530	Findings Section in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45)

1. Conforms to [HAI Single-Person Report Generic Constraints \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-28319) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-28320).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-22507) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.34" (CONF:4523-27433).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-30873).

Preferred document title: "Urinary Infection Report (UTI)"

4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-28408).
5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:4523-22509).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:4523-22510).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4523-22511).

1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4523-22512).
 - a. This low **SHALL** contain exactly one [1..1] **@value** (CONF:4523-22513).
Note: Admission Date
2. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4523-22514).
 - a. The high, if present, **SHALL** contain exactly one [1..1] **@value** (CONF:4523-22515).
Note: Discharge Date
3. The value of the admission date **SHALL NOT** be earlier than January 1, 1986; **SHALL NOT** be earlier than the date of birth; and **SHALL NOT** be later than the event date (CONF:4523-23362).
- ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:4523-22516).
 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:4523-22517).
 - a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:4523-22518).
 - i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4523-22519).

The value of healthCareFacility/id/@extension must be a value previously registered with NHSN.

- ii. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:4523-22520).
 - b. This healthCareFacility **SHALL** contain exactly one [1..1] **code** (ValueSet: [NHSNHealthcareServiceLocationCode](#) urn:oid:2.16.840.1.113883.13.19 **DYNAMIC**) (CONF:4523-22521).
6. **SHALL** contain exactly one [1..1] **component** (CONF:4523-22523).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-22524).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-22525) such that it
 1. **SHALL** contain exactly one [1..1] [Infection Risk Factors Section in a UTI Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.36) (CONF:4523-22526).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-30871) such that it
 1. **SHALL** contain exactly one [1..1] [COVID-19 Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01) (CONF:4523-30872).
 - iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-22527) such that it

1. **SHALL** contain exactly one [1..1] [Infection Details Section in a UTI Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.40) (CONF:4523-22528).
- iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-22529) such that it
 1. **SHALL** contain exactly one [1..1] [Findings Section in an Infection-Type Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45) (CONF:4523-22530).

1.1.22 Late Onset Sepsis/Meningitis Denominator (LOS/Men Denom) Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.58:2022-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection Reports Release 4, STU 2 - US Realm

Table 51: Late Onset Sepsis/Meningitis Denominator (LOS/Men Denom) Report (V2) Contexts

Contained By:	Contains:
	NHSN Comment Section (optional) Encounters Section in a LOS/Men Denominator (required) Risk Factors Section in a LOS/Men Denominator (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report records the denominator information for neonatal component late onset sepsis and meningitis (LOS/Men).

Preferred document title: “Late Onset Sepsis/Meningitis Denominator”.

Key required data:

- the facility id
- the month and year the data were collected
- the date admitted to the facility
- the date admitted or transferred to the location within the facility
- if discharged, transferred or expired, the date on which this occurred

Table 52: Late Onset Sepsis/Meningitis Denominator (LOS/Men Denom) Report (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.58:2022-04-01)					
templateId	1..1	SHALL		4523-30685	
@root	1..1	SHALL		4523-30703	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-30702	
@root	1..1	SHALL		4523-30710	2.16.840.1.113883.10.20.5.58
@extension	1..1	SHALL		4523-30711	2022-04-01
title	1..1	SHALL		4523-30712	
recordTarget	1..*	SHALL		4523-30716	
patientRole	1..1	SHALL		4523-30717	
patient	0..1	MAY		4523-30718	
documentationOf	1..1	SHALL		4523-30942	
serviceEvent	1..1	SHALL		4523-30943	
effectiveTime	1..1	SHALL		4523-30944	
low	1..1	SHALL		4523-30945	
high	1..1	SHALL		4523-30946	
componentOf	1..1	SHALL		4523-30686	
encompassingEncounter	1..1	SHALL		4523-30687	
code	1..1	SHALL		4523-30691	
@code	1..1	SHALL		4523-30707	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = IMP
@codeSystem	1..1	SHALL		4523-30708	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
effectiveTime	1..1	SHALL		4523-30692	
low	1..1	SHALL		4523-	

XPath	Card.	Verb	Data Type	CONF#	Value
				30693	
@value	1..1	SHALL		4523-30709	
location	1..1	SHALL		4523-30688	
healthCareFacility	1..1	SHALL		4523-30689	
id	1..1	SHALL		4523-30690	
@root	1..1	SHALL		4523-30704	
@extension	0..1	MAY		4523-30705	
component	1..1	SHALL		4523-30694	
structuredBody	1..1	SHALL		4523-30695	
component	1..1	SHALL		4523-30696	
section	1..1	SHALL		4523-30697	Risk Factors Section in a LOS/Men Denominator (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.72:2019-04-01)
component	1..1	SHALL		4523-30821	
section	1..1	SHALL		4523-30822	Encounters Section in a LOS/Men Denominator (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.71:2019-04-01)
component	0..1	MAY		4523-30700	
section	1..1	SHALL		4523-30701	NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01)

1. Conforms to [HAI Single-Person Report Generic Constraints \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-30685) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30703).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-30702) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.58" (CONF:4523-30710).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-30711).
- Preferred document title: "Late Onset Sepsis/Meningitis Denominator"
- 4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-30712).
 - 5. **SHALL** contain at least one [1..*] **recordTarget** (CONF:4523-30716).
 - a. Such recordTargets **SHALL** contain exactly one [1..1] **patientRole** (CONF:4523-30717).
 - i. This patientRole **MAY** contain zero or one [0..1] **patient** (CONF:4523-30718).
 - 6. **SHALL** contain exactly one [1..1] **documentationOf** (CONF:4523-30942).
 - a. This documentationOf **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:4523-30943).
 - i. This serviceEvent **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4523-30944).

Note: Month and year the data were collected

 - 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4523-30945).

Note: First day of the period reported
 - 2. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:4523-30946).

Note: Last day of the period reported
 - 7. **SHALL** contain exactly one [1..1] **componentOf** (CONF:4523-30686).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:4523-30687).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **code** (CONF:4523-30691).
 - 1. This code **SHALL** contain exactly one [1..1] **@code**="IMP" Inpatient encounter (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4523-30707).
 - 2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4523-30708).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4523-30692).
 - 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4523-30693).

Note: Date admitted to facility

 - a. This low **SHALL** contain exactly one [1..1] **@value** (CONF:4523-30709).

Note: Admission Date
 - iii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:4523-30688).

1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:4523-30689).
 - a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:4523-30690).
Note: Facility ID

The value of @root must be the NHSN assigned Facility OID.

- i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4523-30704).

The value of @extension, if supplied, must be a value registered with NHSN.

- ii. This id **MAY** contain zero or one [0..1] **@extension** (CONF:4523-30705).

8. **SHALL** contain exactly one [1..1] **component** (CONF:4523-30694).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-30695).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-30696) such that it
 1. **SHALL** contain exactly one [1..1] [Risk Factors Section in a LOS/Men Denominator](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.72:2019-04-01) (CONF:4523-30697).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-30821) such that it
 1. **SHALL** contain exactly one [1..1] [Encounters Section in a LOS/Men Denominator](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.71:2019-04-01) (CONF:4523-30822).
 - iii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:4523-30700) such that it
 1. **SHALL** contain exactly one [1..1] [NHSN Comment Section](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01) (CONF:4523-30701).

1.1.23 Late Onset Sepsis/Meningitis Event (LOS) Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.53:2022-04-01 (closed)]

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Table 53: Late Onset Sepsis/Meningitis Event (LOS) Report (V3) Contexts

Contained By:	Contains:
	Findings Section in an Infection-Type Report (optional) NHSN Comment Section (required)

Contained By:	Contains:
	Infection Details in Late Onset Sepsis Report (required) Risk Factors Section in a LOS/Men Event (V2) (required)

This report type records a late onset sepsis/meningitis infection event.

Preferred document title: "Late Onset Sepsis/Meningitis Event (LOS)".

For Late Onset Sepsis/Meningitis Event Reports, a Medicaid beneficiary number may be present.

Table 54: Late Onset Sepsis/Meningitis Event (LOS) Report (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.53:2022-04-01)					
templateId	1..1	SHALL		4523-30728	
@root	1..1	SHALL		4523-30745	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-30962	
@root	1..1	SHALL		4523-30972	2.16.840.1.113883.10.20.5.53
@extension	1..1	SHALL		4523-30973	2022-04-01
title	1..1	SHALL		4523-30729	
recordTarget	1..1	SHALL		4523-30963	
patientRole	1..1	SHALL		4523-30964	
id	0..1	MAY		4523-30965	
@root	1..1	SHALL		4523-30974	2.16.840.1.113883.10.20.5.9.28
@extension	1..1	SHALL		4523-30975	
componentOf	1..1	SHALL		4523-30730	
encompassingEncounter	1..1	SHALL		4523-30731	
effectiveTime	1..1	SHALL		4523-30954	
low	1..1	SHALL		4523-30966	
high	0..1	MAY		4523-30967	
location	1..1	SHALL		4523-30955	
healthCareFacility	1..1	SHALL		4523-30956	
id	1..1	SHALL		4523-30957	
@root	1..1	SHALL		4523-30968	
@extension	1..1	SHALL		4523-30969	

XPath	Card.	Verb	Data Type	CONF#	Value
code	1..1	SHALL		4523-30970	urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode)
component	1..1	SHALL		4523-30747	
structuredBody	1..1	SHALL		4523-30748	
component	1..1	SHALL		4523-30749	
section	1..1	SHALL		4523-30750	Infection Details in Late Onset Sepsis Report (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.64:2018-04-01)
component	1..1	SHALL		4523-30751	
section	1..1	SHALL		4523-30752	Risk Factors Section in a LOS/Men Event (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.65:2019-04-01)
component	0..1	MAY		4523-30958	
section	1..1	SHALL		4523-30959	Findings Section in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45)
component	1..1	SHALL		4523-30960	
section	1..1	SHALL		4523-30961	NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01)

1. Conforms to [HAI Single-Person Report Generic Constraints \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-30728) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30745).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-30962) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.53" (CONF:4523-30972).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-30973).

Preferred document title: "Late Onset Sepsis/Meningitis Event (LOS) Report"

4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-30729).
5. **SHALL** contain exactly one [1..1] **recordTarget** (CONF:4523-30963).
 - a. This recordTarget **SHALL** contain exactly one [1..1] **patientRole** (CONF:4523-30964).

For Late Onset Sepsis/Meningitis Event Reports, a Medicaid beneficiary number may be present.

- i. This patientRole **MAY** contain zero or one [0..1] **id** (CONF:4523-30965) such that it
 1. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.9.28" (CONF:4523-30974).
Note: Specifies that this is a Medicaid beneficiary number
 2. **SHALL** contain exactly one [1..1] **@extension** (CONF:4523-30975).
Note: Medicaid beneficiary number
6. **SHALL** contain exactly one [1..1] **componentOf** (CONF:4523-30730).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:4523-30731).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4523-30954).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4523-30966).
Note: Admission Date
 2. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4523-30967).
Note: Discharge Date
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:4523-30955).
 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:4523-30956).
 - a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:4523-30957).

The value of **@root** must be the NHSN assigned Facility OID

- i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4523-30968).

The value of **@extension** must be a value registered with NHSN

- ii. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:4523-30969).
 - b. This healthCareFacility **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNHealthcareServiceLocationCode](#) **urn:oid:2.16.840.1.113883.13.19 DYNAMIC** (CONF:4523-30970).
7. **SHALL** contain exactly one [1..1] **component** (CONF:4523-30747).

- a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-30748).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-30749) such that it
 1. **SHALL** contain exactly one [1..1] [Infection Details in Late Onset Sepsis Report](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.64:2018-04-01) (CONF:4523-30750).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-30751) such that it
 1. **SHALL** contain exactly one [1..1] [Risk Factors Section in a LOS/Men Event \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.65:2019-04-01) (CONF:4523-30752).
 - iii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:4523-30958) such that it
 1. **SHALL** contain exactly one [1..1] [Findings Section in an Infection-Type Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45) (CONF:4523-30959).
 - iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-30960) such that it
 1. **SHALL** contain exactly one [1..1] [NHSN Comment Section](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01) (CONF:4523-30961).

1.1.24 Outpatient Procedure Component Same Day Outcome Measures Event Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.54:2022-04-01 (closed)]

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Table 55: Outpatient Procedure Component Same Day Outcome Measures Event Report (V2) Contexts

Contained By:	Contains:
	NHSN Comment Section (optional) Same Day Outcome Measures Event Details Section (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report type records data on each patient who experienced one or more of the same day outcome measures events.

Preferred document title: “Outpatient Procedure Component Same Day Outcome Measures Event Report”.

Key encounter data:

- The encounter type (outpatient) is required.
- The facility id is required.
- A value for the date admitted to facility where the outpatient procedure occurred is required.

**Table 56: Outpatient Procedure Component Same Day Outcome Measures Event Report (V2)
Constraints Overview**

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.54:2022-04-01)					
templateId	1..1	SHALL		4523-1	
@root	1..1	SHALL		4523-30992	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-30991	
@root	1..1	SHALL		4523-26	2.16.840.1.113883.10.20.5.54
@extension	1..1	SHALL		4523-27	2022-04-01
title	1..1	SHALL		4523-70	
componentOf	1..1	SHALL		4523-2	
encompassingEncounter	1..1	SHALL		4523-30985	
code	1..1	SHALL		4523-30987	
@code	1..1	SHALL		4523-24	AMB
@codeSystem	1..1	SHALL		4523-25	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
effectiveTime	1..1	SHALL		4523-30986	
low	1..1	SHALL		4523-5	
@value	1..1	SHALL		4523-30993	
location	1..1	SHALL		4523-6	
healthCareFacility	1..1	SHALL		4523-7	
id	1..1	SHALL		4523-8	
@root	1..1	SHALL		4523-21	
component	1..1	SHALL		4523-30988	
structuredBody	1..1	SHALL		4523-30989	
component	1..1	SHALL		4523-30990	
section	1..1	SHALL		4523-13	Same Day Outcome Measures Event Details Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.66:2019-04-01)
component	0..1	MAY		4523-30561	
section	1..1	SHALL		4523-	NHSN Comment Section (identifier:

XPath	Card.	Verb	Data Type	CONF#	Value
				30562	urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01

1. Conforms to [HAI Single-Person Report Generic Constraints \(V2\)](#) template
(identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-1) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30992).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-30991) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.54" (CONF:4523-26).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-27).

Preferred document title: "Outpatient Procedure Component Same Day Outcome Measures Event Report".

4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-70).
5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:4523-2).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:4523-30985).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **code** (CONF:4523-30987).
 1. This code **SHALL** contain exactly one [1..1] **@code**="AMB" Outpatient (CONF:4523-24).
 2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4523-25).
 - ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4523-30986).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4523-5).
 - a. This low **SHALL** contain exactly one [1..1] **@value** (CONF:4523-30993).
Note: Admission Date
 - iii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:4523-6).
 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:4523-7).
 - a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:4523-8).

The value of **@root** must be the NHSN assigned Facility OID.

- i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4523-21).
6. **SHALL** contain exactly one [1..1] **component** (CONF:4523-30988).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-30989).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-30990) such that it
 1. **SHALL** contain exactly one [1..1] [Same Day Outcome Measures Event Details Section](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.66:2019-04-01) (CONF:4523-13).
 - ii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:4523-30561) such that it
 1. **SHALL** contain exactly one [1..1] [NHSN Comment Section](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01) (CONF:4523-30562).

1.1.25 Outpatient Procedure Surgical Site Infection (SSI) Event Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.57:2022-04-01 (closed)]

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Table 57: Outpatient Procedure Surgical Site Infection (SSI) Event Report (V2) Contexts

Contained By:	Contains:
	NHSN Comment Section (optional) Infection Details Section in an OPC SSI Report (required) Findings Section in an OPC SSI Report (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report type records surgical site infection events for outpatient procedure.

Preferred document title: “Outpatient Procedure Surgical Site Infection (SSI) Event”.

Key encounter data:

- The encounter type (outpatient) is required.
- The facility id is required.
- A value for the date admitted to facility where the outpatient procedure occurred is required.

Other dates and locations:

- The date of the infection is recorded as effectiveTime in the Infection-Type Observation.

Other notes: The procedure id is recorded in the id of the Procedure Details in an OPC SSI Event template. NHSN uses this to establish a link between OPC Procedure for Denominator and OPC SSI Reports.

Table 58: Outpatient Procedure Surgical Site Infection (SSI) Event Report (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.57:2022-04-01)					
templateId	1..1	SHALL		4523-28	
@root	1..1	SHALL		4523-46	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-45	
@root	1..1	SHALL		4523-53	2.16.840.1.113883.10.20.5.57
@extension	1..1	SHALL		4523-54	2022-04-01
title	1..1	SHALL		4523-71	
componentOf	1..1	SHALL		4523-29	
encompassingEncounter	1..1	SHALL		4523-30	
code	1..1	SHALL		4523-36	
@code	1..1	SHALL		4523-51	AMB
@codeSystem	1..1	SHALL		4523-52	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
effectiveTime	1..1	SHALL		4523-31	
low	1..1	SHALL		4523-32	
@value	1..1	SHALL		4523-47	
location	1..1	SHALL		4523-33	
healthCareFacility	1..1	SHALL		4523-34	
id	1..1	SHALL		4523-35	
@root	1..1	SHALL		4523-48	
@extension	0..1	MAY		4523-49	
component	1..1	SHALL		4523-37	
structuredBody	1..1	SHALL		4523-38	
component	1..1	SHALL		4523-39	
section	1..1	SHALL		4523-40	Infection Details Section in an OPC SSI Report (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.69:2019-04-01)
component	1..1	SHALL		4523-41	
section	1..1	SHALL		4523-42	Findings Section in an OPC SSI Report (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.70:2019-04-01)
component	0..1	MAY		4523-30940	
section	1..1	SHALL		4523-30941	NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.71:2019-04-01)

XPath	Card.	Verb	Data Type	CONF#	Value
					0.20.5.5.61:2017-04-01

1. Conforms to [HAI Single-Person Report Generic Constraints \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-28) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-46).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-45) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.57" (CONF:4523-53).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-54).

Preferred document title: "Outpatient Procedure Surgical Site Infection (SSI) Event".

4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-71).
5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:4523-29).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:4523-30).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **code** (CONF:4523-36).
 1. This code **SHALL** contain exactly one [1..1] **@code**="AMB" Outpatient (CONF:4523-51).
 2. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4523-52).

Date of Encounter: Record the date of the encounter (admission) at the outpatient procedure facility. Encounter is defined as the completion of the registration process for the procedure facility.

- ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4523-31).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4523-32).
 - a. This low **SHALL** contain exactly one [1..1] **@value** (CONF:4523-47).
Note: Admission Date
- iii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:4523-33).
 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:4523-34).
 - a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:4523-35).

The value of @root must be the NHSN assigned Facility OID.

- i. This id **SHALL** contain exactly one [1..1] @root (CONF:4523-48).

The value of @extension, if supplied, must be a value registered with NHSN.

- ii. This id **MAY** contain zero or one [0..1] @extension (CONF:4523-49).

6. **SHALL** contain exactly one [1..1] **component** (CONF:4523-37).

a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-38).

i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-39) such that it

1. **SHALL** contain exactly one [1..1] [Infection Details Section in an OPC SSI Report](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.69:2019-04-01) (CONF:4523-40).

ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-41) such that it

1. **SHALL** contain exactly one [1..1] [Findings Section in an OPC SSI Report](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.70:2019-04-01) (CONF:4523-42).

iii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:4523-30940) such that it

1. **SHALL** contain exactly one [1..1] [NHSN Comment Section](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01) (CONF:4523-30941).

1.1.26 Ventilator Associated Event (VAE) Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.51:2022-04-01 (closed)]

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Table 59: Ventilator Associated Event (VAE) Report (V3) Contexts

Contained By:	Contains:
	Findings Section in an Infection-Type Report (required) Infection Details Section in a VAE Report (required) Risk Factors Section in a VAE Report (required) NHSN Comment Section (optional) COVID-19 Section (V2) (required)

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report type records a ventilator associated infection event.

Preferred document title: “Ventilator Associated Event (VAE)”

Key encounter data:

- A value for admission date is required.
- A value for discharge date may be recorded.
- The facility id, unit identifier, and unit type are required.

Other dates and locations:

- The event date is recorded as effectiveTime in the Infection-Type Observation.

Table 60: Ventilator Associated Event (VAE) Report (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.51:2022-04-01)					
templateId	1..1	SHALL		4523-97	
@root	1..1	SHALL		4523-113	2.16.840.1.113883.10.20.5.7.4.2
templateId	1..1	SHALL		4523-111	
@root	1..1	SHALL		4523-122	2.16.840.1.113883.10.20.5.51
@extension	1..1	SHALL		4523-123	2022-04-01
title	1..1	SHALL		4523-28469	
componentOf	1..1	SHALL		4523-98	
encompassingEncounter	1..1	SHALL		4523-99	
effectiveTime	1..1	SHALL		4523-100	
low	1..1	SHALL		4523-101	
@value	1..1	SHALL		4523-114	
high	0..1	MAY		4523-102	
@value	1..1	SHALL		4523-115	
location	1..1	SHALL		4523-103	
healthCareFacility	1..1	SHALL		4523-104	
id	1..1	SHALL		4523-105	
@root	1..1	SHALL		4523-117	
@extension	1..1	SHALL		4523-118	
code	1..1	SHALL		4523-119	urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode)
component	1..1	SHALL		4523-106	
structuredBody	1..1	SHALL		4523-107	
component	1..1	SHALL		4523-108	
section	1..1	SHALL		4523-136	Infection Details Section in a VAE Report (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.59:2017-04-01)
component	1..1	SHALL		4523-30874	
section	1..1	SHALL		4523-30875	COVID-19 Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01)
component	1..1	SHALL		4523-109	
section	1..1	SHALL		4523-137	Findings Section in an Infection-Type Report

XPath	Card.	Verb	Data Type	CONF#	Value
					(identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45)
component	1..1	SHALL		4523-110	
section	1..1	SHALL		4523-171	Risk Factors Section in a VAE Report (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.60:2017-04-01)
component	0..1	MAY		4523-185	
section	1..1	SHALL		4523-186	NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01)

1. Conforms to [HAI Single-Person Report Generic Constraints \(V2\)](#) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01).

This template id represents the IG in which this template is published.

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-97) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-113).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-111) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.51" (CONF:4523-122).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-123).

Preferred document title: "Ventilator Associated Event (VAE)"

4. **SHALL** contain exactly one [1..1] **title** (CONF:4523-28469).
5. **SHALL** contain exactly one [1..1] **componentOf** (CONF:4523-98).
 - a. This componentOf **SHALL** contain exactly one [1..1] **encompassingEncounter** (CONF:4523-99).
 - i. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4523-100).
 1. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4523-101).
 - a. This low **SHALL** contain exactly one [1..1] **@value** (CONF:4523-114).
Note: Admission Date
 2. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4523-102).
 - a. The high, if present, **SHALL** contain exactly one [1..1] **@value** (CONF:4523-115).
Note: Discharge Date

3. The value of the admission date **SHALL NOT** be earlier than January 1, 1986; **SHALL NOT** be earlier than the date of birth; and **SHALL NOT** be later than the event date (CONF:4523-116).
- ii. This encompassingEncounter **SHALL** contain exactly one [1..1] **location** (CONF:4523-103).
 1. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:4523-104).
 - a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:4523-105).
 - i. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4523-117).

The value of healthCareFacility/id/@extension must be a value previously registered with NHSN.

- ii. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:4523-118).
 - b. This healthCareFacility **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNHealthcareServiceLocationCode](#) urn:oid:2.16.840.1.113883.13.19 **DYNAMIC** (CONF:4523-119).
6. **SHALL** contain exactly one [1..1] **component** (CONF:4523-106).
 - a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:4523-107).
 - i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-108) such that it
 1. **SHALL** contain exactly one [1..1] [Infection Details Section in a VAE Report](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.59:2017-04-01) (CONF:4523-136).
 - ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-30874) such that it
 1. **SHALL** contain exactly one [1..1] [COVID-19 Section \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01) (CONF:4523-30875).
 - iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-109) such that it
 1. **SHALL** contain exactly one [1..1] [Findings Section in an Infection-Type Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45) (CONF:4523-137).
 - iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:4523-110) such that it
 1. **SHALL** contain exactly one [1..1] [Risk Factors Section in a VAE Report](#) (identifier:

urn:hl7ii:2.16.840.1.113883.10.20.5.5.60:2017-04-01)
(CONF:4523-171).

- v. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:4523-185) such that it

- 1. **SHALL** contain exactly one [1..1] NHSN Comment Section

(identifier:

urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01)
(CONF:4523-186).

2 SECTION-LEVEL TEMPLATES

2.1 HAI Section Generic Constraints

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.4.26 (closed)]

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This template records the constraints that apply to all sections specified in the NHSN HAI Implementation Guide.

Table 61: HAI Section Generic Constraints Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26)					
templateId	1..1	SHALL		86-21958	
@root	1..1	SHALL		86-21959	2.16.840.1.113883.10.20.5.4.26
code	1..1	SHALL		86-21953	
@code	1..1	SHALL		86-21954	urn:oid:2.16.840.1.113883.6.1 (LOINC)
title	1..1	SHALL		86-21955	
text	1..1	SHALL		86-21956	
entry	1..*	SHALL		86-21957	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21958) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.4.26" (CONF:86-21959).
2. **SHALL** contain exactly one [1..1] **code** (CONF:86-21953).
 - a. This code **SHALL** contain exactly one [1..1] **@code** (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:86-21954).
3. **SHALL** contain exactly one [1..1] **title** (CONF:86-21955).
4. **SHALL** contain exactly one [1..1] **text** (CONF:86-21956).
5. **SHALL** contain at least one [1..*] **entry** (CONF:86-21957).

2.1.1 COVID-19 Section (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01 (closed)]

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Table 62: COVID-19 Section (V2) Contexts

Contained By:	Contains:
HAI Bloodstream Infection Report (BSI) (V5) (required) HAI Surgical Site Infection Report (SSI) (V4) (required) HAI Urinary Tract Infection Numerator Report (UTI) (V3) (required) Ventilator Associated Event (VAE) Report (V3) (required)	NHSN COVID-19 Condition Observation (V2) (required)

This section template contains information about whether or not the patient had COVID-19.

Table 63: COVID-19 Section (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01)					
templateId	1..1	SHALL		4475-20	
@root	1..1	SHALL		4475-23	2.16.840.1.113883.10.20.5.5.80
@extension	1..1	SHALL		4475-24	2021-01-01
code	1..1	SHALL		4475-21	
@code	1..1	SHALL		4475-25	94721-8
@codeSystem	1..1	SHALL		4475-26	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		4475-19	
observation	1..1	SHALL		4475-27	NHSN COVID-19 Condition Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.270:2021-01-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4475-20) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.80" (CONF:4475-23).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2021-01-01" (CONF:4475-24).
3. **SHALL** contain exactly one [1..1] **code** (CONF:4475-21).

- a. This code **SHALL** contain exactly one [1..1] @code="94721-8" COVID-19 Evaluation note (CONF:4475-25).
- b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4475-26).
4. **SHALL** contain exactly one [1..1] entry (CONF:4475-19).
 - a. This entry **SHALL** contain exactly one [1..1] [NHSN COVID-19 Condition Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.270:2021-01-01) (CONF:4475-27).

Figure 2: COVID-19 Section Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <templateId root="2.16.840.1.113883.10.20.5.5.80" extension="2021-01-01"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="94721-8"
    displayName="COVID-19 Evaluation note"/>
  <title>COVID-19 Section</title>
  <text>...</text>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [C-CDA R1.1] Problem Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- [HAI R4D1] Confirmed or Suspected COVID-19 (V2) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.270" extension="2021-01-01"/>
      ...
    </observation>
  </entry>
</section>
```

2.1.2 Details Section in an Evidence of Infection (Dialysis) Report (V6)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.41:2019-04-01 (closed)]

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Table 64: Details Section in an Evidence of Infection (Dialysis) Report (V6) Contexts

Contained By:	Contains:
HAI Evidence of Infection (Dialysis) Report (V7) (required)	Death Observation in an Evidence of Infection (Dialysis) Report (required) Criteria of Diagnosis Organizer (required) Hospital Admission Clinical Statement (required) Dialysis Clinic Admission Clinical Statement (required) Loss of Vascular Access Observation (required) Infection Indicator Organizer (V5) (required)

The clinical statements in this section record the criteria used in the diagnosis of an infection or the identification of an adverse reaction. They also record any infection indicators, dialysis clinic admission date in comparison to event date, whether the patient was hospitalized, and death observation.

Table 65: Details Section in an Evidence of Infection (Dialysis) Report (V6) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.41:2019-04-01)					
templateId	1..1	SHALL		4395-22338	
@root	1..1	SHALL		4395-30224	2.16.840.1.113883.10.20.5.5.41
@extension	1..1	SHALL		4395-30282	2019-04-01
code	1..1	SHALL		4395-22340	
@code	1..1	SHALL		4395-22341	51899-3
@codeSystem	1..1	SHALL		4395-30598	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		4395-22342	
organizer	1..1	SHALL		4395-30428	Infection Indicator Organizer (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.181:2019-04-01)
entry	1..1	SHALL		4395-22344	
organizer	1..1	SHALL		4395-22345	Criteria of Diagnosis Organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.180)
entry	1..1	SHALL		4395-22346	
act	1..1	SHALL		4395-22347	Hospital Admission Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.133)
entry	1..1	SHALL		4395-22348	
observation	1..1	SHALL		4395-22349	Death Observation in an Evidence of Infection (Dialysis) Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.121)
entry	1..1	SHALL		4395-22350	
encounter	1..1	SHALL		4395-22351	Dialysis Clinic Admission Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.124)

XPath	Card.	Verb	Data Type	CONF#	Value
entry	1..1	SHALL		4395-30222	
observation	1..1	SHALL		4395-30223	Loss of Vascular Access Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.203)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-22338) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.41" (CONF:4395-30224).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30282).
3. **SHALL** contain exactly one [1..1] **code** (CONF:4395-22340).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51899-3" Details Section (CONF:4395-22341).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4395-30598).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-22342) such that it
 - a. **SHALL** contain exactly one [1..1] [Infection Indicator Organizer \(V5\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.181:2019-04-01) (CONF:4395-30428).
5. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-22344) such that it
 - a. **SHALL** contain exactly one [1..1] [Criteria of Diagnosis Organizer](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.180) (CONF:4395-22345).
6. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-22346) such that it
 - a. **SHALL** contain exactly one [1..1] [Hospital Admission Clinical Statement](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.133) (CONF:4395-22347).
7. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-22348) such that it
 - a. **SHALL** contain exactly one [1..1] [Death Observation in an Evidence of Infection \(Dialysis\) Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.121) (CONF:4395-22349).
8. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-22350) such that it
 - a. **SHALL** contain exactly one [1..1] [Dialysis Clinic Admission Clinical Statement](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.124) (CONF:4395-22351).
9. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-30222) such that it
 - a. **SHALL** contain exactly one [1..1] [Loss of Vascular Access Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.203) (CONF:4395-30223).

Figure 3: Details Section in an Evidence of Infection (Dialysis) Report (V5) Example

```
<section>
  <!-- [HAI R1] HAI Section Generic Constraints template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3D1.1] Details Section in an Evidence of Infection (Dialysis) Report (V5) -->
  <templateId root="2.16.840.1.113883.10.20.5.5.41"
    extension="2019-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="51899-3"
    displayName="Details Section"/>
  <title>Details</title>
  ...
  <entry typeCode="DRIV">
    <organizer classCode="CLUSTER" moodCode="EVN">
      <!-- [HAI R3D1.1] Infection Indication Organizer (V5) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.181"
        extension="2019-04-01"/>
      ...
    </organizer >
  </entry>
  <entry typeCode="DRIV">
    < organizer classCode="CLUSTER" moodCode="EVN">
      <!-- Criteria of Diagnosis Organizer -->
      <templateId root="2.16.840.1.113883.10.20.5.6.180"/>
      ...
    </organizer >
  </entry>
  <entry typeCode="DRIV">
    <act classCode="ACT" moodCode="EVN" negationInd="false">
      <!--Hospital Admission Clinical Statement -->
      <templateId root="2.16.840.1.113883.10.20.5.6.133"/>
      ...
    </act >
  </entry>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" nullFlavor="NI">
      <!-- C-CDA Deceased Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.79"/>
      <!-- HAI Death Observation in an Evidence of Infection (Dialysis) Report -->
      <templateId root="2.16.840.1.113883.10.20.5.6.121"/>
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <encounter classCode="ENC" moodCode="EVN">
      <!-- Dialysis Clinic Admission Clinical Statement -->
      <templateId root="2.16.840.1.113883.10.20.5.6.124"/>
      ...
    </encounter >
  </entry>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation Type -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" />
      <!-- Loss of Vascular Access Observation -->
```

```

    <templateId root="2.16.840.1.113883.10.20.5.6.203"/>
    ...
  </observation>
</entry>
</section>

```

2.1.3 Encounters Section in a LIO Report (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.44:2014-12-01 (closed)]

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Table 66: Encounters Section in a LIO Report (V2) Contexts

Contained By:	Contains:
HAI Laboratory-Identified Organism (LIO) Report (V3) (required)	Prior Discharge Encounter (V2) (required) Last Physical Overnight Location Act (required) Other Facility Discharge Act (required)

In a LIO Report, the Encounters Section contains entries representing the last physical overnight location of the patient along with whether in the past four weeks the patient was either discharged from the facility or from another facility. It also records the date of that discharge.

Table 67: Encounters Section in a LIO Report (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.44:2014-12-01)					
templateId	1..1	SHALL		1129-22364	
@root	1..1	SHALL		1129-22365	2.16.840.1.113883.10.20.5.5.44
@extension	1..1	SHALL		1129-30283	2014-12-01
code	1..1	SHALL		1129-22366	
@code	1..1	SHALL		1129-22367	46240-8
@codeSystem	1..1	SHALL		1129-30599	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		1129-22368	
encounter	1..1	SHALL		1129-30422	Prior Discharge Encounter (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.151:2014-12-01)
entry	1..1	SHALL		1129-28240	
act	1..1	SHALL		1129-30588	Other Facility Discharge Act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.228:2014-12-01)
entry	1..1	SHALL		1129-30273	
act	1..1	SHALL		1129-30575	Last Physical Overnight Location Act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.227:2014-12-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-22364) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.44" (CONF:1129-22365).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30283).
3. **SHALL** contain exactly one [1..1] **code** (CONF:1129-22366).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="46240-8" History of Encounters (CONF:1129-22367).

- b. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:1129-30599).
- 4. **SHALL** contain exactly one [1..1] **entry** (CONF:1129-22368) such that it
 - a. **SHALL** contain exactly one [1..1] Prior Discharge Encounter (V2)
(identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.151:2014-12-01)
(CONF:1129-30422).
- 5. **SHALL** contain exactly one [1..1] **entry** (CONF:1129-28240) such that it
 - a. **SHALL** contain exactly one [1..1] Other Facility Discharge Act (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.5.6.228:2014-12-01) (CONF:1129-
30588).
- 6. **SHALL** contain exactly one [1..1] **entry** (CONF:1129-30273) such that it
 - a. **SHALL** contain exactly one [1..1] Last Physical Overnight Location Act
(identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.227:2014-12-01)
(CONF:1129-30575).

Figure 4: Encounters Section in an LIO Report (V2) Example

```
<section>
  <!-- HAI Generic section templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- Encounters Section in an LIO Report (V2) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.5.44"
    extension="2014-12-01" />
  <code code="46240-8"
    codeSystem="2.16.840.1.113883.6.1"
    displayName="History of Encounters" />
  <title>Encounters</title>
  <text>...</text>
  <entry typeCode="DRIV">
    <!-- Prior Discharge Encounter (V2) -->
    <encounter classCode="ENC" moodCode="EVN">
      <!-- C-CDA Encounter activity templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" />
      <!-- HAI Prior Discharge Encounter (V2) templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.151"
        extension="2014-12-01" />
      ...
    </encounter>
  </entry>

  <entry typeCode="DRIV">
    <!-- Other Facility Discharge Act -->
    <act classCode="ACT" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.5.6.228"
        extension="2014-12-01" />
      ...
    </act>
  </entry>

  <entry typeCode="DRIV">
    <!-- Last Physical Overnight Location Act -->
    <act classCode="ACT" moodCode="EVN">
      <!-- Last Physical Overnight Location Act templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.227"
        extension="2014-12-01" />
      ...
    </act>
  </entry>
</section>
```

2.1.4 Encounters Section in a LOS/Men Denominator

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.71:2019-04-01 (closed)]

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Table 68: Encounters Section in a LOS/Men Denominator Contexts

Contained By:	Contains:
Late Onset Sepsis/Meningitis Denominator (LOS/Men Denom) Report (V2) (required)	Location Within Facility Encounter (required)

In a LOS/Men Denominator, the Encounters Section contains information about an infant's location within the facility, the date admitted or transferred to that location, the disposition of the infant and, if the infant was discharged, transferred, or expired, the date on which this occurred.

Table 69: Encounters Section in a LOS/Men Denominator Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.71:2019-04-01)					
templateId	1..1	SHALL		4395-30811	
@root	1..1	SHALL		4395-30817	2.16.840.1.113883.10.20.5.5.71
@extension	1..1	SHALL		4395-30818	2019-04-01
code	1..1	SHALL		4395-30812	
@code	1..1	SHALL		4395-30819	46240-8
@codeSystem	1..1	SHALL		4395-30820	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		4395-30809	
encounter	1..1	SHALL		4395-30810	Location Within Facility Encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.262:2019-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30811) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.71" (CONF:4395-30817).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30818).

3. **SHALL** contain exactly one [1..1] **code** (CONF:4395-30812).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="46240-8" History of Encounters (CONF:4395-30819).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4395-30820).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-30809) such that it
 - a. **SHALL** contain exactly one [1..1] Location Within Facility Encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.262:2019-04-01) (CONF:4395-30810).

Figure 5: Encounters Section in a LOS/MEN Denominator Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3D4] Encounters Section in a LOS/MEN Denominator -->
  <templateId root="2.16.840.1.113883.10.20.5.5.999999" extension="2019-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="46240-8"
    displayName="History of Encounters" />
  <title>Location Within Facility Encounter</title>
  <text>...</text>
  <entry>
    <!-- [HAI R3D3] Location Within Facility Encounter -->
    <encounter classCode="ENC" moodCode="EVN">
      <!-- [C-CDA R1.1] Encounter activity -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" />
      <!-- [HAI R3D3] Location Within Facility Encounter -->
      <templateId root="2.16.840.1.113883.10.20.5.262" extension="2019-04-01" />
      ...
    </encounter>
  </entry>
</section>
```

2.1.5 Findings Section in a LIO Report (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.46:2014-12-01 (closed)]

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Table 70: Findings Section in a LIO Report (V2) Contexts

Contained By:	Contains:
<u>HAI Laboratory-Identified Organism (LIO) Report (V3)</u> (required)	<u>Pathogen Identified Observation (LIO) (V2)</u> (required)

The Findings Section in a LIO Report records a laboratory-identified microorganism. It differs from the Findings Section in Infection Reports in that it records only one microorganism (if more were

identified, each is recorded in a separate report), details about the specimen collection are recorded, and no drug-susceptibility test results are recorded. If no organism is found, no report is submitted; thus, the explicit statement "no organism found", which is used in the Findings Section in Infection Reports, is not used here.

Table 71: Findings Section in a LIO Report (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.46:2014-12-01)					
templateId	1..1	SHALL		1129-22378	
@root	1..1	SHALL		1129-22379	2.16.840.1.113883.10.20.5.5.46
@extension	1..1	SHALL		1129-30463	2014-12-01
code	1..1	SHALL		1129-22380	
@code	1..1	SHALL		1129-22381	18769-0
@codeSystem	1..1	SHALL		1129-30600	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		1129-22382	
observation	1..1	SHALL		1129-30419	Pathogen Identified Observation (LIO) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.146:2014-12-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-22378) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.46" (CONF:1129-22379).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30463).
3. **SHALL** contain exactly one [1..1] **code** (CONF:1129-22380).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="18769-0" Findings Section (CONF:1129-22381).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1129-30600).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:1129-22382) such that it
 - a. **SHALL** contain exactly one [1..1] [Pathogen Identified Observation \(LIO\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.146:2014-12-01) (CONF:1129-30419).

Figure 6: Findings Section in an LIO Report (V2) Example

```
<section>
  <!-- HAI Generic section template -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- HAI Findings Section in an LIO Report template -->
  <templateId root="2.16.840.1.113883.10.20.5.5.46"
    extension="2014-12-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="18769-0"
    displayName="Findings Section" />
  <title>Findings</title>
  ...
  <entry typeCode="DRIV">
    <observation>
      <!-- Pathogen Identified Observation (LIO) V2 -->
      <templateId root="2.16.840.1.113883.10.20.5.6.146"
        extension="2014-12-01" />
      ...
    </observation>
  </entry>
</section>
```

2.1.6 Findings Section in an ARO Report (V4)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.32:2020-04-01
(closed)]

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Table 72: Findings Section in an ARO Report (V4) Contexts

Contained By:	Contains:
HAI AUR Antimicrobial Resistance Option (ARO) Report [V6] (required)	Specimen Collection Procedure (ARO) [V4] (required)

The Findings Section in an ARO Report records the details concerning one pathogen isolate and its related antimicrobial susceptibility testing results.

Table 73: Findings Section in an ARO Report (V4) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.32:2020-04-01)					
templateId	1..1	SHALL		4459-21128	
@root	1..1	SHALL		4459-21129	2.16.840.1.113883.10.20.5.5.32
@extension	1..1	SHALL		4459-30475	2020-04-01
code	1..1	SHALL		4459-21132	
@code	1..1	SHALL		4459-21133	18769-0
@codeSystem	1..1	SHALL		4459-30601	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		4459-21136	
procedure	1..1	SHALL		4459-30473	Specimen Collection Procedure (ARO) (V4) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.188:2020-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4459-21128) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.32" (CONF:4459-21129).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2020-04-01" (CONF:4459-30475).
3. **SHALL** contain exactly one [1..1] **code** (CONF:4459-21132).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="18769-0" Findings Section (CONF:4459-21133).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4459-30601).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:4459-21136).
 - a. This entry **SHALL** contain exactly one [1..1] [Specimen Collection Procedure \(ARO\) \(V4\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.188:2020-04-01) (CONF:4459-30473).

Figure 7: Findings Section in an ARO Report (V4) Example

```
<section>
  <!-- [HAI R1] HAI Section Generic Constraints -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3N1] Findings Section in an ARO Report (V4) -->
  <templateId root="2.16.840.1.113883.10.20.5.5.32" extension="2020-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="18769-0"
        displayName="Findings section" />
  <title>Findings</title>
  <text>
    ...
  </text>
  <entry typeCode="DRIV">
    <procedure classCode="PROC" moodCode="EVN">
      <!-- [HAI R3N1] Specimen Collection Procedure (ARO) (V4) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.188" extension="2020-04-01" />
      ...
    </procedure>
  </entry>
</section>
```

2.1.7 Findings Section in an Infection-Type Report

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.45 (closed)]

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Table 74: Findings Section in an Infection-Type Report Contexts

Contained By:	Contains:
HAI Bloodstream Infection Report (BSI) (V5) (required) HAI Evidence of Infection (Dialysis) Report (V7) (optional) HAI Surgical Site Infection Report (SSI) (V4) (required) HAI Urinary Tract Infection Numerator Report (UTI) (V3) (required) Late Onset Sepsis/Meningitis Event (LOS) Report (V3) (optional) Ventilator Associated Event (VAE) Report (V3) (required)	Pathogen Identified Observation (optional) MDRO/CDI Observation (optional) Findings Organizer (optional)

The Findings Section in an Infection-Type Report records whether infection organisms were identified and, if so, records details about them.

Table 75: Findings Section in an Infection-Type Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45)					
templateId	1..1	SHALL		86-22371	
@root	1..1	SHALL		86-22372	2.16.840.1.113883.10.20.5.5.45
code	1..1	SHALL		86-22373	
@code	1..1	SHALL		86-22374	18769-0
@codeSystem	1..1	SHALL		86-28357	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	0..3	MAY		86-23048	
organizer	1..1	SHALL		86-23049	Findings Organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.182)
entry	0..1	MAY		86-23051	
observation	1..1	SHALL		86-23052	Pathogen Identified Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.145)
entry	0..1	MAY		86-23054	
observation	1..1	SHALL		86-23055	MDRO/CDI Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.142)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22371) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.45" (CONF:86-22372).
3. **SHALL** contain exactly one [1..1] **code** (CONF:86-22373).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="18769-0" Findings Section (CONF:86-22374).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28357).
4. **MAY** contain [0..3] **entry** (CONF:86-23048) such that it
 - a. **SHALL** contain exactly one [1..1] [Findings Organizer](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.182) (CONF:86-23049).
 - b. If pathogens were identified, the Findings Section **SHALL** contain at least one and no more than three entry elements containing a Findings Organizer reporting pathogens identified (CONF:86-23050).
5. **MAY** contain zero or one [0..1] **entry** (CONF:86-23051) such that it

- a. **SHALL** contain exactly one [1..1] [Pathogen Identified Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.145) (CONF:86-23052).
 - b. If no pathogens were identified, the Findings Section **SHALL** contain a single entry element containing a Pathogen Identified Observation reporting that no pathogens were identified (CONF:86-23053).
6. **MAY** contain zero or one [0..1] **entry** (CONF:86-23054) such that it
- a. **SHALL** contain exactly one [1..1] [MDRO/CDI Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.142) (CONF:86-23055).
 - b. If pathogens were identified, and the report is a UTI, SSI, VAE, or BSI Report, an entry element **SHALL** be present, containing an MDRO/CDI Observation (CONF:86-23056).

Figure 8: Findings Section in an Infection-Type Report Example - Pathogen(s) Identified

```

<section>
  <!-- HAI Generic section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- HAI Findings section in an infection-type report template -->
  <templateId root="2.16.840.1.113883.10.20.5.5.45"/>
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="18769-0"
        displayName="Findings Section"/>
  <title>Findings</title>
  ...
  <entry>
    <organizer>
      <!-- Findings Organizer -->
      <templateId root="2.16.840.1.113883.10.20.5.6.182"/>
      ...
    </organizer>
  </entry>
  <entry typeCode="DRIV">
    <observation>
      <!-- MDRO/CDI Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.142"/>
      ...
    </observation>
  </entry>
</section>

```

Figure 9: Findings Section in an Infection-Type Report Example - No pathogens identified

```
<section>
  <!-- HAI Generic section template -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- HAI Findings section in an infection-type report template -->
  <templateId root="2.16.840.1.113883.10.20.5.5.45" />
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="18769-0"
    displayName="Findings" />
  <title>Findings</title>
  <text>...</text>
  <!-- No pathogens identified -->
  <entry>
    <!-- Pathogen Identified Observation -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- [C-CDA R1.1] Result Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2" />
      <!-- [HAI R1] Pathogen Identified Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.145" />
      <id nullFlavor="NA" />
      <code code="41852-5"
        displayName="Microorganism identified"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" />
      <statusCode code="completed" />
      <effectiveTime nullFlavor="NA" />
      <value xsi:type="CD" code="3119-7"
        displayName="No pathogen identified"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="cdcNHSN" />
    </observation>
  </entry>
</section>
```

2.1.8 Findings Section in an OPC SSI Report

```
[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.70:2019-04-01
(closed)]
```

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Release 3, STU 4 - US Realm

Table 76: Findings Section in an OPC SSI Report Contexts

Contained By:	Contains:
Outpatient Procedure Surgical Site Infection (SSI) Event Report [V2] (required)	Pathogen Identified Observation (optional) Findings Organizer (optional)

The Findings Section in an OPC SSI Report records whether infection organisms were identified and, if so, records details about them.

Table 77: Findings Section in an OPC SSI Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.70:2019-04-01)					
templateId	1..1	SHALL		4395-30776	
@root	1..1	SHALL		4395-30781	2.16.840.1.113883.10.20.5.5.70
@extension	1..1	SHALL		4395-30785	2019-04-01
code	1..1	SHALL		4395-30777	
@code	1..1	SHALL		4395-30782	18769-0
@codeSystem	1..1	SHALL		4395-30783	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	0..3	MAY		4395-30774	
organizer	1..1	SHALL		4395-30775	Findings Organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.182)
entry	0..1	MAY		4395-30778	
observation	1..1	SHALL		4395-30779	Pathogen Identified Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.145)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30776) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.70" (CONF:4395-30781).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30785).
3. **SHALL** contain exactly one [1..1] **code** (CONF:4395-30777).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="18769-0" Findings Section (CONF:4395-30782).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4395-30783).

This section must contain either a Findings Organizer detailing identified pathogens or a Pathogen Identified Observation reporting that no pathogens were identified. Both a Findings Organizer and a Pathogen Identified Observation cannot be present at the same time.

4. **MAY** contain [0..3] **entry** (CONF:4395-30774) such that it

- a. **SHALL** contain exactly one [1..1] [Findings Organizer](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.182) (CONF:4395-30775).
 - b. If pathogens were identified, the Findings Section **SHALL** contain at least one and no more than three entry elements containing a Findings Organizer reporting pathogens identified (CONF:4395-30780).
5. **MAY** contain zero or one [0..1] **entry** (CONF:4395-30778) such that it
 - a. **SHALL** contain exactly one [1..1] [Pathogen Identified Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.145) (CONF:4395-30779).
 - b. If no pathogens were identified, the Findings Section **SHALL** contain a single entry element containing a Pathogen Identified Observation reporting that no pathogens were identified (CONF:4395-30784).

Figure 10: Findings Section in an OPC SSI Report Example - Pathogen(s) Identified

```

<section>
  <!-- HAI Generic section template -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3D4] HAI Findings Section in an OPC SSI report -->
  <templateId root="2.16.840.1.113883.10.20.5.5.70" extension="2019-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="18769-0"
    displayName="Findings" />
  <title>Findings</title>
  <text>...</text>
  <entry typeCode="DRIV">
    <organizer classCode="CLUSTER" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.5.6.182" />
      ...
    </organizer>
    <!-- end of Findings organizer for the first organism -->
  </entry>
  <entry typeCode="DRIV">
    <organizer classCode="CLUSTER" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.5.6.182" />
      ...
    </organizer>
    <!-- end of Findings organizer for the second organism -->
  </entry>
  <entry typeCode="DRIV">
    <organizer classCode="CLUSTER" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.5.6.182" />
      ...
    </organizer>
    <!-- end of Findings organizer for the third organism -->
  </entry>
</section>

```

Figure 11: Findings Section in an OPC SSI Report Example - No Pathogens Identified

```
<section>
  <!-- HAI Generic section template -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3D4] HAI Findings Section in an OPC SSI report -->
  <templateId root="2.16.840.1.113883.10.20.5.5.70" extension="2019-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="18769-0"
    displayName="Findings" />
  <title>Findings</title>
  <text>...</text>
  <entry>
    <!-- Pathogen Identified Observation -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- [C-CDA R1.1] Result Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2" />
      <!-- [HAI R1] Pathogen Identified Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.145" />
      <id nullFlavor="NA" />
      <code code="41852-5"
        displayName="Microorganism identified"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" />
      <statusCode code="completed" />
      <effectiveTime nullFlavor="NA" />
      <value xsi:type="CD" code="3119-7"
        displayName="No pathogen identified"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="cdcNHSN" />
    </observation>
  </entry>
</section>
```

2.1.9 Infection Details in Late Onset Sepsis Report

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.64:2018-04-01 (open)]

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Release 3, STU 3 - US Realm

Table 78: Infection Details in Late Onset Sepsis Report Contexts

Contained By:	Contains:
Late Onset Sepsis/Meningitis Event (LOS) Report (V3) (required)	Death Observation (required) Infection-Type Observation (required) Inborn/Outborn Observation (required)

This template represents the event details of a late onset sepsis report.

Table 79: Infection Details in Late Onset Sepsis Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.64:2018-04-01)					
templateId	1..1	SHALL		3357-30742	
@root	1..1	SHALL		3357-30743	2.16.840.1.113883.10.20.5.5.64
@extension	1..1	SHALL		3357-30744	2018-04-01
code	1..1	SHALL		3357-30784	
@code	1..1	SHALL		3357-30785	51899-3
@codeSystem	1..1	SHALL		3357-30786	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		3357-30816	
observation	1..1	SHALL		3357-30817	Infection-Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139)
entry	1..1	SHALL		3357-30818	
observation	1..1	SHALL		3357-30819	Inborn/Outborn Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.257:2018-04-01)
entry	1..1	SHALL		3357-30787	
observation	1..1	SHALL		3357-30788	Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-30742) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.64" (CONF:3357-30743).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2018-04-01" (CONF:3357-30744).
3. **SHALL** contain exactly one [1..1] **code** (CONF:3357-30784).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51899-3" Details Section (CONF:3357-30785).

- b. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:3357-30786).
- 4. **SHALL** contain exactly one [1..1] **entry** (CONF:3357-30816) such that it
 - a. **SHALL** contain exactly one [1..1] [Infection-Type Observation](#) (identifier:
urn:oid:2.16.840.1.113883.10.20.5.6.139) (CONF:3357-30817).
- 5. **SHALL** contain exactly one [1..1] **entry** (CONF:3357-30818) such that it
 - a. **SHALL** contain exactly one [1..1] [Inborn/Outborn Observation](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.5.6.257:2018-04-01) (CONF:3357-30819).
- 6. **SHALL** contain exactly one [1..1] **entry** (CONF:3357-30787) such that it
 - a. **SHALL** contain exactly one [1..1] [Death Observation](#) (identifier:
urn:oid:2.16.840.1.113883.10.20.5.6.120) (CONF:3357-30788).

Figure 12: Infection Details in Late Onset Sepsis Report Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3D3] Infection Details in Late Onset Sepsis Report -->
  <templateId root="2.16.840.1.113883.10.20.5.5.64" extension="2018-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="51899-3"
    displayName="Details" />
  <title>Details Section</title>
  <text>...</text>
  <entry typeCode="DRIV">
    <!-- Infection-Type Observation -->
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [C-CDA R1.1] Problem Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- [HAI R2N1] Infection-Type Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.139"/>
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <!-- Inborn/Outborn Observation -->
    <observation classCode="OBS" moodCode="EVN" negationInd="true">
      <!-- [HAI R3D3] Inborn/Outborn Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.257" extension="2018-04-01"/>
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <!-- Death Observation -->
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [C-CDA R1.1] Deceased Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.79" />
      <!-- Death Observation in an Infection-type -->
      <templateId root="2.16.840.1.113883.10.20.5.6.120" />
      ...
    </observation>
  </entry>
</section>
```

2.1.10 Infection Details Section in a BSI Report

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.38 (closed)]

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Table 80: Infection Details Section in a BSI Report Contexts

Contained By:	Contains:
HAI Bloodstream Infection Report (BSI) (V5) (required)	Death Observation (optional) Post-Procedure Observation (optional) Infection-Type Observation (required)

This section records the infection type, with details, as well as whether the reported infection occurred during a post-procedure period. If the patient died, NHSN protocol requires that the death be recorded.

Table 81: Infection Details Section in a BSI Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.38)					
templateId	1..1	SHALL		86-22310	
@root	1..1	SHALL		86-22311	2.16.840.1.113883.10.20.5.5.38
code	1..1	SHALL		86-22312	
@code	1..1	SHALL		86-22313	51899-3
@codeSystem	1..1	SHALL		86-28358	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		86-22314	
observation	1..1	SHALL		86-22315	Infection-Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139)
entry	0..1	MAY		86-22316	
observation	1..1	SHALL		86-22317	Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120)
entry	0..1	MAY		86-22318	
observation	1..1	SHALL		86-22319	Post-Procedure Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.150)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22310) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.38" (CONF:86-22311).
- 3. **SHALL** contain exactly one [1..1] **code** (CONF:86-22312).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51899-3" Details Section (CONF:86-22313).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28358).
- 4. **SHALL** contain exactly one [1..1] **entry** (CONF:86-22314) such that it
 - a. **SHALL** contain exactly one [1..1] Infection-Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139) (CONF:86-22315).
- 5. **MAY** contain zero or one [0..1] **entry** (CONF:86-22316) such that it
 - a. **SHALL** contain exactly one [1..1] Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120) (CONF:86-22317).
- 6. **MAY** contain zero or one [0..1] **entry** (CONF:86-22318) such that it
 - a. **SHALL** contain exactly one [1..1] Post-Procedure Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.150) (CONF:86-22319).

Figure 13: Infection Details Section in a BSI Report Example

```
<section>
  <!-- HAI Generic Section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- HAI Infection Details Section in a BSI report template-->
  <templateId root="2.16.840.1.113883.10.20.5.5.38"/>
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51899-3"
        displayName="Details Section"/>
  <title> Details </title>
  ...
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- Infection-Type Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.139"/>
      ...
    </observation>
  </entry>

  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Deceased Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.79"/>
      <!-- Death Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.120"/>
      ...
    </observation>
  </entry>

  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="true">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- Post-Procedure Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.150"/>
      ...
    </observation>
  </entry>
</section>
```

2.1.11 Infection Details Section in a UTI Report

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.40 (closed)]

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Release 1 - US Realm

Table 82: Infection Details Section in a UTI Report Contexts

Contained By:	Contains:
HAI Urinary Tract Infection Numerator Report (UTI) (V3) (required)	Death Observation (optional) Post-Procedure Observation (optional) Infection-Type Observation (required)

This section records the infection type, with details. If the patient died, NHSN protocol requires that the death be recorded.

Table 83: Infection Details Section in a UTI Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.40)					
templateId	1..1	SHALL		86-22328	
@root	1..1	SHALL		86-22329	2.16.840.1.113883.10.20.5.5.40
code	1..1	SHALL		86-22330	
@code	1..1	SHALL		86-22331	51899-3
@codeSystem	1..1	SHALL		86-28359	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		86-22332	
observation	1..1	SHALL		86-22333	Infection-Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139)
entry	0..1	MAY		86-22334	
observation	1..1	SHALL		86-22335	Post-Procedure Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.150)
entry	0..1	MAY		86-22336	
observation	1..1	SHALL		86-22337	Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22328) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.40" (CONF:86-22329).
- 3. **SHALL** contain exactly one [1..1] **code** (CONF:86-22330).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51899-3" Details Section (CONF:86-22331).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28359).
- 4. **SHALL** contain exactly one [1..1] **entry** (CONF:86-22332) such that it
 - a. **SHALL** contain exactly one [1..1] Infection-Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139) (CONF:86-22333).
- 5. **MAY** contain zero or one [0..1] **entry** (CONF:86-22334) such that it
 - a. **SHALL** contain exactly one [1..1] Post-Procedure Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.150) (CONF:86-22335).
- 6. **MAY** contain zero or one [0..1] **entry** (CONF:86-22336) such that it
 - a. **SHALL** contain exactly one [1..1] Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120) (CONF:86-22337).

Figure 14: Infection Details Section in a UTI Report Example

```
<section>
  <!-- HAI Generic Section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- HAI Infection Details Section in a UTI report template -->
  <templateId root="2.16.840.1.113883.10.20.5.5.40"/>
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51899-3"
        displayName="Details Section"/>
  <title>Details</title>
  ...
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- Infection-Type Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.139"/>
      ...
    </observation>
  </entry>

  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Deceased Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.79"/>
      <!-- Death Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.120"/>
      ...
    </observation>
  </entry>

  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="true">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- Post-Procedure Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.150"/>
      ...
    </observation>
  </entry>
</section>
```

2.1.12 Infection Details Section in a VAE Report

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.59:2017-04-01 (closed)]

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Table 84: Infection Details Section in a VAE Report Contexts

Contained By:	Contains:
Ventilator Associated Event (VAE) Report (V3) (required)	Death Observation (required) Post-Procedure Observation (optional) Infection-Type Observation (required)

This section records the infection type, with details, as well as whether the reported infection occurred during a post-procedure period. If the patient died, NHSN protocol requires that the death be recorded.

Table 85: Infection Details Section in a VAE Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.59:2017-04-01)					
templateId	1..1	SHALL		3311-125	
@root	1..1	SHALL		3311-130	2.16.840.1.113883.10.20.5.5.59
@extension	1..1	SHALL		3311-135	2017-04-01
code	1..1	SHALL		3311-126	
@code	1..1	SHALL		3311-131	51899-3
@codeSystem	1..1	SHALL		3311-132	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		3311-124	
observation	1..1	SHALL		3311-129	Infection-Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139)
entry	1..1	SHALL		3311-127	
observation	1..1	SHALL		3311-133	Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120)
entry	0..1	MAY		3311-128	
observation	1..1	SHALL		3311-134	Post-Procedure Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.150)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3311-125) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.59" (CONF:3311-130).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-04-01" (CONF:3311-135).
3. **SHALL** contain exactly one [1..1] **code** (CONF:3311-126).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51899-3" Details Section (CONF:3311-131).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3311-132).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:3311-124) such that it
 - a. **SHALL** contain exactly one [1..1] Infection-Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139) (CONF:3311-129).
5. **SHALL** contain exactly one [1..1] **entry** (CONF:3311-127) such that it
 - a. **SHALL** contain exactly one [1..1] Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120) (CONF:3311-133).
6. **MAY** contain zero or one [0..1] **entry** (CONF:3311-128) such that it
 - a. **SHALL** contain exactly one [1..1] Post-Procedure Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.150) (CONF:3311-134).

Figure 15: Infection Details Section in a VAE Report Example

```
<section>
  <!-- HAI Section Generic Constraints -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3D2] Infection Details Section in a VAE Report -->
  <templateId root="2.16.840.1.113883.10.20.5.5.59" extension="2017-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51899-3"
        displayName="Details" />
  <title>Details</title>
  <text/>
  <entry typeCode="DRIV">
    <!-- Infection Type Observation -->
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [C-CDA R1.1] Problem Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" />
      <!-- [HAI] Infection Type Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.139" />
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <!-- Death Observation -->
    <!-- Not negated: this patient died -->
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [C-CDA R1.1] Deceased Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.79" />
      <!-- Death Observation in an Infection-type -->
      <templateId root="2.16.840.1.113883.10.20.5.6.120" />
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <!-- Post-procedure Observation -->
    <!-- negationInd = false: the infection was post-procedure -->
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [C-CDA R1.1] Problem Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" />
      <!-- [HAI] Post-procedure Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.150" />
      ...
    </observation>
  </entry>
</section>
```

2.1.13 Infection Details Section in an OPC SSI Report

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.69:2019-04-01 (closed)]

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Table 86: Infection Details Section in an OPC SSI Report Contexts

Contained By:	Contains:
Outpatient Procedure Surgical Site Infection (SSI) Event Report (V2) (required)	Infection-Type Observation in an OPC SSI Event (required) Procedure Details in an OPC SSI Event (required)

This section records the infection type, with details. It records SSI level, all identification criteria used to identify this SSI event, and identified pathogen(s).

Table 87: Infection Details Section in an OPC SSI Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.69:2019-04-01)					
templateId	1..1	SHALL		4395-30722	
@root	1..1	SHALL		4395-30734	2.16.840.1.113883.10.20.5.5.69
@extension	1..1	SHALL		4395-30737	2019-04-01
code	1..1	SHALL		4395-30723	
@code	1..1	SHALL		4395-30735	51899-3
@codeSystem	1..1	SHALL		4395-30736	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		4395-30724	
observation	1..1	SHALL		4395-30725	Infection-Type Observation in an OPC SSI Event (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.263:2019-04-01)
entry	1..1	SHALL		4395-30732	
procedure	1..1	SHALL		4395-30733	Procedure Details in an OPC SSI Event (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.265:2019-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30722) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.69" (CONF:4395-30734).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30737).
3. **SHALL** contain exactly one [1..1] **code** (CONF:4395-30723).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51899-3" Details Section (CONF:4395-30735).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4395-30736).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-30724) such that it
 - a. **SHALL** contain exactly one [1..1] [Infection-Type Observation in an OPC SSI Event](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.263:2019-04-01) (CONF:4395-30725).
5. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-30732) such that it
 - a. **SHALL** contain exactly one [1..1] [Procedure Details in an OPC SSI Event](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.265:2019-04-01) (CONF:4395-30733).

Figure 16: Infection Details Section in an OPC SSI Report Example

```
<section>
  <!-- HAI Generic Section template -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3D4] HAI Infection Details Section in an Outpatient SSI Report -->
  <templateId root="2.16.840.1.113883.10.20.5.5.69" extension="2019-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="51899-3"
displayName="Event Details" />
  <title>Event Details</title>
  <text>...</text>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [C-CDA R1.1] Problem Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" />
      <!-- [HAI R2.1] Infection Type Observation in an OPC SSI Event -->
      <templateId root="2.16.840.1.113883.10.20.5.6.263" extension="2019-04-01" />
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <!-- Procedure Details Clinical Statement in an Infection-type Report -->
    <procedure classCode="PROC" moodCode="EVN">
      <!-- [C-CDA R1.1] Procedure Activity Procedure -->
      <templateId root="2.16.840.1.113883.10.20.22.4.14" />
      <!-- [HAI R3D4] Procedure Details in an OPC SSI Event -->
      <templateId root="2.16.840.1.113883.10.20.5.6.265" extension="2019-04-01" />
      ...
    </procedure>
  </entry>
</section>
```

2.1.14 Infection Details Section in an SSI Report (V2)

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.39.2 (closed)]

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Release 2, DSTU 1 - US Realm

Table 88: Infection Details Section in an SSI Report (V2) Contexts

Contained By:	Contains:
HAI Surgical Site Infection Report (SSI) (V4) (required)	Death Observation (optional) Infection-Type Observation (required) Procedure Details Clinical Statement in an Infection-Type Report (required) Infection Present at the Time of Surgery Observation (required) SSI Detected Using Toolkit Observation (required)

This section records the infection type, with details. It records whether the infection was present at the time of surgery and whether the SSI was identified through the use of discharge diagnosis or procedure codes. If the patient died, NHSN protocol requires that the death be recorded.

Table 89: Infection Details Section in an SSI Report (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.39.2)					
templateId	1..1	SHALL		1101-22320	
@root	1..1	SHALL		1101-30273	2.16.840.1.113883.10.20.5.5.39.2
code	1..1	SHALL		1101-22322	
@code	1..1	SHALL		1101-22323	51899-3
@codeSystem	1..1	SHALL		1101-30313	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		1101-22324	
observation	1..1	SHALL		1101-22325	Infection-Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139)
entry	0..1	MAY		1101-22326	
observation	1..1	SHALL		1101-22327	Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120)
entry	1..1	SHALL		1101-30274	
observation	1..1	SHALL		1101-30275	Infection Present at the Time of Surgery Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.205)
entry	1..1	SHALL		1101-30294	
observation	1..1	SHALL		1101-30295	SSI Detected Using Toolkit Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.206)
entry	1..1	SHALL		1101-30296	
procedure	1..1	SHALL		1101-30297	Procedure Details Clinical Statement in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.154)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1101-22320) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.39.2" (CONF:1101-30273).
3. **SHALL** contain exactly one [1..1] **code** (CONF:1101-22322).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51899-3" Details Section (CONF:1101-22323).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1101-30313).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:1101-22324) such that it
 - a. **SHALL** contain exactly one [1..1] [Infection-Type Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139) (CONF:1101-22325).
5. **MAY** contain zero or one [0..1] **entry** (CONF:1101-22326) such that it
 - a. **SHALL** contain exactly one [1..1] [Death Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120) (CONF:1101-22327).
6. **SHALL** contain exactly one [1..1] **entry** (CONF:1101-30274) such that it
 - a. **SHALL** contain exactly one [1..1] [Infection Present at the Time of Surgery Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.205) (CONF:1101-30275).
7. **SHALL** contain exactly one [1..1] **entry** (CONF:1101-30294) such that it
 - a. **SHALL** contain exactly one [1..1] [SSI Detected Using Toolkit Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.206) (CONF:1101-30295).
8. **SHALL** contain exactly one [1..1] **entry** (CONF:1101-30296) such that it
 - a. **SHALL** contain exactly one [1..1] [Procedure Details Clinical Statement in an Infection-Type Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.154) (CONF:1101-30297).

Figure 17: Infection Details Section in an SSI Report Example

```
<!-- HAI Generic Section template -->
< templateId root="2.16.840.1.113883.10.20.5.4.26"/>
<!-- HAI Infection Details Section in an SSI Report template -->
<templateId root="2.16.840.1.113883.10.20.5.5.39.2"/>
<code codeSystem="2.16.840.1.113883.6.1"
      codeSystemName="LOINC"
      code="51899-3"
      displayName="Details Section"/>
<title>Details</title>
...
<entry typeCode="DRIV">
  <observation classCode="OBS" moodCode="EVN" negationInd="false">
    <!-- C-CDA Problem Observation templateId -->
    <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
    <!-- Infection-Type Observation template -->
    <templateId root="2.16.840.1.113883.10.20.5.6.139"/>
    ...
  </observation>
</entry>

<entry typeCode="DRIV">
  <observation classCode="OBS" moodCode="EVN" negationInd="false">
    <!-- C-CDA Deceased Observation templateId -->
    <templateId root="2.16.840.1.113883.10.20.22.4.79"/>
    <!-- Death Observation template -->
    <templateId root="2.16.840.1.113883.10.20.5.6.120"/>
    ...
  </observation>
</entry>

<entry typeCode="DRIV">
  <observation classCode="OBS" moodCode="EVN" negationInd="false">
    <!-- C-CDA Problem Observation -->
    <templateId root="2.16.840.1.113883.10.20.22.4.4" />
    <!-- Infection Present at the Time of Surgery Observation -->
    <templateId root="2.16.840.1.113883.10.20.5.6.205"/>
    ...
  </observation>
</entry>

<entry typeCode="DRIV">
  <observation classCode="OBS" moodCode="EVN" negationInd="false">
    <!-- SSI Detected Using Toolkit Observation -->
    <templateId root="2.16.840.1.113883.10.20.5.6.206"/>
    ...
  </observation>
</entry>

<entry typeCode="DRIV">
  <procedure classCode="PROC" moodCode="EVN">
    <!-- C-CDA Procedure Activity Procedure template -->
    <templateId root="2.16.840.1.113883.10.20.22.4.14" />
    <!-- Procedure Details Clinical Statement in an Infection-Type Report template -->
    <templateId root="2.16.840.1.113883.10.20.5.6.154"/>
    ...
  </procedure>
</entry>
</section>
```

2.1.15 Infection Risk Factors Section in a BSI Report (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2018-04-01
(closed)]

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Table 90: Infection Risk Factors Section in a BSI Report (V3) Contexts

Contained By:	Contains:
HAI Bloodstream Infection Report (BSI) (V5) (required)	Infection Risk Factors Measurement Observation (optional) Infection Risk Factors Observation (required) Hemodialysis Catheter Present (required) Extracorporeal Life Support Present (required) Ventricular Assist Device (VAD) Present (required) Known or Suspected Munchhausen's By Proxy Observation (required) Observed or Suspected Patient Injection into Vascular Line Observation (required) Epidermolysis Bullosa Observation (required) Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation (required)

In a Bloodstream Infection (BSI) Report, the Infection Risk Factors Section contains Infection Risk Factors Observations and optional Infection Risk Factors Measurement Observations depending on the location type, specified by

ClinicalDocument/componentOf/encompassingEncounter/location/healthcareFacility/code.

Some information requirements in this template depend on the location reporting the infection: ICU/Other (ICU or any other location except for Specialty Care Areas), SCA (Specialty Care Areas), or NICU (Neonatal Intensive Care Unit).

Table 91: Infection Risk Factors Section in a BSI Report (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2018-04-01)					
templateId	1..1	SHALL		3357-22266	
@root	1..1	SHALL		3357-22267	2.16.840.1.113883.10.20.5.5.33
@extension	1..1	SHALL		3357-28433	2018-04-01
code	1..1	SHALL		3357-22268	
@code	1..1	SHALL		3357-22269	51898-5
@codeSystem	1..1	SHALL		3357-28360	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..2	SHALL		3357-23203	
observation	1..1	SHALL		3357-23204	Infection Risk Factors Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.138)
entry	0..1	MAY		3357-23208	
observation	1..1	SHALL		3357-23209	Infection Risk Factors Measurement Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.137)
entry	1..1	SHALL		3357-28361	
procedure	1..1	SHALL		3357-28464	Hemodialysis Catheter Present (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.245:2017-04-01)
entry	1..1	SHALL		3357-28362	
procedure	1..1	SHALL		3357-28465	Ventricular Assist Device (VAD) Present (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.247:2017-04-01)
entry	1..1	SHALL		3357-28363	
procedure	1..1	SHALL		3357-28466	Extracorporeal Life Support Present (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.246:2017-04-01)

XPath	Card.	Verb	Data Type	CONF#	Value
entry	1..1	SHALL		3357-30668	
observation	1..1	SHALL		3357-30669	Known or Suspected Munchhausen's By Proxy Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.250:2018-04-01)
entry	1..1	SHALL		3357-30670	
observation	1..1	SHALL		3357-30671	Epidermolysis Bullosa Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.252:2018-04-01)
entry	1..1	SHALL		3357-30672	
observation	1..1	SHALL		3357-30673	Observed or Suspected Patient Injection into Vascular Line Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.251:2018-04-01)
entry	1..1	SHALL		3357-30693	
observation	1..1	SHALL		3357-30694	Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.253:2018-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-22266) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.33" (CONF:3357-22267).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2018-04-01" (CONF:3357-28433).
3. **SHALL** contain exactly one [1..1] **code** (CONF:3357-22268).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51898-5" Risk Factors Section (CONF:3357-22269).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3357-28360).
4. **SHALL** contain at least one and not more than 2 **entry** (CONF:3357-23203) such that it
 - a. **SHALL** contain exactly one [1..1] [Infection Risk Factors Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.138) (CONF:3357-23204).

- b. If the location type represents an ICU/Other location (ICU or any other location except for SCA or NICU), this entry element **SHALL** be present containing an Infection Risk Factors Observation representing whether a central line was present (CONF:3357-23205).
 - c. If the location type represents an SCA location, an entry element **SHALL** be present containing an Infection Risk Factors Observation representing whether a permanent central line was present, and an entry element containing an Infection Risk Factors Observation representing whether a Temporary Central Line was present (CONF:3357-23206).
 - d. If the location type represents an NICU location, an entry element **SHALL** be present containing an Infection Risk Factors Observation representing whether a central line was present (CONF:3357-23207).
- 5. **MAY** contain zero or one [0..1] **entry** (CONF:3357-23208) such that it
 - a. **SHALL** contain exactly one [1..1] Infection Risk Factors Measurement Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.137) (CONF:3357-23209).
 - b. If the location type represents an NICU location, an entry element **SHALL** be present containing an Infection Risk Factors Measurement Observation representing the birth weight (CONF:3357-23210).
- 6. **SHALL** contain exactly one [1..1] **entry** (CONF:3357-28361) such that it
 - a. **SHALL** contain exactly one [1..1] Hemodialysis Catheter Present (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.245:2017-04-01) (CONF:3357-28464).
- 7. **SHALL** contain exactly one [1..1] **entry** (CONF:3357-28362) such that it
 - a. **SHALL** contain exactly one [1..1] Ventricular Assist Device (VAD) Present (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.247:2017-04-01) (CONF:3357-28465).
- 8. **SHALL** contain exactly one [1..1] **entry** (CONF:3357-28363) such that it
 - a. **SHALL** contain exactly one [1..1] Extracorporeal Life Support Present (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.246:2017-04-01) (CONF:3357-28466).
- 9. **SHALL** contain exactly one [1..1] **entry** (CONF:3357-30668) such that it
 - a. **SHALL** contain exactly one [1..1] Known or Suspected Munchausen's By Proxy Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.250:2018-04-01) (CONF:3357-30669).
- 10. **SHALL** contain exactly one [1..1] **entry** (CONF:3357-30670) such that it
 - a. **SHALL** contain exactly one [1..1] Epidermolysis Bullosa Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.252:2018-04-01) (CONF:3357-30671).
- 11. **SHALL** contain exactly one [1..1] **entry** (CONF:3357-30672) such that it
 - a. **SHALL** contain exactly one [1..1] Observed or Suspected Patient Injection into Vascular Line Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.251:2018-04-01) (CONF:3357-30673).

12. **SHALL** contain exactly one [1..1] **entry** (CONF:3357-30693) such that it
- a. **SHALL** contain exactly one [1..1] [Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.253:2018-04-01) (CONF:3357-30694).

Figure 18: Infection Risk Factors Section in BSI Report (V3) Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <templateId root="2.16.840.1.113883.10.20.5.5.33" extension="2018-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" 2.16.840.1.113883.10.20.5.5.33
    code="51898-5"
    displayName="Risk Factors" />
  <title>Risk Factors</title>
  <text>...</text>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [C-CDA R1.1] Problem Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" />
      <!-- [HAI] Infection Risk Factors Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.138" />
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [C-CDA R1.1] Vital Sign Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.27" />
      <!-- [HAI] Infection Risk Factors Measurement Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.137" />
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <procedure classCode="PROC" moodCode="EVN" negationInd="false">
      <!-- [HAI R3D2] Hemodialysis Catheter Present-->
      <templateId root="2.16.840.1.113883.10.20.5.6.245" extension="2017-04-01" />
      ...
    </procedure>
  </entry>
  <entry typeCode="DRIV">
    <procedure classCode="PROC" moodCode="EVN" negationInd="false">
      <!-- [HAI R3D2] Extracorporeal Life Support Present -->
      <templateId root="2.16.840.1.113883.10.20.5.6.246" extension="2017-04-01" />
      <code nullFlavor="UNK" />
      ...
    </procedure>
  </entry>
  <entry typeCode="DRIV">
    <procedure classCode="PROC" moodCode="EVN" negationInd="false">
      <!-- [HAI R3D2] Ventricular Assist Device (VAD) Present -->
      <templateId root="2.16.840.1.113883.10.20.5.6.247" extension="2017-04-01" />
      ...
    </procedure>
  </entry>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [C-CDA R1.1] Problem Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" />
      <!-- [HAI R3D3] Known or Suspected Munchhausen's By Proxy Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.250" extension="2018-04-01" />
```

```

    ...
  </observation>
</entry>
<entry typeCode="DRIV">
  <observation classCode="OBS" moodCode="EVN" negationInd="false">
    <!-- [C-CDA R1.1] Problem Observation -->
    <templateId root="2.16.840.1.113883.10.20.22.4.4" />
    <!-- [HAI R3D3] Observed or Suspected Patient Injection into Vascular Line
Observation -->
    <templateId root="2.16.840.1.113883.10.20.5.6.251" extension="2018-04-01" />
    ...
  </observation>
</entry>
<entry typeCode="DRIV">
  <observation classCode="OBS" moodCode="EVN" negationInd="false">
    <!-- [C-CDA R1.1] Problem Observation -->
    <templateId root="2.16.840.1.113883.10.20.22.4.4" />
    <!-- [HAI R3D3] Epidermolysis Bullosa Observation -->
    <templateId root="2.16.840.1.113883.10.20.5.6.252" extension="2018-04-01" />
    ...
  </observation>
</entry>
<entry typeCode="DRIV">
  <observation classCode="OBS" moodCode="EVN" negationInd="false">
    <!-- [C-CDA R1.1] Problem Observation -->
    <templateId root="2.16.840.1.113883.10.20.22.4.4" />
    <!-- [HAI R3D3] Pus Present in Specimen Site and Matching Organism in Blood and
Specimen -->
    <templateId root="2.16.840.1.113883.10.20.5.6.253" extension="2018-04-01" />
    ...
  </observation>
</entry>
</section>

```

2.1.16 Infection Risk Factors Section in a CLIP Report (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.34:2014-12-01 (closed)]

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Table 92: Infection Risk Factors Section in a CLIP Report (V2) Contexts

Contained By:	Contains:
HAI Central-Line Insertion Practice Numerator Report (V3) (required)	Central-Line Insertion Practice Clinical Statement (V2) (required)
	Antimicrobial Coated Catheter Used Observation (optional)

In a CLIP Report, the Infection Risk Factors Section contains a single Central-Line Insertion Practice Clinical Statement, which contains a set of sequenced events. This section also optionally contains an Antimicrobial Coated Catheter Used Observation.

Table 93: Infection Risk Factors Section in a CLIP Report (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.34:2014-12-01)					
templateId	1..1	SHALL		1129-22277	
@root	1..1	SHALL		1129-28199	2.16.840.1.113883.10.20.5.5.34
@extension	1..1	SHALL		1129-30288	2014-12-01
code	1..1	SHALL		1129-22273	
@code	1..1	SHALL		1129-22274	51898-5
@codeSystem	1..1	SHALL		1129-28198	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		1129-22275	
act	1..1	SHALL		1129-30430	Central-Line Insertion Practice Clinical Statement (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.116:2014-12-01)
entry	0..1	SHOULD		1129-28213	
observation	1..1	SHALL		1129-28214	Antimicrobial Coated Catheter Used Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.217:2014-12-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-22277) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.34" (CONF:1129-28199).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30288).
3. **SHALL** contain exactly one [1..1] **code** (CONF:1129-22273).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51898-5" Risk Factors Section (CONF:1129-22274).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1129-28198).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:1129-22275) such that it
 - a. **SHALL** contain exactly one [1..1] [Central-Line Insertion Practice Clinical Statement \(V2\)](#) (identifier:

urn:hl7ii:2.16.840.1.113883.10.20.5.6.116:2014-12-01) (CONF:1129-30430).

5. **SHOULD** contain zero or one [0..1] **entry** (CONF:1129-28213) such that it
 - a. **SHALL** contain exactly one [1..1] [Antimicrobial Coated Catheter Used Observation](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.5.6.217:2014-12-01) (CONF:1129-28214).

Figure 19: Infection Risk Factors Section in a CLIP Report Example

```
<section>
  <!-- HAI Generic Section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- HAI Infection Risk Factors Section in a CLIP Report template -->
  <templateId root="2.16.840.1.113883.10.20.5.5.34"
    extension="2014-12-01"/>
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="51898-5"
    displayName="Risk Factors Section"/>
  <title> Risk Factors </title>
  ...
  <entry typeCode="DRIV">
    <act moodCode="EVN" classCode="ACT" negationInd="false">
      <!-- C-CDA Procedure Activity Act templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.12" />
      <!-- Central-Line Insertion Practice Clinical Statement (V2) template-->
      <templateId root="2.16.840.1.113883.10.20.5.6.116"
        extension="2014-12-01" />
      ...
    </act>
  </entry>
  <entry typeCode="DRIV">
    <observation moodCode="EVN" classCode="OBS" negationInd="false">
      <!-- Antimicrobial Coated Catheter Used Observation template-->
      <templateId root="2.16.840.1.113883.10.20.5.6.217"
        extension="2014-12-01" />
      ...
    </observation>
  </entry>
</section>
```

2.1.17 Infection Risk Factors Section in a Procedure Report

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.35 (closed)]

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Release 1 - US Realm

Table 94: Infection Risk Factors Section in a Procedure Report Contexts

Contained By:	Contains:
HAI Procedure Denominator Report (V3) (required)	ASA Class Observation (optional) Weight Observation (required) Height Observation (required) Trauma Observation (required) Diabetes Mellitus Observation (required) Procedure Risk Factors Clinical Statement in a Procedure Report (required) Duration of Labor Observation (optional)

In an HAI Procedure Denominator Report, the Infection Risk Factors Section contains procedure risk factors, trauma, diabetes mellitus, height, and weight observations. Optionally contained in this section are ASA class (if the patient is an inpatient) and duration of labor (if the procedure was a Cesarean) observations.

Table 95: Infection Risk Factors Section in a Procedure Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.35)					
templateId	1..1	SHALL		86-22279	
@root	1..1	SHALL		86-22280	2.16.840.1.113883.10.20.5.5.35
code	1..1	SHALL		86-22281	
@code	1..1	SHALL		86-22282	51898-5
@codeSystem	1..1	SHALL		86-28361	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		86-22283	
procedure	1..1	SHALL		86-22284	Procedure Risk Factors Clinical Statement in a Procedure Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.156)
entry	1..1	SHALL		86-22285	
observation	1..1	SHALL		86-22286	Trauma Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.170)
entry	1..1	SHALL		86-22287	
observation	1..1	SHALL		86-22288	Diabetes Mellitus Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.123)
entry	1..1	SHALL		86-22289	
observation	1..1	SHALL		86-22290	Height Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.131)
entry	1..1	SHALL		86-22291	
observation	1..1	SHALL		86-22292	Weight Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.173)
entry	0..1	MAY		86-23211	
observation	1..1	SHALL		86-23212	ASA Class Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.113)
entry	0..1	MAY		86-23214	
observation	1..1	SHALL		86-23215	Duration of Labor Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.127)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22279) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.35" (CONF:86-22280).
3. **SHALL** contain exactly one [1..1] **code** (CONF:86-22281).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51898-5" Risk Factors Section (CONF:86-22282).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28361).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:86-22283) such that it
 - a. **SHALL** contain exactly one [1..1] [Procedure Risk Factors Clinical Statement in a Procedure Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.156) (CONF:86-22284).
5. **SHALL** contain exactly one [1..1] **entry** (CONF:86-22285) such that it
 - a. **SHALL** contain exactly one [1..1] [Trauma Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.170) (CONF:86-22286).
6. **SHALL** contain exactly one [1..1] **entry** (CONF:86-22287) such that it
 - a. **SHALL** contain exactly one [1..1] [Diabetes Mellitus Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.123) (CONF:86-22288).
7. **SHALL** contain exactly one [1..1] **entry** (CONF:86-22289) such that it
 - a. **SHALL** contain exactly one [1..1] [Height Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.131) (CONF:86-22290).
8. **SHALL** contain exactly one [1..1] **entry** (CONF:86-22291) such that it
 - a. **SHALL** contain exactly one [1..1] [Weight Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.173) (CONF:86-22292).
9. **MAY** contain zero or one [0..1] **entry** (CONF:86-23211) such that it
 - a. **SHALL** contain exactly one [1..1] [ASA Class Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.113) (CONF:86-23212).
 - b. If the patient is an inpatient (componentOf/encompassingEncounter/code/@code="IMP"), an entry element **SHALL** be present containing an ASA Class Observation (CONF:86-23213).
10. **MAY** contain zero or one [0..1] **entry** (CONF:86-23214) such that it
 - a. **SHALL** contain exactly one [1..1] [Duration of Labor Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.127) (CONF:86-23215).
 - b. If the procedure, recorded in the Details Section of the report, was a Cesarean (code/@code is 2115-4), an entry element **SHALL** be present containing a Duration of Labor Observation (CONF:86-23216).

Figure 20: Infection Risk Factors Section in Procedure Report Example

```
<section>
  <!-- HAI Generic Section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- HAI Infection Risk Factors Section in a Procedure Report template -->
  <templateId root="2.16.840.1.113883.10.20.5.5.35"/>
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51898-5"
        displayName="Risk Factors Section"/>
  <title>Risk Factors</title>
  ...
  <entry typeCode="DRIV">
    <procedure classCode="PROC" moodCode="EVN">
      <!-- Procedure Risk Factors Clinical Statement in a Procedure Report template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.156"/>
      ...
    </procedure >
  </entry>

  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- Trauma Observation template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.170"/>
      ...
    </observation>
  </entry>

  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- Diabetes Mellitus Observation template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.123"/>
      ...
    </observation>
  </entry>

  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Vital Sign Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.27"/>
      <!-- Height Observation template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.131"/>
      ...
    </observation>
  </entry>

  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Vital Sign Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.27"/>
      <!-- Weight Observation template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.173"/>
      ...
    </observation>
  </entry>
```

```

<entry typeCode="DRIV">
  <observation classCode="OBS" moodCode="EVN" negationInd="false">
    <!-- C-CDA Problem Observation templateId -->
    <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
    <!-- ASA Class Observation template -->
    <templateId root="2.16.840.1.113883.10.20.5.6.113"/>
    ...
  </observation>
</entry>
<entry typeCode="DRIV">
  <observation classCode="OBS" moodCode="EVN">
    <!-- Duration of Labor Observation template -->
    <templateId root="2.16.840.1.113883.10.20.5.6.127"/>
    ...
  </observation>
</entry>
</section>

```

2.1.18 Infection Risk Factors Section in a UTI Report

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.36 (closed)]

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Release 1 - US Realm

Table 96: Infection Risk Factors Section in a UTI Report Contexts

Contained By:	Contains:
HAI Urinary Tract Infection Numerator Report (UTI V3) (required)	Urinary Catheter Observation (required)

In a UTI Report, the Infection Risk Factors Section contains a single Urinary Catheter Observation.

Table 97: Infection Risk Factors Section in a UTI Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.36)					
templateId	1..1	SHALL		86-22300	
@root	1..1	SHALL		86-22301	2.16.840.1.113883.10.20.5.5.36
code	1..1	SHALL		86-22296	
@code	1..1	SHALL		86-22297	51898-5
@codeSystem	1..1	SHALL		86-28362	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		86-22298	
observation	1..1	SHALL		86-22299	Urinary Catheter Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.171)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22300) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.36" (CONF:86-22301).
3. **SHALL** contain exactly one [1..1] **code** (CONF:86-22296).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51898-5" Risk Factors Section (CONF:86-22297).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28362).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:86-22298).
 - a. This entry **SHALL** contain exactly one [1..1] [Urinary Catheter Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.171) (CONF:86-22299).

Figure 21: Infection Risk Factors Section in a UTI Report Example

```
<section>
  <!-- HAI Generic section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- HAI Infection risk factors section in a UTI report template -->
  <templateId root="2.16.840.1.113883.10.20.5.5.36"/>
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51898-5"
        displayName="Risk Factors Section"/>
  <title>Risk Factors</title>
  ...
  <entry typeCode="DRIV">
    observation classCode="OBS" moodCode="EVN" negationInd="true">
      <!-- C-CDA Problem Observation templateId. -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- HAI Urinary Catheter Observation templateId-->
      <templateId root="2.16.840.1.113883.10.20.5.6.171"/>
      ...
    </observation>
  </entry>
</section>
```

2.1.19 Infection Risk Factors Section in an OPC Denominator for Procedure

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.68:2019-04-01
(closed)]

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Release 3, STU 4 - US Realm

Table 98: Infection Risk Factors Section in an OPC Denominator for Procedure Contexts

Contained By:	Contains:
Outpatient Procedure Component Denominator for Procedure Report (V2) (required)	ASA Class Observation (optional) Weight Observation (required) Height Observation (required) Diabetes Mellitus Observation (required) Procedure Risk Factors Clinical Statement in a Procedure Report (required)

In an OPC Denominator for Procedure, the Infection Risk Factors Section contains procedure risk factors, ASA class, diabetes mellitus, height, and weight observations.

Table 99: Infection Risk Factors Section in an OPC Denominator for Procedure Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.68:2019-04-01)					
templateId	1..1	SHALL		4395-30645	
@root	1..1	SHALL		4395-30661	2.16.840.1.113883.10.20.5.5.68
@extension	1..1	SHALL		4395-30664	2019-04-01
code	1..1	SHALL		4395-30646	
@code	1..1	SHALL		4395-30662	51898-5
@codeSystem	1..1	SHALL		4395-30663	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		4395-30647	
procedure	1..1	SHALL		4395-30648	Procedure Risk Factors Clinical Statement in a Procedure Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.156)
entry	1..1	SHALL		4395-30651	
observation	1..1	SHALL		4395-30652	Diabetes Mellitus Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.123)
entry	1..1	SHALL		4395-30653	
observation	1..1	SHALL		4395-30654	Height Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.131)
entry	1..1	SHALL		4395-30655	
observation	1..1	SHALL		4395-30656	Weight Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.173)
entry	0..1	MAY		4395-30657	
observation	1..1	SHALL		4395-30658	ASA Class Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.113)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30645) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.68" (CONF:4395-30661).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30664).
3. **SHALL** contain exactly one [1..1] **code** (CONF:4395-30646).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51898-5" Risk Factors Section (CONF:4395-30662).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4395-30663).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-30647) such that it
 - a. **SHALL** contain exactly one [1..1] [Procedure Risk Factors Clinical Statement in a Procedure Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.156) (CONF:4395-30648).
5. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-30651) such that it
 - a. **SHALL** contain exactly one [1..1] [Diabetes Mellitus Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.123) (CONF:4395-30652).
6. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-30653) such that it
 - a. **SHALL** contain exactly one [1..1] [Height Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.131) (CONF:4395-30654).
7. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-30655) such that it
 - a. **SHALL** contain exactly one [1..1] [Weight Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.173) (CONF:4395-30656).
8. **MAY** contain zero or one [0..1] **entry** (CONF:4395-30657) such that it
 - a. **SHALL** contain exactly one [1..1] [ASA Class Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.113) (CONF:4395-30658).

Figure 22: Infection Risk Factors Section in an OPC Denominator for Procedure

```
<section>
  <!-- HAI Generic Section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- HAI Infection Risk Factors Section in an OPC Denominator for Procedure -->
  <templateId root="2.16.840.1.113883.10.20.5.5.68" extension="2019-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51898-5"
        displayName="Risk Factors Section"/>
  <title>Risk Factors</title>
  ...
  <entry typeCode="DRIV">
    <procedure classCode="PROC" moodCode="EVN">
      <!-- Procedure Risk Factors Clinical Statement in a Procedure Report template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.156"/>
      ...
    </procedure >
  </entry>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- Diabetes Mellitus Observation template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.123"/>
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Vital Sign Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.27"/>
      <!-- Height Observation template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.131"/>
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Vital Sign Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.27"/>
      <!-- Weight Observation template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.173"/>
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- ASA Class Observation template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.113"/>
      ...
    </observation>
  </entry>
</section>
```


2.1.20 NHSN Comment Section

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 2 - US Realm

Table 100: NHSN Comment Section Contexts

Contained By:	Contains:
Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report (optional) Vascular Access Type Report (VAT) Summary Report (V3) (optional) Outpatient Procedure Component Denominator for Same Day Outcome Measures Report (optional) Antimicrobial Resistance Option (ARO) Summary Report (V3) (optional) Outpatient Procedure Component Denominator for Procedure Report (V2) (optional) HAI Bloodstream Infection Report (BSI) (V5) (optional) Late Onset Sepsis/Meningitis Event (LOS) Report (V3) (required) Outpatient Procedure Component Same Day Outcome Measures Event Report (V2) (optional) Outpatient Procedure Surgical Site Infection (SSI) Event Report (V2) (optional) Ventilator Associated Event (VAE) Report (V3) (optional) Late Onset Sepsis/Meningitis Denominator (LOS/Men Denom) Report (V2) (optional)	NHSN Comment (required)

The NHSN Comment Section contains the NHSN Comment template. This section is not specific to any one report and contains comments that are relevant to the whole report (it is not specific to any section of a report).

Table 101: NHSN Comment Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01)					
templateId	1..1	SHALL		3311-172	
@root	1..1	SHALL		3311-180	2.16.840.1.113883.10.20.5.5.61
@extension	1..1	SHALL		3311-181	2017-04-01
code	1..1	SHALL		3311-173	
@code	1..1	SHALL		3311-182	86468-6
@codeSystem	1..1	SHALL		3311-183	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		3311-179	
act	1..1	SHALL		3311-184	NHSN Comment (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3311-172) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.61" (CONF:3311-180).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-04-01" (CONF:3311-181).
3. **SHALL** contain exactly one [1..1] **code** (CONF:3311-173).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="86468-6" Report Comment Section (CONF:3311-182).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3311-183).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:3311-179) such that it
 - a. **SHALL** contain exactly one [1..1] [NHSN Comment](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01) (CONF:3311-184).

Figure 23: NHSN Comment Section Example

```
<section>
  <!-- HAI Section Generic Constraints -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3D2] NHSN Comment Section -->
  <templateId root="2.16.840.1.113883.10.20.5.5.61" extension="2017-04-01" />
  <code code="86468-6"
    displayName="Report comment section"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" />
  <title>Comment</title>
  <text>...</text>
  <entry typeCode="DRIV">
    <act classCode="ACT" moodCode="EVN">
      <!-- [HAI R3D2] Comment -->
      <templateId root="2.16.840.1.113883.10.20.5.6.243" extension="2017-04-01" />
      ...
    </act>
  </entry>
</section>
```

2.1.21 NHSN Social History Section

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.81:2022-04-01
(open)]

Draft as part of NHSN Healthcare Associated Infection Reports Release 4, STU
2 - US Realm

Table 102: NHSN Social History Section Contexts

Contained By:	Contains:
HAI Single-Person Report Generic Constraints (V2) (required)	Birth Sex Observation (required) Gender Identity Observation (V3) (optional)

This section contains social history templates Birth Sex and Gender Identity.

Table 103: NHSN Social History Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.81:2022-04-01)					
templateId	1..1	SHALL		4523-3	
@root	1..1	SHALL		4523-17	2.16.840.1.113883.10.20.5.5.81
@extension	1..1	SHALL		4523-18	2022-04-01
code	1..1	SHALL		4523-4	
@code	1..1	SHALL		4523-19	29762-2
@codeSystem	1..1	SHALL		4523-20	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		4523-9	
observation	1..1	SHALL		4523-10	Birth Sex Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.200:2016-06-01)
entry	0..*	SHOULD		4523-11	
observation	1..1	SHALL		4523-12	Gender Identity Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.45:2022-06-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-3) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.81" (CONF:4523-17).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-18).
3. **SHALL** contain exactly one [1..1] **code** (CONF:4523-4).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="29762-2" Social History (CONF:4523-19).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4523-20).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:4523-9) such that it
 - a. **SHALL** contain exactly one [1..1] [Birth Sex Observation](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.200:2016-06-01) (CONF:4523-10).
5. **SHOULD** contain zero or more [0..*] **entry** (CONF:4523-11) such that it
 - a. **SHALL** contain exactly one [1..1] [Gender Identity Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.45:2022-06-01) (CONF:4523-12).

Figure 24: NHSN Social History Section Example

```

<component>
  <section>
    <templateId root="2.16.840.1.113883.10.20.5.5.81" extension="2022-04-01" />
    <code code="29762-2" codeSystem="2.16.840.1.113883.6.1" displayName="Social
History" />
    <title>NHSN Social History</title>
    <text>
      . . .
    </text>
    <entry>
      <observation classCode="OBS" moodCode="EVN">
        <!-- [C-CDA CG] Birth Sex Observation -->
        <templateId root="2.16.840.1.113883.10.20.22.4.200" extension="2016-06-01"
/>
      ...
    </observation>
    </entry>
    <entry>
      <observation classCode="OBS" moodCode="EVN">
        <!-- [C-CDA CG] Gender Identity Observation (V3) -->
        <templateId root="2.16.840.1.113883.10.20.34.3.45" extension="2022-06-01"
/>
      ...
    </observation>
    </entry>
  </section>
</component>

```

2.1.22 Procedure Details Section in a CLIP Report

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.42 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 1 - US Realm

Table 104: Procedure Details Section in a CLIP Report Contexts

Contained By:	Contains:
HAI Central-Line Insertion Practice Numerator Report [V3] (required)	Procedure Details Clinical Statement in a CLIP Report (required)

In a CLIP Report, this section records details of the procedure, including the reason for it.

Table 105: Procedure Details Section in a CLIP Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.42)					
templateId	1..1	SHALL		86-22352	
@root	1..1	SHALL		86-22353	2.16.840.1.113883.10.20.5.5.42
code	1..1	SHALL		86-22354	
@code	1..1	SHALL		86-22355	51899-3
@codeSystem	1..1	SHALL		86-28363	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		86-22356	
procedure	1..1	SHALL		86-22357	Procedure Details Clinical Statement in a CLIP Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.155)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22352) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.42" (CONF:86-22353).
3. **SHALL** contain exactly one [1..1] **code** (CONF:86-22354).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51899-3" Details Section (CONF:86-22355).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28363).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:86-22356).
 - a. This entry **SHALL** contain exactly one [1..1] [Procedure Details Clinical Statement in a CLIP Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.155) (CONF:86-22357).

Figure 25: Procedure Details Section in a CLIP Report Example

```
<section>
  <!-- HAI Generic section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- HAI Procedure details section in a CLIP report template -->
  <templateId root="2.16.840.1.113883.10.20.5.5.42"/>
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51899-3"
        displayName="Details Section"/>
  <title>Details</title>
  ...
  <entry typeCode="DRIV">
    <!-- Procedure Details Clinical Statement in a CLIP Report -->
    <procedure moodCode="EVN" classCode="PROC">
      <!-- C-CDA Procedure Activity Procedure templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
      <-- HAI Procedure Details Clinical Statement in a CLIP Report templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.155"/>
      ...
    </procedure >
  </entry>
</section>
```

2.1.23 Procedure Details Section in a Procedure Report (V2)

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.43.2 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 2, DSTU 1 - US Realm

Table 106: Procedure Details Section in a Procedure Report (V2) Contexts

Contained By:	Contains:
HAI Procedure Denominator Report (V3) (required)	Procedure Details Clinical Statement in a Procedure Report (V2) (required)

This section records details of the procedure.

Table 107: Procedure Details Section in a Procedure Report (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.43.2)					
templateId	1..1	SHALL		1101-22358	
@root	1..1	SHALL		1101-30248	2.16.840.1.113883.10.20.5.5.43.2
code	1..1	SHALL		1101-22360	
@code	1..1	SHALL		1101-22361	51899-3
@codeSystem	1..1	SHALL		1101-30314	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		1101-22362	
procedure	1..1	SHALL		1101-30249	Procedure Details Clinical Statement in a Procedure Report (V2) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.153.2)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1101-22358) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.43.2" (CONF:1101-30248).
3. **SHALL** contain exactly one [1..1] **code** (CONF:1101-22360).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51899-3" Details Section (CONF:1101-22361).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1101-30314).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:1101-22362).
 - a. This entry **SHALL** contain exactly one [1..1] [Procedure Details Clinical Statement in a Procedure Report \(V2\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.153.2) (CONF:1101-30249).

Figure 26: Procedure Details Section in a Procedure Report Example

```
<section>
  <!-- HAI Generic Section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- Procedure Details Section in a Procedure Report (V2) template -->
  <templateId root="2.16.840.1.113883.10.20.5.5.43.2"/>
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51899-3"
        displayName="Details Section"/>
  <title>Details</title>
  ...
  <entry typeCode="DRIV">
    <!-- Procedure Details Clinical Statement in a Procedure Report (V2) -->
    <procedure classCode="PROC" moodCode="EVN">
      <!-- C-CDA Procedure Activity Procedure templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
      <!-- Procedure Details Clinical Statement in a Procedure Report (V2) templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.153.2"/>
      ...
    </procedure>
  </entry>
</section>
```

2.1.24 Procedure Details Section in an OPC Denominator for Procedure

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.67:2019-04-01
(closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 3, STU 4 - US Realm

Table 108: Procedure Details Section in an OPC Denominator for Procedure Contexts

Contained By:	Contains:
Outpatient Procedure Component Denominator for Procedure Report (V2) (required)	Procedure Details in an OPC Denominator for Procedure (required)

This section records details of the procedure.

Table 109: Procedure Details Section in an OPC Denominator for Procedure Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.67:2019-04-01)					
templateId	1..1	SHALL		4395-30611	
@root	1..1	SHALL		4395-30615	2.16.840.1.113883.10.20.5.5.67
@extension	1..1	SHALL		4395-30618	2019-04-01
code	1..1	SHALL		4395-30612	
@code	1..1	SHALL		4395-30616	51899-3
@codeSystem	1..1	SHALL		4395-30617	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		4395-30613	
procedure	1..1	SHALL		4395-30614	Procedure Details in an OPC Denominator for Procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.259:2019-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30611) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.67" (CONF:4395-30615).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30618).
3. **SHALL** contain exactly one [1..1] **code** (CONF:4395-30612).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51899-3" Details Section (CONF:4395-30616).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4395-30617).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-30613).
 - a. This entry **SHALL** contain exactly one [1..1] [Procedure Details in an OPC Denominator for Procedure](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.259:2019-04-01) (CONF:4395-30614).

Figure 27: Procedure Details Section in an OPC Denominator for Procedure Example

```
<section>
  <!-- HAI Generic Section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- Procedure Details Section in an OPC Denominator for Procedure -->
  <templateId root="2.16.840.1.113883.10.20.5.5.67" extension="2019-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51899-3"
        displayName="Details Section"/>
  <title>Details</title>
  ...
  <entry typeCode="DRIV">
    <!-- Procedure Details in an OPC Denominator for Procedure -->
    <procedure classCode="PROC" moodCode="EVN">
      <!-- C-CDA Procedure Activity Procedure templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
      <!-- Procedure Details in an OPC Denominator for Procedure -->
      <templateId root="2.16.840.1.113883.10.20.5.6.259" extension="2019-04-01"/>
      ...
    </procedure>
  </entry>
</section>
```

2.1.25 Report No Events Section

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01
(closed)]

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Table 110: Report No Events Section Contexts

Contained By:	Contains:
Neonatal Intensive Care Unit (NICU) Summary Report (V3) (optional) Intensive Care Unit (ICU) Summary Report (V3) (optional) Specialty Care Area (SCA) Summary Report (V3) (optional) Vascular Access Type Report (VAT) Summary Report (V3) (optional) Outpatient Procedure Component Denominator for Same Day Outcome Measures Report (optional) Antimicrobial Resistance Option (ARO) Summary Report (V3) (optional) Prevention Process and Outcome Measures (POM) Summary Report (V4) (optional)	Report No Events (required)

The Report No Events Section contains the Report No Events template. This section is available for use in any report. If this section is present in a report it must contain at least one entry.

Table 111: Report No Events Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01)					
templateId	1..1	SHALL		3357-30604	
@root	1..1	SHALL		3357-30608	2.16.840.1.113883.10.20.5.5.62
@extension	1..1	SHALL		3357-30609	2018-04-01
code	1..1	SHALL		3357-30605	
@code	1..1	SHALL		3357-30610	90252-8
@codeSystem	1..1	SHALL		3357-30611	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..*	SHALL		3357-30606	
act	1..1	SHALL		3357-30910	Report No Events (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-30604) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.62" (CONF:3357-30608).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2018-04-01" (CONF:3357-30609).
3. **SHALL** contain exactly one [1..1] **code** (CONF:3357-30605).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="90252-8" Report No Events section (CONF:3357-30610).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3357-30611).
4. **SHALL** contain at least one [1..*] **entry** (CONF:3357-30606) such that it
 - a. **SHALL** contain exactly one [1..1] [Report No Events](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01) (CONF:3357-30910).

Figure 28: Report No Events Section Example

```
<section>
  <!-- HAI Section Generic Constraints -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3D3] Report No Events Section -->
  <templateId root="2.16.840.1.113883.10.20.5.5.62" extension="2018-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="90252-8"
    displayName="Report No Events Section" />
  <title>Report No Events</title>
  <text>
    <table>
      <tbody>
        <tr>
          <td>Report no infection surveillance events - Methicillin-resistant
Staphylococcus aureus</td>
        </tr>
      </tbody>
    </table>
  </text>
  <entry typeCode="DRIV">
    <act classCode="ACT" moodCode="EVN">
      <!-- [HAI R3D3] Report No Events-->
      <templateId root="2.16.840.1.113883.10.20.5.6.249" extension="2018" />
      ...
    </act>
  </entry>
  ...
</section>
```

2.1.26 Risk Factors Section in a LOS/Men Denominator

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.72:2019-04-01
(closed)]

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Table 112: Risk Factors Section in a LOS/Men Denominator Contexts

Contained By:	Contains:
Late Onset Sepsis/Meningitis Denominator (LOS/Men Denom) Report (V2) (required)	Infection Risk Factors Measurement Observation (required) Gestational Age at Birth Observation (V2) (required)

This template represents the risk factors section found in the Late Onset Sepsis / Meningitis Denominator form.

It contains the following elements:

- Birth weight (grams)
- Gestational age (days)

Table 113: Risk Factors Section in a LOS/Men Denominator Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.72:2019-04-01)					
templateId	1..1	SHALL		4395-30886	
@root	1..1	SHALL		4395-30894	2.16.840.1.113883.10.20.5.5.72
@extension	1..1	SHALL		4395-30895	2019-04-01
code	1..1	SHALL		4395-30889	
@code	1..1	SHALL		4395-30896	51898-5
@codeSystem	1..1	SHALL		4395-30897	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		4395-30887	
observation	1..1	SHALL		4395-30888	Infection Risk Factors Measurement Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.137)
entry	1..1	SHALL		4395-30892	
observation	1..1	SHALL		4395-30893	Gestational Age at Birth Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2019-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30886) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.72" (CONF:4395-30894).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30895).
3. **SHALL** contain exactly one [1..1] **code** (CONF:4395-30889).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51898-5" Risk Factors Section (CONF:4395-30896).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4395-30897).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-30887) such that it

- a. **SHALL** contain exactly one [1..1] [Infection Risk Factors Measurement Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.137) (CONF:4395-30888).
5. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-30892) such that it
 - a. **SHALL** contain exactly one [1..1] [Gestational Age at Birth Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2019-04-01) (CONF:4395-30893).

Figure 29: Risk Factors Section In a LOS/Men Denominator

```

<section>
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3D4] Risk Factors Section in a LOS/Men Denominator -->
  <templateId root="2.16.840.1.113883.10.20.5.5.72" extension="2019-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="51898-5"
  displayName="Risk Factors" />
  <title>Risk Factors</title>
  <text>
    ...
  </text>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [C-CDA R1.1] Vital Sign Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.27" />
      <!-- [HAI] Infection Risk Factors Measurement Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.137" />
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [HAI R3D4] Gestational Age Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.255" extension="2019-04-01"/>
      ...
    </observation>
  </entry>
</section>

```

2.1.27 Risk Factors Section in a LOS/Men Event (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.65:2019-04-01 (closed)]

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Table 114: Risk Factors Section in a LOS/Men Event (V2) Contexts

Contained By:	Contains:
Late Onset Sepsis/Meningitis Event (LOS) Report (V3) (required)	Infection Risk Factors Measurement Observation (required) Infection Risk Factors Observation (optional) Gestational Age at Birth Observation (V2) (required)

This template represents the risk factors section found in the Late Onset Sepsis / Meningitis Event form.

It contains the following elements:

- Central line present prior to event, including umbilical catheter
- Birth weight (grams)
- Gestational age (days)

Table 115: Risk Factors Section in a LOS/Men Event (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.65:2019-04-01)					
templateId	1..1	SHALL		4395-30753	
@root	1..1	SHALL		4395-30756	2.16.840.1.113883.10.20.5.5.65
@extension	1..1	SHALL		4395-30757	2019-04-01
code	1..1	SHALL		4395-30758	
@code	1..1	SHALL		4395-30759	51898-5
@codeSystem	1..1	SHALL		4395-30760	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	0..1	MAY		4395-30761	
observation	1..1	SHALL		4395-30762	Infection Risk Factors Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.138)
entry	1..1	SHALL		4395-30754	
observation	1..1	SHALL		4395-30755	Infection Risk Factors Measurement Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.137)
entry	1..1	SHALL		4395-30981	
observation	1..1	SHALL		4395-30982	Gestational Age at Birth Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2019-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30753) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.65" (CONF:4395-30756).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30757).
3. **SHALL** contain exactly one [1..1] **code** (CONF:4395-30758).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51898-5" Risk Factors Section (CONF:4395-30759).

- b. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:4395-30760).
- 4. **MAY** contain zero or one [0..1] **entry** (CONF:4395-30761) such that it
 - a. **SHALL** contain exactly one [1..1] Infection Risk Factors Observation
(identifier: urn:oid:2.16.840.1.113883.10.20.5.6.138) (CONF:4395-30762).
- 5. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-30754) such that it
 - a. **SHALL** contain exactly one [1..1] Infection Risk Factors Measurement Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.137) (CONF:4395-30755).
- 6. **SHALL** contain exactly one [1..1] **entry** (CONF:4395-30981) such that it
 - a. **SHALL** contain exactly one [1..1] Gestational Age at Birth Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2019-04-01) (CONF:4395-30982).

Figure 30: Risk Factors Section in a LOS/Men Event (V2) Example

```
<section>
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3D4] Risk Factors Section in a LOS/Men Event (V2) -->
  <templateId root="2.16.840.1.113883.10.20.5.5.65" extension="2019-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="51898-5"
displayName="Risk Factors" />
  <title>Risk Factors</title>
  <text>
...
  </text>
  <entry typeCode="DRIV">
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- [C-CDA R1.1] Problem Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" />
  <!-- [HAI] Infection Risk Factors Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.138" />
  ...
</observation>
</entry>
  <entry typeCode="DRIV">
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- [C-CDA R1.1] Vital Sign Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.27" />
  <!-- [HAI] Infection Risk Factors Measurement Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.137" />
  ...
</observation>
</entry>

  <entry typeCode="DRIV">
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- [HAI R3D4] Gestational Age Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.255" extension="2019-04-01"/>
  ...
</observation>
</entry>
</section>
```

2.1.28 Risk Factors Section in a VAE Report

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.60:2017-04-01
(closed)]

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Table 116: Risk Factors Section in a VAE Report Contexts

Contained By:	Contains:
Ventilator Associated Event (VAE) Report (V3) (required)	Mechanical Ventilation Initiation Act (required) APRV or Related at Time of VAE Observation (optional)

In a VAE Report, the Risk Factors Section contains a Mechanical Ventilation Initiation Act and an APRV or Related at Time of VAE Observation.

Table 117: Risk Factors Section in a VAE Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.60:2017-04-01)					
templateId	1..1	SHALL		3311-140	
@root	1..1	SHALL		3311-144	2.16.840.1.113883.10.20.5.5.60
@extension	1..1	SHALL		3311-145	2017-04-01
code	1..1	SHALL		3311-139	
@code	1..1	SHALL		3311-142	51898-5
@codeSystem	1..1	SHALL		3311-143	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		3311-138	
act	1..1	SHALL		3311-28394	Mechanical Ventilation Initiation Act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.244:2017-04-01)
entry	0..1	MAY		3311-28395	
observation	1..1	SHALL		3311-28410	APRV or Related at Time of VAE Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.248:2017-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3311-140) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.60" (CONF:3311-144).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-04-01" (CONF:3311-145).
3. **SHALL** contain exactly one [1..1] **code** (CONF:3311-139).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51898-5" Risk Factors Section (CONF:3311-142).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3311-143).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:3311-138) such that it
 - a. **SHALL** contain exactly one [1..1] [Mechanical Ventilation Initiation Act](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.244:2017-04-01) (CONF:3311-28394).
5. **MAY** contain zero or one [0..1] **entry** (CONF:3311-28395) such that it

- a. **SHALL** contain exactly one [1..1] [APRV or Related at Time of VAE Observation](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.248:2017-04-01) (CONF:3311-28410).

Figure 31: Risk Factors Section in a VAE Report Example

```
<section>
  <!-- HAI Section Generic Constraints -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3D2] Risk Factors Section in a VAE Report -->
  <templateId root="2.16.840.1.113883.10.20.5.5.60" extension="2017-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51898-5"
        displayName="Risk Factors" />
  <title>Risk Factors</title>
  <text>...</text>
  <entry typeCode="DRIV">
    <!-- Contains the mechanical ventilation initiation time and location of where the
initiation took place -->
    <!-- Mechanical Ventilation Initiation Act -->
    <act classCode="ACT" moodCode="EVN">
      <!-- [C-CDA R1.1] Procedure Activity Act -->
      <templateId root="2.16.840.1.113883.10.20.22.4.12" />
      <!-- [HAI] Mechanical Ventilation Initiation Act -->
      <templateId root="2.16.840.1.113883.10.20.5.6.244" extension="2017-04-01" />
      ...
    </act>
  </entry>
  <!-- APRV or Related at Time of VAE Observation is optional -->
  <entry typeCode="DRIV">
    <!-- Setting negationInd="false" indicates that the Patient on Airway Pressure
Release Ventilation (APRV)
or a related mode of mechanical ventilation at the time of VAE -->
    <observation moodCode="EVN" classCode="OBS" negationInd="false">
      <!-- [HAI R3D2] APRV or Related at Time of VAE Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.248" extension="2017-04-01" />
      ...
    </observation>
  </entry>
</section>
```

2.1.29 Risk Factors Section in an Evidence of Infection (Dialysis) Report (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.37:2022-04-01 (closed)]

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Table 118: Risk Factors Section in an Evidence of Infection (Dialysis) Report (V3) Contexts

Contained By:	Contains:
HAI Evidence of Infection (Dialysis) Report (V7) (required)	Vascular Access Type Observation (required) Dialysis Patient Observation (required)

In an EOID Report, the Risk Factors Section contains at least one Vascular Access Type Observation for each value in the NHSNVascularAccessTypeCode Value Set. Additional observations record whether a vascular access type other than those listed is present and whether or not the patient is a maintenance hemodialysis patient.

Table 119: Risk Factors Section in an Evidence of Infection (Dialysis) Report (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.37:2022-04-01)					
templateId	1..1	SHALL		4523-22302	
@root	1..1	SHALL		4523-22303	2.16.840.1.113883.10.20.5.5.37
code	1..1	SHALL		4523-22304	
@code	1..1	SHALL		4523-22305	51898-5
@codeSystem	1..1	SHALL		4523-28364	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		4523-22306	
observation	1..1	SHALL		4523-22307	Dialysis Patient Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.125)
entry	6..6	SHALL		4523-22308	
observation	1..1	SHALL		4523-22309	Vascular Access Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.172)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-22302) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.37" (CONF:4523-22303).
3. **SHALL** contain exactly one [1..1] **code** (CONF:4523-22304).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51898-5" Risk Factors Section (CONF:4523-22305).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4523-28364).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:4523-22306) such that it
 - a. **SHALL** contain exactly one [1..1] [Dialysis Patient Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.125) (CONF:4523-22307).
5. **SHALL** contain [6..6] **entry** (CONF:4523-22308) such that it
 - a. **SHALL** contain exactly one [1..1] [Vascular Access Type Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.172) (CONF:4523-22309).

Figure 32: Risk Factors Section in an Evidence of Infection (Dialysis) Report (V3) Example

```
<section>
  <!-- HAI Generic Section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- HAI Risk Factors Section in an EOID Report (V3) template -->
  <templateId root="2.16.840.1.113883.10.20.5.5.37" extension="2022-04-01"/>
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51898-5"
        displayName=" Risk Factors Section"/>
  <title>Risk Factors</title>
  ...
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- HAI Dialysis Patient Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.125"/>
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation Type -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- HAI Vascular Access Type Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.172"/>
      ...
    </observation>
  </entry>
  ...
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation Type -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- HAI Vascular Access Type Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.172"/>
      ...
    </observation>
  </entry>
  ...
</section>
```


2.1.30 Same Day Outcome Measures Event Details Section

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.66:2019-04-01 (closed)]

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Table 120: Same Day Outcome Measures Event Details Section Contexts

Contained By:	Contains:
Outpatient Procedure Component Same Day Outcome Measures Event Report (V2) (required)	Same Day Outcome Measures Organizer (V3) (optional)

In an Outpatient Procedure Component Same Day Outcome Measures Event, the Same Day Outcome Measures Event Details Section contains details about same-day outcome measures events.

Table 121: Same Day Outcome Measures Event Details Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.66:2019-04-01)					
templateId	1..1	SHALL		4395-30551	
@root	1..1	SHALL		4395-30555	2.16.840.1.113883.10.20.5.5.66
@extension	1..1	SHALL		4395-30558	2019-04-01
code	1..1	SHALL		4395-30552	
@code	1..1	SHALL		4395-30556	51899-3
@codeSystem	1..1	SHALL		4395-30557	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	0..*	SHOULD		4395-30549	
organizer	0..1	SHOULD		4395-30550	Same Day Outcome Measures Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.212:2019-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30551) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.66" (CONF:4395-30555).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30558).
3. **SHALL** contain exactly one [1..1] **code** (CONF:4395-30552).

- a. This code **SHALL** contain exactly one [1..1] @code="51899-3" Event Details (CONF:4395-30556).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4395-30557).
4. **SHOULD** contain zero or more [0..*] entry (CONF:4395-30549) such that it
 - a. **SHOULD** contain zero or one [0..1] [Same Day Outcome Measures Organizer \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.212:2019-04-01) (CONF:4395-30550).

Figure 33: Same Day Outcome Measures Event Details Section Example

```
<section>
  <!-- HAI Generic section templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- Same Day Outcome Measures Event Details Section -->
  <templateId root="2.16.840.1.113883.10.20.5.5.66" extension="2019-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51899-3"
        displayName="Event Details" />
  <title>Same Day Outcome Measures Event Details</title>
  ...
  <entry typeCode="DRIV">
    <!-- Same Day Outcome Measure Organizer (V3)-->
    <organizer classCode="CLUSTER" moodCode="EVN">
      <!-- Same Day Outcome Measure Organizer templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.212" extension="2019-04-01" />
      ...
    </organizer>
  </entry>
</section>
```

2.1.31 Summary Data Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.47 (closed)]

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Release 1 - US Realm

Table 122: Summary Data Section Contexts

Contained By:	Contains:
Intensive Care Unit (ICU) Summary Report (V3) (required) Specialty Care Area (SCA) Summary Report (V3) (required) Outpatient Procedure Component Denominator for Same Day Outcome Measures Report (required)	Summary Encounter (required)

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.

The Summary Encounter requires a participant representing the facility or in-facility location to which the data pertain. Most summary reports contain data for a single location. To report data for more than one location, use a separate Summary Encounter element for each. For example, a POM report typically reports data for an in-facility location, but under some circumstances the NHSN protocol also requires facility-wide data. Use one Summary Encounter to report the data for the in-facility location, and a separate Summary Encounter to report the facility-wide data.

If the data in a population summary report are categorized--as, for example, data on a NICU population are categorized by patient birth weight--each category is represented by a separate Summary Encounter element. If there is no categorization, the report concerns a group that has only one category and it therefore will contain only one Summary Data Encounter element. This is the usual case.

Table 123: Summary Data Section Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.47)					
templateId	1..1	SHALL		86-22386	
@root	1..1	SHALL		86-22387	2.16.840.1.113883.10.20.5.5.47
code	1..1	SHALL		86-22388	
@code	1..1	SHALL		86-22389	51900-9
@codeSystem	1..1	SHALL		86-28365	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..*	SHALL		86-22390	
encounter	1..1	SHALL		86-22391	Summary Encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.184)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22386) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.47" (CONF:86-22387).
3. **SHALL** contain exactly one [1..1] **code** (CONF:86-22388).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51900-9" Summary Data Section (CONF:86-22389).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28365).

4. **SHALL** contain at least one [1..*] **entry** (CONF:86-22390).
 - a. Such entries **SHALL** contain exactly one [1..1] [Summary Encounter](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.184) (CONF:86-22391).

Figure 34: Summary Data Section Example

```
<section>
  <!-- HAI Generic Section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- HAI Summary Data Section template -->
  <templateId root="2.16.840.1.113883.10.20.5.5.47"/>
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51900-9"
        displayName="Summary Data Section"/>
  ...
  <entry typeCode="DRIV">
    <encounter classCode="ENC" moodCode="EVN">
      <!-- HAI Summary Encounter template -->
      <templateId root="2.16.840.1.113883.10.20.5.5.184"/>
      ...
    </encounter>
  </entry>

  <entry typeCode="DRIV">
    <encounter>
      ...
    </encounter>
  </entry>
</section>
```

2.1.32 Summary Data Section (ARO) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.52:2019-04-01
(closed)]

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Release 3, STU 4 - US Realm

Table 124: Summary Data Section (ARO) (V3) Contexts

Contained By:	Contains:
Antimicrobial Resistance Option (ARO) Summary Report [V3] (required)	Summary Encounter (ARO) [V3] (required)

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.

The Summary Data Section (ARO) extends its generic equivalent, but is specific to the Antimicrobial Resistance Option (ARO) Summary Report.

Table 125: Summary Data Section (ARO) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.52:2019-04-01)					
templateId	1..1	SHALL		4395-23070	
@root	1..1	SHALL		4395-23071	2.16.840.1.113883.10.20.5.5.52
@extension	1..1	SHALL		4395-30920	2019-04-01
code	1..1	SHALL		4395-23072	
@code	1..1	SHALL		4395-23073	51900-9
@codeSystem	1..1	SHALL		4395-28366	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..*	SHALL		4395-23074	
encounter	1..1	SHALL		4395-23075	Summary Encounter (ARO) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.199:2019-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-23070) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.52" (CONF:4395-23071).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30920).
3. **SHALL** contain exactly one [1..1] **code** (CONF:4395-23072).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51900-9" Summary Data Section (CONF:4395-23073).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4395-28366).
4. **SHALL** contain at least one [1..*] **entry** (CONF:4395-23074).
 - a. Such entries **SHALL** contain exactly one [1..1] [Summary Encounter \(ARO\) \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.199:2019-04-01) (CONF:4395-23075).

Figure 35: Summary Data Section (ARO) (V3) Example

```
<section>
  <!-- HAI Generic Section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- HAI Summary Data Section (ARO) template (V3) -->
  <templateId root="2.16.840.1.113883.10.20.5.5.52"
    extension="2019-04-01"/>
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="51900-9"
    displayName="Summary Data Section"/>
  ...
  <entry>
    <encounter classCode="ENC" moodCode="EVN">
      <!-- HAI Summary Encounter (ARO) (V3) template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.199"
        extension="2019-04-01"/>
      ...
    </encounter>
  </entry>
</section>
```

2.1.33 Summary Data Section (AUP) (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.51:2015-04-01
(closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 2 - US Realm

Table 126: Summary Data Section (AUP) (V2) Contexts

Contained By:	Contains:
Antimicrobial Use (AUP) Summary Report (V2) (required)	Summary Encounter Patient Presence (AUP) (V2) (required) Summary Encounter (AUP) (V2) (required)

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.

The Summary Data Section (AUP) extends its generic equivalent but is specific to the Antimicrobial Use (AUP) Summary Report.

Table 127: Summary Data Section (AUP) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.51:2015-04-01)					
templateId	1..1	SHALL		1181-23013	
@root	1..1	SHALL		1181-23014	2.16.840.1.113883.10.20.5.5.51
@extension	1..1	SHALL		1181-30565	2015-04-01
code	1..1	SHALL		1181-23015	
@code	1..1	SHALL		1181-23016	51900-9
@codeSystem	1..1	SHALL		1181-28367	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		1181-23017	
encounter	1..1	SHALL		1181-23018	Summary Encounter Patient Presence (AUP) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.197:2015-04-01)
entry	1..*	SHALL		1181-23046	
encounter	1..1	SHALL		1181-23047	Summary Encounter (AUP) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.198:2015-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1181-23013) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.51" (CONF:1181-23014).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-01" (CONF:1181-30565).
3. **SHALL** contain exactly one [1..1] **code** (CONF:1181-23015).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51900-9" Summary Data Section (CONF:1181-23016).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1181-28367).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:1181-23017) such that it
 - a. **SHALL** contain exactly one [1..1] [Summary Encounter Patient Presence \(AUP\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.197:2015-04-01) (CONF:1181-23018).

5. **SHALL** contain at least one [1..*] **entry** (CONF:1181-23046) such that it
- a. **SHALL** contain exactly one [1..1] [Summary Encounter \(AUP\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.198:2015-04-01) (CONF:1181-23047).

Figure 36: Summary Data Section (AUP) (V2)

```
<section>
  <!-- HAI Generic Section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- HAI Summary Data Section (AUP) (V2) template -->
  <templateId root="2.16.840.1.113883.10.20.5.5.51"
    extension="2015-01-04"/>
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="51900-9"
    displayName="Summary Data Section"/>
  ...
  <entry>
    <encounter classCode="ENC" moodCode="EVN">
      <!-- HAI Summary Encounter Patient Presence (AUP) (V2) template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.197"
        extension="2015-01-04"/>
      ...
    </encounter>
  </entry>
  <entry>
    <encounter classCode="ENC" moodCode="EVN">
      <!-- HAI Summary Encounter (AUP) (V2) template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.198"
        extension="2015-01-04"/>
      ...
    </encounter>
  </entry>

  <entry>
    <encounter>
      ...
    </encounter>
  </entry>
</section>
```


2.1.34 Summary Data Section (HP-FLU)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.58:2017-04-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 2 - US Realm

Table 128: Summary Data Section (HP-FLU) Contexts

Contained By:	Contains:
Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report (required)	Summary Encounter (HP-FLU) (required) Vaccination Type Observation (required)

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever it is used; therefore, the section is represented by the same LOINC section code whatever the data reported.

The HP-FLU report extends the simple pattern for Summary Encounter. This report is stratified by healthcare personnel (HCP) type. Each type is recorded in a separate Summary Encounter (HP-FLU) within the Summary Data Section (HP-FLU). The HCP type is recorded as a participant in the encounter, in addition to the location participant that is required in all Summary Encounters.

Table 129: Summary Data Section (HP-FLU) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.58:2017-04-01)					
templateId	1..1	SHALL		3311-18	
@root	1..1	SHALL		3311-21	2.16.840.1.113883.10.20.5.5.58
@extension	1..1	SHALL		3311-24	2017-04-01
code	1..1	SHALL		3311-19	
@code	1..1	SHALL		3311-22	51900-9
@codeSystem	1..1	SHALL		3311-23	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		3311-17	
observation	1..1	SHALL		3311-28415	Vaccination Type Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.242:2017-04-01)
entry	1..*	SHALL		3311-75	
encounter	1..1	SHALL		3311-28413	Summary Encounter (HP-FLU) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.241:2017-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3311-18) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.58" (CONF:3311-21).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-04-01" (CONF:3311-24).
3. **SHALL** contain exactly one [1..1] **code** (CONF:3311-19).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51900-9" Summary Data Section (CONF:3311-22).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3311-23).
4. **SHALL** contain exactly one [1..1] **entry** (CONF:3311-17) such that it
 - a. **SHALL** contain exactly one [1..1] [Vaccination Type Observation](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.242:2017-04-01) (CONF:3311-28415).
5. **SHALL** contain at least one [1..*] **entry** (CONF:3311-75) such that it
 - a. **SHALL** contain exactly one [1..1] [Summary Encounter \(HP-FLU\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.241:2017-04-01) (CONF:3311-28413).

Figure 37: Summary Data Section (HP-FLU) Example

```
<section>
  <!-- HAI Section Generic Constraints -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3D2] Summary Data Section (HP-FLU) -->
  <templateId root="2.16.840.1.113883.10.20.5.5.58" extension="2017-04-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51900-9"
        displayName="Summary Section" />
  <title>Summary Data</title>
  <text>...</text>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN">
      <!-- [HAI R3D2] Vaccination Type Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.242" extension="2017-04-01" />
      ...
    </observation>
  </entry>
  <!-- Employees (staff on facility payroll) -->
  <entry typeCode="DRIV">
    <encounter classCode="ENC" moodCode="EVN">
      <!-- [HAI R3D2] Summary Encounter (HP-FLU) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.241" extension="2017-04-01" />
      ...
    </encounter>
  </entry>
  <!-- Licensed independent practitioners -->
  <entry typeCode="DRIV">
    <encounter classCode="ENC" moodCode="EVN">
      <!-- [HAI R3D2] Summary Encounter (HP-FLU) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.241" extension="2017-04-01" />
      ...
    </encounter>
  </entry>
  <!-- Adult students/trainees & volunteers -->
  <entry typeCode="DRIV">
    <encounter classCode="ENC" moodCode="EVN">
      <!-- [HAI R3D2] Summary Encounter (HP-FLU) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.241" extension="2017-04-01" />
      ...
    </encounter>
  </entry>
  <!-- Other contract personnel -->
  <entry typeCode="DRIV">
    <encounter classCode="ENC" moodCode="EVN">
      <!-- [HAI R3D2] Summary Encounter (HP-FLU) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.241" extension="2017-04-01" />
      ...
    </encounter>
  </entry>
</section>
```

2.1.35 Summary Data Section (HV) (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.57:2016-08-01
(closed)]

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Release 3, DSTU 1.1 - US Realm

Table 130: Summary Data Section (HV) (V2) Contexts

Contained By:	Contains:
Hemovigilance (HV) Summary Report (V2) (required)	No Hemovigilance Adverse Reactions Reported This Month Observation (required) No Hemovigilance Incidents Reported This Month Observation (required) Summary Encounter (HV) (V2) (required)

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.

The Summary Data Section (HV) extends its generic equivalent but is specific to the HAI Hemovigilance (HV) Summary Report.

Table 131: Summary Data Section (HV) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.57:2016-08-01)					
templateId	1..1	SHALL		3247-30615	
@root	1..1	SHALL		3247-30619	2.16.840.1.113883.10.20.5.5.57
@extension	1..1	SHALL		3247-30620	2016-08-01
code	1..1	SHALL		3247-30616	
@code	1..1	SHALL		3247-30621	51900-9
@codeSystem	1..1	SHALL		3247-30622	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..1	SHALL		3247-30614	
observation	1..1	SHALL		3247-30685	No Hemovigilance Adverse Reactions Reported This Month Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.232:2015-10-01)
entry	1..*	SHALL		3247-30617	
observation	1..1	SHALL		3247-30686	No Hemovigilance Incidents Reported This Month Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.233:2015-10-01)
entry	1..*	SHALL		3247-30736	
encounter	1..1	SHALL		3247-30737	Summary Encounter (HV) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.234:2016-08-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3247-30615) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.57" (CONF:3247-30619).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2016-08-01" (CONF:3247-30620).
3. **SHALL** contain exactly one [1..1] **code** (CONF:3247-30616).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51900-9" Summary Data Section (CONF:3247-30621).

- b. This code **SHALL** contain exactly one [1..1]
`@codeSystem="2.16.840.1.113883.6.1"` (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:3247-30622).
- 4. **SHALL** contain exactly one [1..1] **entry** (CONF:3247-30614) such that it
 - a. **SHALL** contain exactly one [1..1] No Hemovigilance Adverse Reactions
Reported This Month Observation (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.5.6.232:2015-10-01) (CONF:3247-30685).
- 5. **SHALL** contain at least one [1..*] **entry** (CONF:3247-30617) such that it
 - a. **SHALL** contain exactly one [1..1] No Hemovigilance Incidents Reported This
Month Observation (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.5.6.233:2015-10-01) (CONF:3247-30686).
- 6. **SHALL** contain at least one [1..*] **entry** (CONF:3247-30736) such that it
 - a. **SHALL** contain exactly one [1..1] Summary Encounter (HV) (V2) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.5.6.234:2016-08-01) (CONF:3247-30737).

Figure 38: Summary Data Section (HV) (V2) Example

```
<section>
  <!-- [HAI R1] HAI Section Generic Constraints -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- [HAI R3D1.1] Summary Data Section (HV) (V2) -->
  <templateId root="2.16.840.1.113883.10.20.5.5.57"
    extension="2016-08-01" />
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" code="51900-9"
    displayName="Summary Data Section" />
  <title>Summary Data</title>
  <text>...</text>
  <entry typeCode="DRIV">
    <!-- No Adverse Reactions Reported This Month Observation -->
    <observation classCode="OBS" moodCode="EVN"
      negationInd="false">
      <!-- [HAI R3D1] No Adverse Reactions Reported This Month Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.232"
        extension="2015-10-01"
        />
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <!-- No Incidents Reported This Month Observation -->
    <observation classCode="OBS" moodCode="EVN"
      negationInd="true">
      <!-- [HAI R3D1] No Incidents Reported This Month Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.233"
        extension="2015-10-01"
        />
      ...
    </observation>
  </entry>
  <entry typeCode="DRIV">
    <encounter classCode="ENC" moodCode="EVN">
      <!-- [HAI R3D1.1] Summary Encounter (HV) (V2) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.234"
        extension="2016-08-01" />
      ...
    </encounter>
  </entry>
</section>
```

2.1.36 Summary Data Section (NICU) (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.48:2018-04-01 (closed)]

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Table 132: Summary Data Section (NICU) (V2) Contexts

Contained By:	Contains:
Neonatal Intensive Care Unit (NICU) Summary Report [V3] (required)	Summary Encounter (NICU) (required)

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.

The NICU Report extends the simple pattern for Summary Encounter. This report is stratified by birth weight. Each category is recorded in a separate Summary Encounter (NICU) within the Summary Data Section (NICU). The category is recorded as a participant in the encounter, in addition to the location participant that is required in all Summary Encounters.

Table 133: Summary Data Section (NICU) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.48:2018-04-01)					
templateId	1..1	SHALL		3357-22837	
@root	1..1	SHALL		3357-22838	2.16.840.1.113883.10.20.5.5.48
@extension	1..1	SHALL		3357-30598	2018-04-01
code	1..1	SHALL		3357-22839	
@code	1..1	SHALL		3357-22840	51900-9
@codeSystem	1..1	SHALL		3357-28368	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..*	SHALL		3357-22841	
encounter	1..1	SHALL		3357-22842	Summary Encounter (NICU) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.191)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-22837) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.48" (CONF:3357-22838).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2018-04-01" (CONF:3357-30598).
3. **SHALL** contain exactly one [1..1] **code** (CONF:3357-22839).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51900-9" Summary Data Section (CONF:3357-22840).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3357-28368).
4. **SHALL** contain at least one [1..*] **entry** (CONF:3357-22841) such that it
 - a. **SHALL** contain exactly one [1..1] [Summary Encounter \(NICU\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.191) (CONF:3357-22842).

Figure 39: Summary Data Section (NICU) Example

```

<section>
  <!-- HAI Generic Section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- HAI Summary Data Section (NICU) template -->
  <templateId root="2.16.840.1.113883.10.20.5.5.48"/>
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51900-9"
        displayName="Summary Data Section"/>
  ...
  <entry typeCode="DRIV">
    <encounter classCode="ENC" moodCode="EVN">
      <!-- HAI Summary Encounter (NICU) template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.191"/>
      ...
    </encounter>
  </entry>
</section>

```

2.1.37 Summary Data Section (POM) (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2022-04-01
(closed)]

Draft as part of NHSN Healthcare Associated Infection Reports Release 4, STU
2 - US Realm

Table 134: Summary Data Section (POM) (V3) Contexts

Contained By:	Contains:
Prevention Process and Outcome Measures (POM) Summary Report (V4) (required)	Summary Encounter (POM) (required) Primary C. Difficile Testing Method This Quarter (optional) Inpatient Rehabilitation (IRF) Unit in Facility (optional) Inpatient Psychiatric (IPF) Unit in Facility (optional)

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.

The POM Summary report typically reports data for an in-facility location, but under some circumstances the NHSN protocol also requires facility-wide data. Use one Summary Encounter (POM) to report the data for the in-facility location and a separate Summary Encounter (POM) to report the facility-wide data. For facility-wide reporting, at the end of each quarter, the NHSN protocol requires the primary C. difficile testing method used most often. This section also contains information about whether the facility contains CMS-certified Inpatient Rehabilitation (IRF) and/or Inpatient Psychiatric (IPF) units.

Table 135: Summary Data Section (POM) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2022-04-01)					
templateId	1..1	SHALL		4523-22880	
@root	1..1	SHALL		4523-22881	2.16.840.1.113883.10.20.5.5.49
@extension	1..1	SHALL		4523-30477	2014-12-01
code	1..1	SHALL		4523-22882	
@code	1..1	SHALL		4523-22883	51900-9
@codeSystem	1..1	SHALL		4523-30602	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..*	SHALL		4523-22884	
encounter	1..1	SHALL		4523-22885	Summary Encounter (POM) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.193)
entry	0..1	SHOULD		4523-30333	
observation	1..1	SHALL		4523-30334	Primary C. Difficile Testing Method This Quarter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.221:2014-12-01)
entry	0..1	SHOULD		4523-31022	
observation	1..1	SHALL		4523-31023	Inpatient Rehabilitation (IRF) Unit in Facility (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.271:2022-04-01)
entry	0..1	SHOULD		4523-31024	
observation	1..1	SHALL		4523-31025	Inpatient Psychiatric (IPF) Unit in Facility (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.272:2022-04-01)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-22880) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.49" (CONF:4523-22881).

- b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:4523-30477).
- 3. **SHALL** contain exactly one [1..1] **code** (CONF:4523-22882).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51900-9" Summary Data Section (CONF:4523-22883).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4523-30602).
- 4. **SHALL** contain at least one [1..*] **entry** (CONF:4523-22884) such that it
 - a. **SHALL** contain exactly one [1..1] Summary Encounter (POM) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.193) (CONF:4523-22885).

Required per NHSN Protocol only if location is facility-wide and month is March, June, September, or December.

- 5. **SHOULD** contain zero or one [0..1] **entry** (CONF:4523-30333) such that it
 - a. **SHALL** contain exactly one [1..1] Primary C. Difficile Testing Method This Quarter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.221:2014-12-01) (CONF:4523-30334).

Required per NHSN Protocol only if location is facility-wide and month is March, June, September, or December.

- 6. **SHOULD** contain zero or one [0..1] **entry** (CONF:4523-31022) such that it
 - a. **SHALL** contain exactly one [1..1] Inpatient Rehabilitation (IRF) Unit in Facility (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.271:2022-04-01) (CONF:4523-31023).

Required per NHSN Protocol only if location is facility-wide and month is March, June, September, or December.

- 7. **SHOULD** contain zero or one [0..1] **entry** (CONF:4523-31024) such that it
 - a. **SHALL** contain exactly one [1..1] Inpatient Psychiatric (IPF) Unit in Facility (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.272:2022-04-01) (CONF:4523-31025).

Figure 40: Summary Data Section (POM) (V3) Example

```

**TODO**
<section>
  <!-- HAI Section Generic Constraints templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.4.26" />
  <!-- Summary Data Section (POM) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.5.49"
    extension="2014-12-01"/>
  <code codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="51900-9"
    displayName="Summary Data Section"/>
  <title>Summary Data</title>
  <text>
    ...
  </text>
  <entry typeCode="DRIV">
    <encounter classCode="ENC" moodCode="EVN">
      <!-- Summary Encounter (POM) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.193"/>
      ...
    </encounter>
  </entry>
  <entry typeCode="DRIV">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Primary C. Difficile Testing Method This Quarter templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.221"
        extension="2014-12-01"/>
      ...
    </observation>
  </entry>
</section>

```

2.1.38 Summary Data Section (VAT)

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.50 (closed)]

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Release 1 - US Realm

Table 136: Summary Data Section (VAT) Contexts

Contained By:	Contains:
Vascular Access Type Report (VAT) Summary Report (V3) (required)	Summary Encounter (VAT) (required)

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.

The Summary Data Section (VAT) extends its generic equivalent but, is specific to the Vascular Access Type Report (VAT) Summary Report.

Table 137: Summary Data Section (VAT) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.50)					
templateId	1..1	SHALL		86-22945	
@root	1..1	SHALL		86-22946	2.16.840.1.113883.10.20.5.5.50
code	1..1	SHALL		86-22947	
@code	1..1	SHALL		86-22948	51900-9
@codeSystem	1..1	SHALL		86-28369	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
entry	1..*	SHALL		86-22949	
encounter	1..1	SHALL		86-22950	Summary Encounter (VAT) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.196)

1. Conforms to [HAI Section Generic Constraints](#) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22945) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.5.50" (CONF:86-22946).
3. **SHALL** contain exactly one [1..1] **code** (CONF:86-22947).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="51900-9" Summary Data Section (CONF:86-22948).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28369).
4. **SHALL** contain at least one [1..*] **entry** (CONF:86-22949).
 - a. Such entries **SHALL** contain exactly one [1..1] [Summary Encounter \(VAT\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.196) (CONF:86-22950).

Figure 41: Summary Data Section (VAT) Example

```
<section>
  <!-- HAI Generic Section template -->
  < templateId root="2.16.840.1.113883.10.20.5.4.26"/>
  <!-- HAI Summary Data Section (VAT) template -->
  <templateId root="2.16.840.1.113883.10.20.5.5.50"/>
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="51900-9"
        displayName="Summary Data Section"/>
  ...
  <entry typeCode="DRIV">
    <encounter classCode="ENC" moodCode="EVN">
      <!-- HAI Summary Encounter (VAT) template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.196"/>
      ...
    </encounter>
  </entry>
</section>
```

3 ENTRY-LEVEL TEMPLATES

3.1 Anesthesia Administration Clinical Statement

[substanceAdministration: identifier urn:oid:2.16.840.1.113883.10.20.5.6.112
(closed)]

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Release 1 - US Realm

Table 138: Anesthesia Administration Clinical Statement Contexts

Contained By:	Contains:
Procedure Details Clinical Statement in a Procedure Report (V2) (required) Procedure Details in an OPC Denominator for Procedure (required)	

This clinical statement reports whether anesthesia was administered.
If anesthesia was not administered, set the value of @negationInd to true. If anesthesia was administered, set the value of @negationInd to false.

Table 139: Anesthesia Administration Clinical Statement Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
substanceAdministration (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.112)					
@classCode	1..1	SHALL		86-19560	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		86-19561	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-19562	
templateId	1..1	SHALL		86-28201	
@root	1..1	SHALL		86-28202	2.16.840.1.113883.10.20.22.4.16
templateId	1..1	SHALL		86-19570	
@root	1..1	SHALL		86-19571	2.16.840.1.113883.10.20.5.6.112
id	1..1	SHALL		86-19572	
@nullFlavor	1..1	SHALL		86-22720	NA
statusCode	1..1	SHALL		86-19573	
@code	1..1	SHALL		86-19574	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL	IVL_TS	86-28331	
low	1..1	SHALL		86-28332	
@nullFlavor	1..1	SHALL		86-28335	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA
high	1..1	SHALL		86-28333	
@nullFlavor	1..1	SHALL		86-28336	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA
consumable	1..1	SHALL		86-19563	
manufacturedProduct	1..1	SHALL		86-19578	
@classCode	1..1	SHALL		86-28349	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
templateId	1..1	SHALL		86-28334	
@root	1..1	SHALL		86-28337	2.16.840.1.113883.10.20.22.4.23
manufacturedMaterial	1..1	SHALL		86-19579	
code	1..1	SHALL		86-19580	
@code	1..1	SHALL		86-19581	84451006
@codeSystem	1..1	SHALL		86-19582	2.16.840.1.113883.6.96

1. Conforms to Medication Activity template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.16).
2. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" Substance administration (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-19560).

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-19561).
4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-19562).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28201) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.16" (CONF:86-28202).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-19570) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.112" (CONF:86-19571).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-19572).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22720).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-19573).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-19574).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-28331).
 - a. This **effectiveTime** **SHALL** contain exactly one [1..1] **low** (CONF:86-28332).
 - i. This **low** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:86-28335).
 - b. This **effectiveTime** **SHALL** contain exactly one [1..1] **high** (CONF:86-28333).
 - i. This **high** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:86-28336).
10. **SHALL** contain exactly one [1..1] **consumable** (CONF:86-19563).
 - a. This **consumable** **SHALL** contain exactly one [1..1] **manufacturedProduct** (CONF:86-19578).
 - i. This **manufacturedProduct** **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:86-28349).
 - ii. This **manufacturedProduct** **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28334) such that it
 1. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.23" (CONF:86-28337).
 - iii. This **manufacturedProduct** **SHALL** contain exactly one [1..1] **manufacturedMaterial** (CONF:86-19579).
 1. This **manufacturedMaterial** **SHALL** contain exactly one [1..1] **code** (CONF:86-19580).
 - a. This **code** **SHALL** contain exactly one [1..1] **@code**="84451006" General Anesthesia (CONF:86-19581).
 - b. This **code** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CONF:86-19582).

Figure 42: Anesthesia Administration Clinical Statement Example

```
<substanceAdministration classCode="SBADM" moodCode="EVN"
    negationInd="false">

    <!-- C-CDA Medication Activity templateId -->
    <templateId root="2.16.840.1.113883.10.20.22.4.16" />

    <!-- HAI Anesthesia Administration Clinical Statement templateId -->
    <templateId root="2.16.840.1.113883.10.20.5.6.112" />
    <id nullFlavor="NA" />
    <statusCode code="completed" />
    <effectiveTime xsi:type="IVL_TS">
        <low nullFlavor="NA" />
        <high nullFlavor="NA" />
    </effectiveTime>
    <consumable>
        <manufacturedProduct classCode="MANU">
            <templateId root="2.16.840.1.113883.10.20.22.4.23" />
            <manufacturedMaterial>
                <code codeSystem="2.16.840.1.113883.6.96"
                    codeSystemName="SNOMED CT"
                    code="84451006"
                    displayName="General anesthesia" />
            </manufacturedMaterial>
        </manufacturedProduct>
    </consumable>
</substanceAdministration>
```

3.2 Antimicrobial Coated Catheter Used Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.217:2014-12-01
(closed)]

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Release 2, DSTU 2.1 – US Realm

Table 140: Antimicrobial Coated Catheter Used Observation Contexts

Contained By:	Contains:
Infection Risk Factors Section in a CLIP Report (V2) (optional)	

This clinical statement represents whether an antimicrobial coated catheter was used.

If an antimicrobial coated catheter was used, set the value of @negationInd to false. If an antimicrobial coated catheter was not used, set the value of @negationInd to true.

Table 141: Antimicrobial Coated Catheter Used Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.217:2014-12-01)					
@classCode	1..1	SHALL		1129-28205	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1129-28206	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		1129-28207	
templateId	1..1	SHALL		1129-30485	
@root	1..1	SHALL		1129-30486	2.16.840.1.113883.10.20.5.6.217
@extension	1..1	SHALL		1129-30487	2014-12-01
code	1..1	SHALL		1129-28202	
@code	1..1	SHALL	CS	1129-28210	ASSERTION
@codeSystem	1..1	SHALL		1129-30597	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1129-28203	
@code	1..1	SHALL		1129-28211	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	1129-28204	
@code	1..1	SHALL		1129-28212	6140-8
@codeSystem	1..1	SHALL		1129-30607	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-28205).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-28206).

If an antimicrobial coated catheter was used, set the value of @negationInd to false. If an antimicrobial coated catheter was not used set the value of @negationInd to true.

3. **SHALL** contain exactly one [1..1] @negationInd (CONF:1129-28207).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1129-30485) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.217" (CONF:1129-30486).

- b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30487).
- 5. **SHALL** contain exactly one [1..1] **code** (CONF:1129-28202).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:1129-28210).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1129-30597).
- 6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1129-28203).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1129-28211).
- 7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1129-28204).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="6140-8" Antimicrobial coated catheter used (CONF:1129-28212).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1129-30607).

Figure 43: Antimicrobial Coated Catheter Used Observation Example

```
<!-- Setting negationInd="false" indicates that an antimicrobial coated
catheter was used -->
<observation moodCode="EVN" classCode="OBS" negationInd="false">
  <!-- Antimicrobial Coated Catheter Used Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.217"
    extension="2014-12-01"/>
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN" code="6140-8"
    displayName="Antimicrobial coated catheter used" />
</observation>
```

3.3 Antimicrobial Susceptibility Antibiotic

[participant: identifier urn:oid:2.16.840.1.113883.10.20.5.6.176 (closed)]

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This clinical statement represents the antimicrobial agent for which susceptibilities are reported against a certain pathogen. The antimicrobial agent is specified in the participant/participantRole/playingEntity/code element.

Table 142: Antimicrobial Susceptibility Antibiotic Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
participant (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.176)					
@typeCode	1..1	SHALL		86-27113	SBJ
templateId	1..1	SHALL		86-21084	
@root	1..1	SHALL		86-21085	2.16.840.1.113883.10.20.5.6.176
participantRole	1..1	SHALL		86-27114	
@classCode	0..1	MAY		86-27115	MANU
playingEntity	1..1	SHALL		86-27116	
code	1..1	SHALL		86-27117	urn:oid:2.16.840.1.114222.4.11.3360 (NHSNAntimicrobialAgentAURPCode)

1. **SHALL** contain exactly one [1..1] **@typeCode**="SBJ" (CONF:86-27113).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21084) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.176" (CONF:86-21085).
3. **SHALL** contain exactly one [1..1] **participantRole** (CONF:86-27114).
 - a. This participantRole **MAY** contain zero or one [0..1] **@classCode**="MANU" (CONF:86-27115).
 - b. This participantRole **SHALL** contain exactly one [1..1] **playingEntity** (CONF:86-27116).
 - i. This playingEntity **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNAntimicrobialAgentAURPCode](#) urn:oid:2.16.840.1.114222.4.11.3360 **DYNAMIC** (CONF:86-27117).

Table 143: NHSNAntimicrobialAgentAURPCode

Value Set: NHSNAntimicrobialAgentAURPCode urn:oid:2.16.840.1.114222.4.11.3360 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the antimicrobial agent.), (Data Element Scope: An entity code representing the antimicrobial agent for which susceptibilities are reported against a certain pathogen.), (Inclusion Criteria:), (Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3360/expansion			
Code	Code System	Code System OID	Print Name
1009148	RxNorm	urn:oid:2.16.840.1.113883.6.88	ampicillin / sulbactam
10109	RxNorm	urn:oid:2.16.840.1.113883.6.88	streptomycin
10207	RxNorm	urn:oid:2.16.840.1.113883.6.88	sulfisoxazole
10395	RxNorm	urn:oid:2.16.840.1.113883.6.88	tetracycline
1040005	RxNorm	urn:oid:2.16.840.1.113883.6.88	ceftaroline
10591	RxNorm	urn:oid:2.16.840.1.113883.6.88	ticarcillin
10612	RxNorm	urn:oid:2.16.840.1.113883.6.88	tinidazole
10627	RxNorm	urn:oid:2.16.840.1.113883.6.88	tobramycin
10829	RxNorm	urn:oid:2.16.840.1.113883.6.88	trimethoprim
10831	RxNorm	urn:oid:2.16.840.1.113883.6.88	sulfamethoxazole / trimethoprim
...			

Figure 44: Antimicrobial Susceptibility Antibiotic Example

<pre> <!-- This participant specifies the antibiotic tested --> <participant typeCode="SBJ"> <!-- Antimicrobial Susceptibility Antibiotic --> <templateId root="2.16.840.1.113883.10.20.5.6.176" /> <participantRole classCode="MANU"> <playingEntity> <code code="21212" displayName="Clarithromycin" codeSystemName="RxNorm" codeSystem="2.16.840.1.113883.6.88"/> </playingEntity> </participantRole> </participant> </pre>
--

3.4 Antimicrobial Susceptibility Final Interpretation Result

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.175 (closed)]

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Table 144: Antimicrobial Susceptibility Final Interpretation Result Contexts

Contained By:	Contains:
Antimicrobial Susceptibility Tests Organizer (V3) (required)	

This clinical statement represents the final susceptibility result of a cluster of antimicrobial susceptibility tests performed on one pathogen-drug combination. Although several tests performed on one pathogen using the same antimicrobial agent may yield conflicting results, this clinical statement provides the final and definitive susceptibility testing result.

Table 145: Antimicrobial Susceptibility Final Interpretation Result Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.175)					
@classCode	1..1	SHALL		86-21067	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21068	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-28203	
@root	1..1	SHALL		86-28204	2.16.840.1.113883.10.20.22.4.2
templateId	1..1	SHALL		86-21071	
@root	1..1	SHALL		86-21072	2.16.840.1.113883.10.20.5.6.175
id	1..1	SHALL		86-21069	
@nullFlavor	1..1	SHALL		86-21070	NA
code	1..1	SHALL		86-21075	
@code	1..1	SHALL		86-28099	365705006
@codeSystem	1..1	SHALL		86-28100	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		86-21076	
@code	1..1	SHALL		86-21077	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		86-21078	
@nullFlavor	1..1	SHALL		86-22630	NA
value	1..1	SHALL	CD	86-21079	urn:oid:2.16.840.1.113883.13.13 (NHSNDrugSusceptibilityFindingCode)

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:86-21067).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:86-21068).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28203) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.2" (CONF:86-28204).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21071) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.175" (CONF:86-21072).
6. **SHALL** contain exactly one [1..1] **id** (CONF:86-21069).

- a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:86-21070).
7. **SHALL** contain exactly one [1..1] code (CONF:86-21075).
 - a. This code **SHALL** contain exactly one [1..1] @code="365705006" Final Interpretation Result (CONF:86-28099).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28100).
8. **SHALL** contain exactly one [1..1] statusCode (CONF:86-21076).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-21077).
9. **SHALL** contain exactly one [1..1] effectiveTime (CONF:86-21078).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22630).
10. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHALL** be selected from ValueSet [NHSNDrugSusceptibilityFindingCode](#) urn:oid:2.16.840.1.113883.13.13 **DYNAMIC** (CONF:86-21079).

Table 146: NHSNDrugSusceptibilityFindingCode

Value Set: NHSNDrugSusceptibilityFindingCode urn:oid:2.16.840.1.113883.13.13 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the drug susceptibility finding.),(Data Element Scope: A coded observation value representing the type of drug susceptibility finding.),(Inclusion Criteria:),(Exclusion Criteria:)			
This value set was imported on 9/15/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.13/expansion			
Code	Code System	Code System OID	Print Name
I	ObservationInterpretation	urn:oid:2.16.840.1.113883.5.83	Intermediate
NS	ObservationInterpretation	urn:oid:2.16.840.1.113883.5.83	Non-susceptible
R	ObservationInterpretation	urn:oid:2.16.840.1.113883.5.83	Resistant
S	ObservationInterpretation	urn:oid:2.16.840.1.113883.5.83	Susceptible
SDD	ObservationInterpretation	urn:oid:2.16.840.1.113883.5.83	Susceptible-dose dependent

Figure 45: Antimicrobial Susceptibility Final Interpretation Result Example

```
<!-- This observation specifies the Final Interpretation Result -->
<observation classCode="OBS" moodCode="EVN">
  <!-- Antimicrobial Susceptibility Final Interpretation Result -->
  <templateId root="2.16.840.1.113883.10.20.5.6.175" />
  <!-- Consolidated CDA Result Observation template -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2" />
  <id nullFlavor="NA" />
  <code code="365705006"
        displayName="Final Interpretation Result"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT" />
  <statusCode code="completed" />
  <effectiveTime nullFlavor="NA" />
  <value xsi:type="CD" codeSystem="2.16.840.1.113883.5.83"
        codeSystemName="HL7 Observation Interpretation"
        code="R"
        displayName="Resistant" />
</observation>
```

3.5 Antimicrobial Susceptibility Isolate Participant (V2)

[participant: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.202:2020-04-01
(closed)]

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Table 147: Antimicrobial Susceptibility Isolate Participant (V2) Contexts

Contained By:	Contains:
Isolate Susceptibility Tests Organizer (V4) (required)	

This template identifies an isolate for the purpose of antimicrobial susceptibility testing.

Table 148: Antimicrobial Susceptibility Isolate Participant (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
participant (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.202:2020-04-01)					
@typeCode	1..1	SHALL		4459-27150	SBJ
templateId	1..1	SHALL		4459-27137	
@root	1..1	SHALL		4459-27138	2.16.840.1.113883.10.20.5.6.202
@extension	1..1	SHALL		4459-30799	2020-04-01
participantRole	1..1	SHALL		4459-27151	
@classCode	1..1	SHALL		4459-27152	ISLT
id	1..*	SHALL		4459-27153	
playingEntity	1..1	SHALL		4459-27154	
code	1..1	SHALL		4459-27155	urn:oid:2.16.840.1.113762.1.4.1190.6 (NHSNPathogenCodeARO)

1. **SHALL** contain exactly one [1..1] **@typeCode**="SBJ" (CONF:4459-27150).
2. **SHALL** contain exactly one [1..1] **templateId** (CONF:4459-27137) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.202" (CONF:4459-27138).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2020-04-01" (CONF:4459-30799).
3. **SHALL** contain exactly one [1..1] **participantRole** (CONF:4459-27151).
 - a. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="ISLT" (CONF:4459-27152).

This is the unique isolate identifier

- b. This participantRole **SHALL** contain at least one [1..*] **id** (CONF:4459-27153).
- c. This participantRole **SHALL** contain exactly one [1..1] **playingEntity** (CONF:4459-27154).
 - i. This playingEntity **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNPathogenCodeARO](#) urn:oid:2.16.840.1.113762.1.4.1190.6 **DYNAMIC** (CONF:4459-27155).

Table 149: NHSNPathogenCodeARO

Value Set: NHSNPathogenCodeARO urn:oid:2.16.840.1.113762.1.4.1190.6 (Clinical Focus: NHSN Surveillance - Antibiotic Resistance Option),(Data Element Scope: Pathogens eligible for NHSN ARO reporting),(Inclusion Criteria:),(Exclusion Criteria:) Note: Steward Expansion Version 20210514 corresponds to ARO Pathogen subset of Pathogen Codes 2021 from idm-vendors-9.5.xlsx Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1190.6/expansion			
Code	Code System	Code System OID	Print Name
10262005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Enterococcus malodoratus (organism)
103429008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Enterohemorrhagic Escherichia coli, serotype O157:H7 (organism)
103436009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Enterococcus pseudoavium (organism)
103437000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Enterococcus raffinosus (organism)
103438005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Enterococcus saccharolyticus (organism)
112283007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Escherichia coli (organism)
113376007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Acinetobacter calcoaceticus-Acinetobacter baumannii complex (organism)
113381003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Acinetobacter radioresistens (organism)
113697002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Stenotrophomonas maltophilia (organism)
113722005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Enterococcus cecorum (organism)
...			

Figure 46: Antimicrobial Susceptibility Isolate Participant (V2) Example

```
<participant typeCode="SBJ">
  <!-- [HAI R3N1] Antimicrobial Susceptibility Isolate Participant (V2) template -->
  <templateId root="2.16.840.1.113883.10.20.5.6.202" extension="2020-04-01" />
  <participantRole classCode="ISLT">
    <!-- Isolate identifier - unique for each isolate in that year -->
    <id root="8d7ebcf7-528e-48e8-9e04-350b11b591d1" extension="125698523"/>
    <playingEntity>
      <code code="3092008"
        displayName="Staphylococcus aureus"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT"/>
    </playingEntity>
  </participantRole>
</participant>
```

3.6 Antimicrobial Susceptibility Result Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.186:2016-08-01 (closed)]

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Table 150: Antimicrobial Susceptibility Result Observation (V3) Contexts

Contained By:	Contains:
Antimicrobial Susceptibility Result Organizer (V3) (required)	

This clinical statement represents the result of one discrete susceptibility test. The type of test is recorded in the code element. The test method is recorded in the methodCode. The susceptibility result of that test is recorded in the interpretationCode element. The numeric result of that test is recorded in the value element as an inequality. The numeric component is recorded in the value/.../@value attribute. The unit of measure is recorded in the value/.../@unit attribute. The inequality is recorded in the value/low and value/high and value/center elements. For example:

Greater than 0.5 mg/ul

Greater than or equal to 0.9 mg/ul

Less than 0.7 mg/ul

Less than or equal to 0.4 mg/ul

Exactly equal to 0.2 mg/ul

Table 151: Antimicrobial Susceptibility Result Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.186:2016-08-01)					
@classCode	1..1	SHALL		3247-22632	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3247-22633	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		3247-22699	
templateId	1..1	SHALL		3247-30551	
@root	1..1	SHALL		3247-30552	2.16.840.1.113883.10.20.22.4.2
templateId	1..1	SHALL		3247-22634	
@root	1..1	SHALL		3247-22635	2.16.840.1.113883.10.20.5.6.186
@extension	1..1	SHALL		3247-30553	2016-08-01
id	1..1	SHALL		3247-22636	
@nullFlavor	1..1	SHALL		3247-22637	NA
code	1..1	SHALL		3247-22638	urn:oid:2.16.840.1.113883.13.15 (NHSNDrugSusceptibilityTests Code)
statusCode	1..1	SHALL		3247-22639	
@code	1..1	SHALL		3247-22640	completed
effectiveTime	1..1	SHALL		3247-22641	
@nullFlavor	1..1	SHALL		3247-22642	NA
value	1..1	SHALL	IVL_PQ	3247-22643	
low	0..1	MAY		3247-22644	
@value	0..1	MAY		3247-23095	
@unit	0..1	MAY		3247-23096	
@inclusive	0..1	MAY	BL	3247-22645	
high	0..1	MAY		3247-	

XPath	Card.	Verb	Data Type	CONF#	Value
				22646	
@value	0..1	MAY		3247-23097	
@unit	0..1	MAY		3247-23098	
@inclusive	0..1	MAY		3247-22647	
center	0..1	MAY		3247-22648	
@value	0..1	MAY		3247-23099	
@unit	0..1	MAY		3247-23100	
@nullFlavor	0..1	MAY		3247-23366	
interpretationCode	1..1	SHALL		3247-23101	urn:oid:2.16.840.1.113883.13.13 (NHSNDrugSusceptibilityFindingCode)
methodCode	1..1	SHALL		3247-30599	
@code	1..1	SHALL		3247-30602	urn:oid:2.16.840.1.113883.10.20.5.9.4 (NHSNDrugSusceptibilityTestMethod)
@codeSystem	1..1	SHALL		3247-30603	

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-22632).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-22633).
4. **SHALL** contain exactly one [1..1] @negationInd (CONF:3247-22699).
5. **SHALL** contain exactly one [1..1] templateId (CONF:3247-30551) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.2" (CONF:3247-30552).
6. **SHALL** contain exactly one [1..1] templateId (CONF:3247-22634) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.186" (CONF:3247-22635).
 - b. **SHALL** contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30553).
7. **SHALL** contain exactly one [1..1] id (CONF:3247-22636).
 - a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:3247-22637).

8. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [NHSNDrugSusceptibilityTestsCode](#) urn:oid:2.16.840.1.113883.13.15 **DYNAMIC** (CONF:3247-22638).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3247-22639).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" (CONF:3247-22640).
10. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:3247-22641).
 - a. This **effectiveTime** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:3247-22642).
11. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="IVL_PQ" (CONF:3247-22643).
 - a. This **value** **MAY** contain zero or one [0..1] **low** (CONF:3247-22644).
 - i. The **low**, if present, **MAY** contain zero or one [0..1] **@value** (CONF:3247-23095).
 - ii. The **low**, if present, **MAY** contain zero or one [0..1] **@unit** (CONF:3247-23096).
 - iii. The **low**, if present, **MAY** contain zero or one [0..1] **@inclusive** (CONF:3247-22645).
 - b. This **value** **MAY** contain zero or one [0..1] **high** (CONF:3247-22646).
 - i. The **high**, if present, **MAY** contain zero or one [0..1] **@value** (CONF:3247-23097).
 - ii. The **high**, if present, **MAY** contain zero or one [0..1] **@unit** (CONF:3247-23098).
 - iii. The **high**, if present, **MAY** contain zero or one [0..1] **@inclusive** (CONF:3247-22647).
 - c. This **value** **MAY** contain zero or one [0..1] **center** (CONF:3247-22648).
 - i. The **center**, if present, **MAY** contain zero or one [0..1] **@value** (CONF:3247-23099).
 - ii. The **center**, if present, **MAY** contain zero or one [0..1] **@unit** (CONF:3247-23100).
 - d. This **value** **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:3247-23366).
12. **SHALL** contain exactly one [1..1] **interpretationCode**, which **SHOULD** be selected from ValueSet [NHSNDrugSusceptibilityFindingCode](#) urn:oid:2.16.840.1.113883.13.13 **DYNAMIC** (CONF:3247-23101).
13. **SHALL** contain exactly one [1..1] **methodCode** (CONF:3247-30599).
 - a. This **methodCode** **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [NHSNDrugSusceptibilityTestMethod](#) urn:oid:2.16.840.1.113883.10.20.5.9.4 **DYNAMIC** (CONF:3247-30602).
 - b. This **methodCode** **SHALL** contain exactly one [1..1] **@codeSystem** (CONF:3247-30603).

Table 152: NHSNDrugSusceptibilityTestsCode

Value Set: NHSNDrugSusceptibilityTestsCode urn:oid:2.16.840.1.113883.13.15 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the drug susceptibility test.), (Data Element Scope: Code identifying the type of drug susceptibility observation.), (Inclusion Criteria:), (Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.15/expansion			
Code	Code System	Code System OID	Print Name
18855-7	LOINC	urn:oid:2.16.840.1.113883.6.1	5-Fluorocytosine [Susceptibility]
18860-7	LOINC	urn:oid:2.16.840.1.113883.6.1	Amikacin [Susceptibility]
18861-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Amoxicillin [Susceptibility]
18862-3	LOINC	urn:oid:2.16.840.1.113883.6.1	Amoxicillin+Clavulanate [Susceptibility]
18864-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Ampicillin [Susceptibility]
18865-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Ampicillin+Sulbactam [Susceptibility]
18866-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Azithromycin [Susceptibility]
18868-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Aztreonam [Susceptibility]
18878-9	LOINC	urn:oid:2.16.840.1.113883.6.1	ceFAZolin [Susceptibility]
18879-7	LOINC	urn:oid:2.16.840.1.113883.6.1	Cefepime [Susceptibility]
...			

Table 153: NHSNDrugSusceptibilityTestMethod

Value Set: NHSNDrugSusceptibilityTestMethod urn:oid:2.16.840.1.113883.10.20.5.9.4 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the drug susceptibility test method.),(Data Element Scope: Code identifying the type of drug susceptibility observation.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.4/expansion			
Code	Code System	Code System OID	Print Name
49589-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Bacterial susceptibility panel by Gradient strip
50545-3	LOINC	urn:oid:2.16.840.1.113883.6.1	Bacterial susceptibility panel by Minimum inhibitory concentration (MIC)
50546-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Bacterial susceptibility panel by Disk diffusion (KB)

Figure 47: Antimicrobial Susceptibility Result Observation (V3)

<pre> <observation classCode="OBS" moodCode="EVN" negationInd="false"> <!-- [C-CDA R1.1] Result Observation --> <templateId root="2.16.840.1.113883.10.20.22.4.2" /> <!-- [HAI R3D1.1] Antimicrobial Susceptibility Result Observation (V3) --> <templateId root="2.16.840.1.113883.10.20.5.6.186" extension="2016-08-01" /> <id nullFlavor="NA" /> <code code="18907-6" displayName="Clarithro Susc Islt" codeSystemName="LOINC" codeSystem="2.16.840.1.113883.6.1" /> <statusCode code="completed" /> <effectiveTime nullFlavor="NA" /> <value xsi:type="IVL_PQ"> <low value="5.0" unit="ug/ml" /> </value> <interpretationCode codeSystem="2.16.840.1.113883.5.83" codeSystemName="HL7 Observation Interpretation" code="R" displayName="Resistant" /> <methodCode codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="49589-5" displayName="Bacterial susceptibility panel by Gradient strip (E-test)" /> </observation> </pre>

Figure 48: Antimicrobial Susceptibility Result Observation (V3) - Not Done

```
<observation classCode="OBS" moodCode="EVN" negationInd="true">
  <!-- [C-CDA R1.1] Result Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2" />

  <!-- [HAI R3D1.1] Antimicrobial Susceptibility Result Observation (V3) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.186" extension="2016-08-01" />

  <id nullFlavor="NA" />
  <code code="18907-6"
    displayName="Clarithro Susc Islt"
    codeSystemName="LOINC"
    codeSystem="2.16.840.1.113883.6.1" />
  <statusCode code="completed" />
  <effectiveTime nullFlavor="NA" />
  <value xsi:type="IVL_PQ" nullFlavor="NA" />
  <interpretationCode nullFlavor="NA" />
  <methodCode codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    code="50546-1"
    displayName="Bacterial susceptibility panel by Disk diffusion (KB)" />
</observation>
```

3.7 Antimicrobial Susceptibility Result Organizer (V3)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.200:2016-08-01
(closed)]

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Table 154: Antimicrobial Susceptibility Result Organizer (V3) Contexts

Contained By:	Contains:
Antimicrobial Susceptibility Tests Organizer (V3) (required)	Antimicrobial Susceptibility Result Observation (V3) (required)

This organizer groups a battery of antimicrobial susceptibility tests. Each drug tested must have an observation for each method in the value set NHSNDrugSusceptibilityTestMethod.

Table 155: Antimicrobial Susceptibility Result Organizer (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.200:2016-08-01)					
@classCode	1..1	SHALL		3247-27103	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = BATTERY
@moodCode	1..1	SHALL		3247-27104	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3247-30554	
@root	1..1	SHALL		3247-28208	2.16.840.1.113883.10.20.22.4.1
templateId	1..1	SHALL		3247-27105	
@root	1..1	SHALL		3247-27106	2.16.840.1.113883.10.20.5.6.200
@extension	1..1	SHALL		3247-30555	2016-08-01
id	1..1	SHALL		3247-27107	
@nullFlavor	1..1	SHALL		3247-30591	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA
code	1..1	SHALL		3247-27108	
@code	1..1	SHALL		3247-28101	18725-2
@codeSystem	1..1	SHALL		3247-28102	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		3247-27109	
@code	1..1	SHALL		3247-27110	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
component	1..*	SHALL		3247-27111	
observation	1..1	SHALL		3247-27112	Antimicrobial Susceptibility Result Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.186:2016-08-01)

1. Conforms to Result Organizer template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.1).
2. **SHALL** contain exactly one [1..1] @classCode="BATTERY" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-27103).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-27104).

4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3247-30554) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.1" (CONF:3247-28208).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:3247-27105) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.200" (CONF:3247-27106).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2016-08-01" (CONF:3247-30555).
6. **SHALL** contain exactly one [1..1] **id** (CONF:3247-27107).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:3247-30591).
7. **SHALL** contain exactly one [1..1] **code** (CONF:3247-27108).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="18725-2" Microbiology Studies (CONF:3247-28101).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3247-28102).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3247-27109).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3247-27110).

Each drug tested must have an observation for each method in the value set NHSNDrugSusceptibilityTestMethod.

9. **SHALL** contain at least one [1..*] **component** (CONF:3247-27111).
 - a. Such components **SHALL** contain exactly one [1..1] [Antimicrobial Susceptibility Result Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.186:2016-08-01) (CONF:3247-27112).

Figure 49: Antimicrobial Susceptibility Result Organizer (V3) Example

```
<organizer classCode="BATTERY" moodCode="EVN">
  <!-- [C-CDA R1.1] Result Organizer -->
  <templateId root="2.16.840.1.113883.10.20.22.4.1" />

  <!-- [HAI R3D1.1] Antimicrobial Susceptibility Result Organizer (V3) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.200" extension="2016-08-01" />
  <id nullFlavor="NA" />
  <code code="18725-2"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Microbiology Studies" />
  <statusCode code="completed" />
  <component>
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [C-CDA R1.1] Result Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2" />

      <!-- [HAI R3D1.1] Antimicrobial Susceptibility Result Observation (V3) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.186" extension="2016-08-01" />
      ...
    </observation>
  </component>

  <!-- This observation specifies the susceptibility test was not done. (NegationInd =
true) -->
  <component>
    <observation classCode="OBS" moodCode="EVN" negationInd="true">
      <!-- [C-CDA R1.1] Result Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2" />

      <!-- [HAI R3D1.1] Antimicrobial Susceptibility Result Observation (V3) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.186" extension="2016-08-01" />
      ...
    </observation>
  </component>
  ...
</organizer>
```

3.8 Antimicrobial Susceptibility Tests Organizer (V3)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.177:2016-08-01 (closed)]

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Table 156: Antimicrobial Susceptibility Tests Organizer (V3) Contexts

Contained By:	Contains:
Isolate Susceptibility Tests Organizer (V4) (required)	Antimicrobial Susceptibility Final Interpretation Result (required) Antimicrobial Susceptibility Result Organizer (V3) (required)

This organizer identifies a set of antimicrobial susceptibility tests performed on a pathogen along with the final antimicrobial susceptibility result generated by those tests with regard to that pathogen-agent combination.

Table 157: Antimicrobial Susceptibility Tests Organizer (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.177:2016-08-01)					
@classCode	1..1	SHALL		3247-21091	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		3247-21092	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3247-30498	
@root	1..1	SHALL		3247-30499	2.16.840.1.113883.10.20.22.4.1
templateId	1..1	SHALL		3247-21093	
@root	1..1	SHALL		3247-21094	2.16.840.1.113883.10.20.5.6.177
@extension	1..1	SHALL		3247-30500	2016-08-01
id	1..*	SHALL		3247-21097	
@nullFlavor	1..1	SHALL		3247-22723	NA
code	1..1	SHALL		3247-21098	
@code	1..1	SHALL		3247-21099	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 18725-2
statusCode	1..1	SHALL		3247-21100	
@code	1..1	SHALL		3247-21101	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
component	1..1	SHALL		3247-21104	
organizer	1..1	SHALL		3247-27178	Antimicrobial Susceptibility Result Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.200:2016-08-01)
component	1..1	SHALL		3247-21106	
observation	1..1	SHALL		3247-22712	Antimicrobial Susceptibility Final Interpretation Result (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.175)

1. Conforms to Result Organizer template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.1).

2. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-21091).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-21092).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3247-30498) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.1" (CONF:3247-30499).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:3247-21093) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.177" (CONF:3247-21094).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2016-08-01" (CONF:3247-30500).
6. **SHALL** contain at least one [1..*] **id** (CONF:3247-21097).
 - a. Such ids **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:3247-22723).
7. **SHALL** contain exactly one [1..1] **code** (CONF:3247-21098).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="18725-2" Microbiology studies (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3247-21099).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3247-21100).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3247-21101).
9. **SHALL** contain exactly one [1..1] **component** (CONF:3247-21104) such that it
 - a. **SHALL** contain exactly one [1..1] Antimicrobial Susceptibility Result Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.200:2016-08-01) (CONF:3247-27178).
10. **SHALL** contain exactly one [1..1] **component** (CONF:3247-21106) such that it
 - a. **SHALL** contain exactly one [1..1] Antimicrobial Susceptibility Final Interpretation Result (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.175) (CONF:3247-22712).

Figure 50: Antimicrobial Susceptibility Tests Organizer (V3) Example

```
<organizer classCode="CLUSTER" moodCode="EVN">

  <!-- [C-CDA R1.1] Result Organizer -->
  <templateId root="2.16.840.1.113883.10.20.22.4.1" />

  <!-- [HAI R3D1.1] Antimicrobial Susceptibility Tests Organizer (V3) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.177" extension="2016-08-01" />
  <id nullFlavor="NA" />
  <code code="18725-2"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Microbiology Studies" />
  <statusCode code="completed" />
  <component>
    <organizer classCode="BATTERY" moodCode="EVN">
      <!-- [C-CDA R1.1] Result Organizer -->
      <templateId root="2.16.840.1.113883.10.20.22.4.1" />

      <!-- [HAI R3D1.1] Antimicrobial Susceptibility Result Organizer (V3) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.200" extension="2016-08-01" />
      ...
    </organizer>
  </component>
</component>

  <!-- This observation specifies the Final Interpretation result. -->
  <observation classCode="OBS" moodCode="EVN">
    <!-- [HAI R1] Antimicrobial Susceptibility Final Interpretation Result -->
    <templateId root="2.16.840.1.113883.10.20.5.6.175" />

    <!-- [C-CDA R1.1] Result Observation -->
    <templateId root="2.16.840.1.113883.10.20.22.4.2" />
    ...
  </observation>
</component>
</organizer>
```

3.9 APRV or Related at Time of VAE Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.248:2017-04-01 (closed)]

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Release 3, STU 2 - US Realm

Table 158: APRV or Related at Time of VAE Observation Contexts

Contained By:	Contains:
Risk Factors Section in a VAE Report (optional)	

This clinical statement represents whether or not the patient was on Airway Pressure Release Ventilation (APRV) or a related mode of mechanical ventilation at the time of the Ventilator-Associated Event (VAE).

If the patient was on APRV or related at the time of the VAE, set the value of @negationInd to false. If the patient was not on APRV or related at the time of the VAE, set the value of @negationInd to true.

Table 159: APRV or Related at Time of VAE Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.248:2017-04-01)					
@classCode	1..1	SHALL		3311-28405	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3311-28406	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		3311-28407	
templateId	1..1	SHALL		3311-28399	
@root	1..1	SHALL		3311-28408	2.16.840.1.113883.10.20.5.6.248
@extension	1..1	SHALL		3311-28409	2017-04-01
code	1..1	SHALL		3311-28396	
@code	1..1	SHALL	CS	3311-28400	ASSERTION
@codeSystem	1..1	SHALL		3311-28401	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		3311-28397	
@code	1..1	SHALL		3311-28402	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	3311-28398	
@code	1..1	SHALL		3311-28403	2342-6
@codeSystem	1..1	SHALL		3311-28404	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3311-28405).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3311-28406).

If the patient was on APRV or related at the time of the VAE, set the value of `@negationInd` to false. If the patient was not on APRV or related at the time of the VAE, set the value of `@negationInd` to true.

3. **SHALL** contain exactly one [1..1] `@negationInd` (CONF:3311-28407).
4. **SHALL** contain exactly one [1..1] `templateId` (CONF:3311-28399) such that it
 - a. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.5.6.248"` (CONF:3311-28408).
 - b. **SHALL** contain exactly one [1..1] `@extension="2017-04-01"` (CONF:3311-28409).
5. **SHALL** contain exactly one [1..1] `code` (CONF:3311-28396).
 - a. This code **SHALL** contain exactly one [1..1] `@code="ASSERTION"` Assertion (CONF:3311-28400).
 - b. This code **SHALL** contain exactly one [1..1] `@codeSystem="2.16.840.1.113883.5.4"` (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3311-28401).
6. **SHALL** contain exactly one [1..1] `statusCode` (CONF:3311-28397).
 - a. This statusCode **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:3311-28402).
7. **SHALL** contain exactly one [1..1] `value` with `@xsi:type="CD"` (CONF:3311-28398).
 - a. This value **SHALL** contain exactly one [1..1] `@code="2342-6"` Patient on Airway Pressure Release Ventilation (APRV) or a related mode of mechanical ventilation at the time of VAE (CONF:3311-28403).
 - b. This value **SHALL** contain exactly one [1..1] `@codeSystem="2.16.840.1.113883.6.277"` (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3311-28404).

Figure 51: APRV or Related at Time of VAE

```
<!-- Setting negationInd="false" indicates that the Patient on Airway Pressure
      Release Ventilation (APRV) or a related mode of mechanical ventilation
      at the time of VAE -->
<observation moodCode="EVN" classCode="OBS" negationInd="false">
  <!-- [HAI R3D2] APRV or Related at Time of VAE Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.248" extension="2017-04-01" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed" />
  <value xsi:type="CD" code="2342-6"
    displayName="Patient on Airway Pressure Release Ventilation (APRV)
      or a related mode of mechanical ventilation at the time of VAE"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN" />
</observation>
```

3.10 ARO Staph Aureus Specific Tests Organizer

[organizer: identifier urn:oid:2.16.840.1.113883.10.20.5.6.190 (closed)]

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Release 1 - US Realm

Table 160: ARO Staph Aureus Specific Tests Organizer Contexts

Contained By:	Contains:
Isolate Susceptibility Tests Organizer (V4) (optional)	ARO Staph Aureus Specific Tests Result Observation (required)

This organizer represents the set of specific tests conducted on an isolate of Staphylococcus aureus when performing antimicrobial susceptibility testing.

Table 161: ARO Staph Aureus Specific Tests Organizer Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.190)					
@classCode	1..1	SHALL		86-22700	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		86-22701	urn:oid:2.16.840.1.113883.5.1 001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-28209	
@root	1..1	SHALL		86-28210	2.16.840.1.113883.10.20.22.4 .1
templateId	1..1	SHALL		86-22702	
@root	1..1	SHALL		86-22703	2.16.840.1.113883.10.20.5.6. 190
id	1..1	SHALL		86-22704	
@nullFlavor	1..1	SHALL		86-23365	NA
code	1..1	SHALL		86-22705	
@code	1..1	SHALL		86-22706	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 18725-2
statusCode	1..1	SHALL		86-22707	
@code	1..1	SHALL		86-22708	urn:oid:2.16.840.1.113883.5.1 4 (HL7ActStatus) = completed
component	1..*	SHALL		86-22709	
observation	1..1	SHALL		86-22710	ARO Staph Aureus Specific Tests Result Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.189)

1. Conforms to Result Organizer template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.1).

2. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:86-22700).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:86-22701).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28209) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.1" (CONF:86-28210).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22702) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.190" (CONF:86-22703).
6. **SHALL** contain exactly one [1..1] **id** (CONF:86-22704).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-23365).
7. **SHALL** contain exactly one [1..1] **code** (CONF:86-22705).
 - a. This **code** **SHALL** contain exactly one [1..1] **@code**="18725-2" Microbiology studies (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-22706).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-22707).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-22708).
9. **SHALL** contain at least one [1..*] **component** (CONF:86-22709) such that it
 - a. **SHALL** contain exactly one [1..1] [ARO Staph Aureus Specific Tests Result Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.189) (CONF:86-22710).

Figure 52: ARO Staph Aureus Specific Tests Organizer Example

```

<organizer classCode="CLUSTER" moodCode="EVN">
  <!-- ARO Staph Aureus Specific Tests Organizer -->
  <templateId root="2.16.840.1.113883.10.20.5.6.190" />
  <!-- Conforms to Consolidated CDA Result Organizer template -->
  <templateId root="2.16.840.1.113883.10.20.22.4.1" />
  <id nullFlavor="NA" />
  <code code="18725-2"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        displayName="Microbiology studies" />
  <statusCode code="completed" />
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- ARO Staph Aureus Specific Tests Result Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.189" />
      <!-- Conforms to Consolidated CDA Result Observation template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2" />
      ...
    </observation>
  </component>
  ...
</organizer>

```

3.11 ARO Staph Aureus Specific Tests Result Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.189 (closed)]

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Release 1 - US Realm

Table 162: ARO Staph Aureus Specific Tests Result Observation Contexts

Contained By:	Contains:
ARO Staph Aureus Specific Tests Organizer (required)	

This clinical statement represents the results of a Staphylococcus aureus-specific test when performing antimicrobial susceptibility testing. The type of test is recorded in the code element; the results of the test are recorded in the value element.

Table 163: ARO Staph Aureus Specific Tests Result Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.189)					
@classCode	1..1	SHALL		86-22687	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-22688	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-28211	
@root	1..1	SHALL		86-28212	2.16.840.1.113883.10.20.22.4.2
templateId	1..1	SHALL		86-22689	
@root	1..1	SHALL		86-22690	2.16.840.1.113883.10.20.5.6.189
id	1..1	SHALL		86-22691	
@nullFlavor	1..1	SHALL		86-22692	NA
code	1..1	SHALL		86-22693	urn:oid:2.16.840.1.114222.4.11.7160 (NHSNStaphAureusSpecificTest)
statusCode	1..1	SHALL		86-22694	
@code	1..1	SHALL		86-22695	completed
effectiveTime	1..1	SHALL		86-22696	
@nullFlavor	1..1	SHALL		86-22697	NA
value	1..1	SHALL	CD	86-22698	urn:oid:2.16.840.1.114222.4.11.6074 (NHSNStaphAureusTestResults)

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).

2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:86-22687).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:86-22688).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28211) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.2" (CONF:86-28212).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22689) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.189" (CONF:86-22690).
6. **SHALL** contain exactly one [1..1] **id** (CONF:86-22691).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22692).
7. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNStaphAureusSpecificTest](#) urn:oid:2.16.840.1.114222.4.11.7160 **DYNAMIC** (CONF:86-22693).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-22694).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CONF:86-22695).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-22696).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22697).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [NHSNStaphAureusTestResults](#) urn:oid:2.16.840.1.114222.4.11.6074 **DYNAMIC** (CONF:86-22698).

Table 164: NHSNStaphAureusSpecificTest

Value Set: NHSNStaphAureusSpecificTest urn:oid:2.16.840.1.114222.4.11.7160 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the type of Staphylococcus aureus-specific test used to perform antimicrobial susceptibility testing.), (Data Element Scope: Code identifying the type of observation.), (Inclusion Criteria:), (Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7160/expansion			
Code	Code System	Code System OID	Print Name
42721-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Oxacillin Resistant Staphylococcus sp isolate [Presence] in Isolate by Latex agglutination
48813-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Methicillin resistance mecA gene [Presence] by Molecular method

Table 165: NHSNStaphAureusTestResults

Value Set: NHSNStaphAureusTestResults urn:oid:2.16.840.1.114222.4.11.6074 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the results of a Staphylococcus aureus-specific test when performing antimicrobial susceptibility testing.),(Data Element Scope: A coded observation value describing the result of a Staphylococcus aureus-specific test when performing antimicrobial susceptibility testing),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.6074/expansion			
Code	Code System	Code System OID	Print Name
10828004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Positive (qualifier value)
260385009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Negative (qualifier value)
261665006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Unknown (qualifier value)

Figure 53: ARO Staph Aureus Specific Tests Result Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- ARO Staph Aureus Specific Tests Result Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.189"/>
  <!-- Conforms to Consolidated CDA Result Observation template -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
  <id nullFlavor="NA"/>
  <code code="42721-1"
    displayName="Oxacillin Resistant Staphylococcus sp isolate [Presence]
      in Isolate by Latex agglutination"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"/>
  <statusCode code="completed"/>
  <effectiveTime nullFlavor="NA"/>
  <value xsi:type="CD" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    code="260385009"
    displayName="Negative"/>
</observation>
```

3.12 ASA Class Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.113 (closed)]

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Release 1 - US Realm

Table 166: ASA Class Observation Contexts

Contained By:	Contains:
Infection Risk Factors Section in a Procedure Report (optional) Infection Risk Factors Section in an OPC Denominator for Procedure (optional)	

This observation records the patient’s physical status using the American Society of Anesthesiologists (ASA) Class Codes. The SNOMED CT representation of ASA Class Codes includes a sixth value (413500003 ASA physical status class 6 for brain-dead patients taken to the operating room to remove organs for transplant). This sixth value is not part of the value set allowed in a CDA document submitted to NHSN.

Table 167: ASA Class Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.113)					
@classCode	1..1	SHALL		86-19583	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-19584	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-19585	false
templateId	1..1	SHALL		86-28213	
@root	1..1	SHALL		86-28214	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-19594	
@root	1..1	SHALL		86-19595	2.16.840.1.113883.10.20.5.6.113
id	1..1	SHALL		86-19596	
@nullFlavor	1..1	SHALL		86-22724	NA
code	1..1	SHALL		86-19586	
@code	1..1	SHALL		86-19587	ASSERTION
@codeSystem	1..1	SHALL		86-28370	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-19588	
@code	1..1	SHALL		86-19589	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-19590	urn:oid:2.16.840.1.113883.13.10 (NHSNASAClassCode)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-19583).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-19584).
4. **SHALL** contain exactly one [1..1] **@negationInd**="false" (CONF:86-19585).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28213) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28214).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-19594) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.113" (CONF:86-19595).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-19596).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22724).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-19586).

- a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-19587).
- b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28370).
9. **SHALL** contain exactly one [1..1] statusCode (CONF:86-19588).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-19589).
10. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHALL** be selected from ValueSet NHSNASAClassCode urn:oid:2.16.840.1.113883.13.10 **DYNAMIC** (CONF:86-19590).

Table 168: NHSNASAClassCode

Value Set: NHSNASAClassCode urn:oid:2.16.840.1.113883.13.10 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the ASA class code.), (Data Element Scope: This observation value records the patient's physical status using the American Society of Anesthesiologists (ASA) Class Codes), (Inclusion Criteria:), (Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.10/expansion			
Code	Code System	Code System OID	Print Name
413495001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	American Society of Anesthesiologists physical status class 1 (finding)
413496000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	American Society of Anesthesiologists physical status class 2 (finding)
413497009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	American Society of Anesthesiologists physical status class 3 (finding)
413498004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	American Society of Anesthesiologists physical status class 4 (finding)
413499007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	American Society of Anesthesiologists physical status class 5 (finding)

Figure 54: ASA Class Observation Example

```
<!-- ASA Class Observation -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- ASA Class Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.113"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED"
    code="413495001" displayName="Normally healthy patient"/>
</observation>
```

3.13 Bacterial Isolate Tested for Carbapenemase Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.222:2014-12-01
(closed)]

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Table 169: Bacterial Isolate Tested for Carbapenemase Observation Contexts

Contained By:	Contains:
Pathogen Identified Observation (LIO) (V2) (optional)	Carbapenemase Test Organizer (optional) Positive Test for Carbapenemase Observation (optional)

This template represents whether or not the bacterial isolate was tested for carbapenemase.

When the bacterial isolate was tested, set the value of @negationInd to false. When the bacterial isolate was not tested, set the value of @negationInd to true. When it is unknown whether or not the bacterial isolate was tested, set the value of @nullFlavor to "UNK".

Table 170: Bacterial Isolate Tested for Carbapenemase Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.222:2014-12-01)					
@nullFlavor	0..1	MAY		1129-30360	UNK
@classCode	1..1	SHALL		1129-30353	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1129-30354	urn:oid:2.16.840.1.113883.5.1 001 (HL7ActMood) = EVN
@negationInd	0..1	SHOULD		1129-30355	
templateId	1..1	SHALL		1129-30501	
@root	1..1	SHALL		1129-30502	2.16.840.1.113883.10.20.5.6.222
@extension	1..1	SHALL		1129-30503	2014-12-01
code	1..1	SHALL		1129-30336	
@code	1..1	SHALL		1129-30345	ASSERTION
@codeSystem	1..1	SHALL		1129-30603	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1129-30337	
@code	1..1	SHALL		1129-30346	urn:oid:2.16.840.1.113883.5.1 4 (HL7ActStatus) = completed
value	1..1	SHALL	CD	1129-30338	
@code	1..1	SHALL		1129-30347	2037-0
@codeSystem	1..1	SHALL		1129-30437	urn:oid:2.16.840.1.113883.6.2 77 (cdcNHSN) = 2.16.840.1.113883.6.277
entryRelationship	1..1	SHOULD		1129-30335	
@typeCode	1..1	SHALL		1129-30356	COMP
organizer	1..1	SHALL		1129-30414	Carbapenemase Test Organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.223:2014-12-01)
entryRelationship	1..1	SHOULD		1129-30438	
@typeCode	1..1	SHALL		1129-	COMP

XPath	Card.	Verb	Data Type	CONF#	Value
				30439	
observation	1..1	SHALL		1129-30440	Positive Test for Carbapenemase Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.225:2014-12-01)

1. **MAY** contain zero or one [0..1] **@nullFlavor="UNK"** (CONF:1129-30360).
2. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-30353).
3. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-30354).
4. **SHOULD** contain zero or one [0..1] **@negationInd** (CONF:1129-30355).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30501) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.6.222"** (CONF:1129-30502).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-12-01"** (CONF:1129-30503).
6. **SHALL** contain exactly one [1..1] **code** (CONF:1129-30336).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** Assertion (CONF:1129-30345).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1129-30603).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1129-30337).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1129-30346).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:1129-30338).
 - a. This value **SHALL** contain exactly one [1..1] **@code="2037-0"** Bacterial isolate tested for carbapenemase (CONF:1129-30347).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.277"** (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1129-30437).

If the value of **@negationInd** is "false" this observation is required to contain the following entryRelationship

9. **SHOULD** contain exactly one [1..1] **entryRelationship** (CONF:1129-30335) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** (CONF:1129-30356).
 - b. **SHALL** contain exactly one [1..1] [Carbapenemase Test Organizer](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.223:2014-12-01) (CONF:1129-30414).

If any tests were performed this observation is required to contain the following entryRelationship

10. **SHOULD** contain exactly one [1..1] **entryRelationship** (CONF:1129-30438) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** (CONF:1129-30439).
 - b. **SHALL** contain exactly one [1..1] [Positive Test for Carbapenemase Observation](#) (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.5.6.225:2014-12-01) (CONF:1129-30440).

Figure 55: Bacterial Isolate Tested for Carbapenemase Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- Bacterial Isolate Tested for Carbapenemase Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.222"
    extension="2014-12-01"/>
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4"
    codeSystemName="ActCode"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    code="2037-0"
    displayName="Bacterial isolate tested for carbapenemase"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"/>
  <!-- If the value of negationInd="false" for the Bacterial
    Isolate Tested for Carbapenemase template (meaning it
    was tested) then the following entryRelationship is
    required -->
  <entryRelationship typeCode="COMP">
    <!-- Carbapenemase Test Organizer -->
    <organizer classCode="CLUSTER" moodCode="EVN">
      <!-- C-CDA Result Organizer templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.1"/>
      <!-- Carbapenemase Test Organizer templateId-->
      <templateId root="2.16.840.1.113883.10.20.5.6.223"
        extension="2014-12-01"/>
      ...
    </organizer>
  </entryRelationship>
  <!-- If any tests were performed, this entryRelationship is required -->
  <entryRelationship typeCode="COMP">
    <!-- Positive Test for Carbapenemase Observation -->
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Result Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2" />
      <!-- Positive Test for Carbapenemase Observation templateId-->
      <templateId root="2.16.840.1.113883.10.20.5.6.225"
        extension="2014-12-01"/>
      ...
    </observation>
  </entryRelationship>
</observation>
```

3.14 Birth Sex Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.200:2016-06-01 (open)]

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Table 171: Birth Sex Observation Contexts

Contained By:	Contains:
NHSN Social History Section (required)	

This observation represents the sex of the patient at birth. It is the sex that is entered on the person's birth certificate at time of birth.

This observation is not appropriate for recording patient gender (administrativeGender).

Table 172: Birth Sex Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.200:2016-06-01)					
@classCode	1..1	SHALL		3250-18230	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3250-18231	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3250-18232	
@root	1..1	SHALL		3250-18233	2.16.840.1.113883.10.20.22.4.200
@extension	1..1	SHALL		3250-32949	2016-06-01
code	1..1	SHALL		3250-18234	
@code	1..1	SHALL		3250-18235	76689-9
@codeSystem	1..1	SHALL		3250-21163	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		3250-18124	
@code	1..1	SHALL		3250-18125	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	3250-32947	urn:oid:2.16.840.1.113762.1.4.1 (ONC Administrative Sex)

1. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3250-18230).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3250-18231).

3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3250-18232) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.200" (CONF:3250-18233).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2016-06-01" (CONF:3250-32949).
4. **SHALL** contain exactly one [1..1] **code** (CONF:3250-18234).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="76689-9" Sex Assigned At Birth (CONF:3250-18235).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:3250-21163).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3250-18124).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:3250-18125).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet ONC Administrative Sex urn:oid:2.16.840.1.113762.1.4.1 **STATIC** 2016-06-01 (CONF:3250-32947).
 - a. If value/**@code** not from value set ONC Administrative Sex urn:oid:2.16.840.1.113762.1.4.1 **STATIC** 2016-06-01, then value/**@nullFlavor** **SHALL** be "UNK" (CONF:3250-32948).

Table 173: ONC Administrative Sex

Value Set: ONC Administrative Sex urn:oid:2.16.840.1.113762.1.4.1 (Clinical Focus: Gender identity restricted to only Male and Female used in administrative situations requiring a restriction to these two categories.),(Data Element Scope: Gender),(Inclusion Criteria: Male and Female only.),(Exclusion Criteria: Any gender identity that is not male or female.) This value set was imported on 10/17/2019 with a version of 20190425. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1/expansion			
Code	Code System	Code System OID	Print Name
F	Administrative Gender	urn:oid:2.16.840.1.113883.5.1	Female
M	Administrative Gender	urn:oid:2.16.840.1.113883.5.1	Male

Figure 56: Birth Sex Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- New templateId for Birth Sex -->
  <!-- Not asserting conformance to Social History Observation due to different vocab. --
>
  <templateId root="2.16.840.1.113883.10.20.22.4.200" extension="2016-06-01"/>
  <code code="76689-9" codeSystem="2.16.840.1.113883.6.1"
    displayName="Sex Assigned At Birth"/>
  <text>
    <reference value="#BSex_Narrative1"/>
  </text>
  <statusCode code="completed"/>
  <!-- effectiveTime if present should match birthTime -->
  <!-- Request name change to QRDA value set (2.16.840.1.113762.1.4.1) - ONC Birth Sex -
->
  <value xsi:type="CD" codeSystem="2.16.840.1.113883.5.1"
codeSystemName="AdministrativeGender"
    code="F" displayName="Female">
    <originalText>
      <reference value="#BSex_value"/>
    </originalText>
  </value>
  <author>
    ...
  </author>
</observation>
```

3.15 Blood Collection Location

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.219:2014-12-01
(closed)]

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Table 174: Blood Collection Location Contexts

Contained By:	Contains:
Positive Blood Culture Observation (V3) (optional)	

If there is a positive blood culture, this template records the location where the blood was collected.
If the blood collection location is other than one specified in the value set
NHSNBloodCollectionLocation, use value/@nullFlavor="OTH".

Table 175: Blood Collection Location Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.219:2014-12-01)					
@classCode	1..1	SHALL		1129-30299	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1129-30300	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1129-30504	
@root	1..1	SHALL		1129-30505	2.16.840.1.113883.10.20.5.6.219
@extension	1..1	SHALL		1129-30506	2014-12-01
code	1..1	SHALL		1129-30296	
@code	1..1	SHALL		1129-30304	2331-7
@codeSystem	1..1	SHALL		1129-30305	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
statusCode	1..1	SHALL		1129-30297	
@code	1..1	SHALL		1129-30306	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	1129-30315	urn:oid:2.16.840.1.114222.4.117237 (NHSNBloodCollectionLocation)
@nullFlavor	0..1	MAY		1129-30316	OTH

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1129-30299).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1129-30300).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30504) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.219" (CONF:1129-30505).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30506).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1129-30296).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="2331-7" Where was the positive blood culture collected (CONF:1129-30304).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1129-30305).

5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1129-30297).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1129-30306).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"**, where the code **SHOULD** be selected from ValueSet [NHSNBloodCollectionLocation](#) urn:oid:2.16.840.1.114222.4.11.7237 **DYNAMIC** (CONF:1129-30315).

If the blood collection location is other than one specified in the value set NHSNBloodCollectionLocation, use nullFlavor="OTH"

- a. This value **MAY** contain zero or one [0..1] **@nullFlavor="OTH"** (CONF:1129-30316).

Table 176: NHSNBloodCollectionLocation

Value Set: NHSNBloodCollectionLocation urn:oid:2.16.840.1.114222.4.11.7237 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the location where blood was collected.),(Data Element Scope: If there is a positive blood culture, this coded observation value records the location where the blood was collected.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 12/8/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7237/expansion			
Code	Code System	Code System OID	Print Name
2332-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Hospital (on the day of or the day following admission) or Emergency Department
2333-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Dialysis clinic

Figure 57: Blood Collection Location Example

<pre> <observation classCode="OBS" moodCode="EVN"> <!-- Blood Collection Location templateId --> <templateId root="2.16.840.1.113883.10.20.5.6.219" extension="2014-12-01"/> <code code="2331-7" displayName="Where was the positive blood culture collected" codeSystem="2.16.840.1.113883.6.277" codeSystemName="cdcNHSN"/> <statusCode code="completed"/> <value xsi:type="CD" code="2333-3" displayName="Dialysis Clinic" codeSystem="2.16.840.1.113883.6.277" codeSystemName="cdcNHSN" /> </observation> </pre>
--

Figure 58: Blood Collection Location - Other Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Blood Collection Location templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.219"
    extension="2014-12-01"/>
  <code code="2331-7"
    displayName="Where was the positive blood culture collected"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" nullFlavor="OTH" />
</observation>
```

3.16 Blood Product Usage Summary Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.237:2016-08-01 (closed)]

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Table 177: Blood Product Usage Summary Observation (V2) Contexts

Contained By:	Contains:
Summary Encounter (HV) (V2) (required)	ISBT Product Code Summary Observation (V2) (optional)

This template represents the number of units transfused, aliquots transfused, or total discards for each type of blood product.

If the value = 0 or type of product is one of the following, there **SHALL NOT** be a contained observation:

- Red Blood Cells/Whole Blood Derived/Total (3401-7, 3402-5, 3470-2)
- Red Blood Cells/Apheresis/Total (3409-0, 3410-8, 3477-7)
- Platelets/Whole Blood Derived/Total (3417-3, 3484-3)
- Platelets/Apheresis/Total (3421-5, 3422-3, 3490-0)
- Red Blood Cells/Whole Blood Derived/S-303 and Riboflavin Treated/Total (3544-4, 3545-1, 3546-9)
- Red Blood Cells/Apheresis/S-303 and Riboflavin Treated/Total (3553-5, 3554-3, 3555-0)
- Platelets/Whole Blood Derived/Psoralen and Riboflavin Treated/Total (3502-2, 3504-8)
- Platelets/Apheresis/Psoralen and Riboflavin Treated/Total (3511-3, 3512-1, 3513-9)
- Plasma/Whole Blood Derived/Psoralen and Riboflavin Treated/Total (3520-4, 3521-2, 3522-0)
- Plasma/Apheresis/Psoralen and Riboflavin Treated/Total (3529-5, 3530-3, 3531-1)

- Cryoprecipitate/Psoralen and Riboflavin Treated/Total (3562-6, 3563-4)
If the value is > 0 and the type of product is not one of those listed above, then each specific subcategory product that is > 0 **SHALL** be listed in a separate contained ISBT Product Code Summary Observation.

Table 178: Blood Product Usage Summary Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.237:2016-08-01)					
@classCode	1..1	SHALL		3247-30705	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3247-30706	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3247-30701	
@root	1..1	SHALL		3247-30707	2.16.840.1.113883.10.20.5.6.237
@extension	1..1	SHALL		3247-30714	2016-08-01
code	1..1	SHALL		3247-30702	
@code	1..1	SHALL		3247-30715	urn:oid:2.16.840.1.114222.4.11.7353 (NHSNSummaryBloodProduct Usage)
statusCode	1..1	SHALL		3247-30703	
@code	1..1	SHALL		3247-30713	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	INT	3247-30704	
entryRelationship	0..*	SHOULD		3247-30728	
observation	1..1	SHALL		3247-30729	ISBT Product Code Summary Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01)

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-30705).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-30706).
3. **SHALL** contain exactly one [1..1] templateId (CONF:3247-30701) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.237" (CONF:3247-30707).
 - b. **SHALL** contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30714).
4. **SHALL** contain exactly one [1..1] code (CONF:3247-30702).

- a. This code **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [NHSNSummaryBloodProductUsage](#) urn:oid:2.16.840.1.114222.4.11.7353 **DYNAMIC** (CONF:3247-30715).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3247-30703).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3247-30713).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="INT"** (CONF:3247-30704).
7. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:3247-30728).
 - a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] [ISBT Product Code Summary Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01) (CONF:3247-30729).
8. If the value = 0 or type of product is one of the following, there **SHALL NOT** be a contained observation:

Table 179: NHSNSummaryBloodProductUsage

Value Set: NHSNSummaryBloodProductUsage urn:oid:2.16.840.1.114222.4.11.7353 (Clinical Focus: NHSN surveillance reporting: monthly reporting denominators for hemovigilance),(Data Element Scope: Code identifying the type of observation.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7353/expansion			
Code	Code System	Code System OID	Print Name
3401-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Total number of units transfused: Red Blood Cells: Whole blood-derived
3402-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Total number of aliquots transfused: Red Blood Cells: Whole blood-derived
...			

Figure 59: Blood Product Usage Summary Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- [HAI R3D1.1] Blood Product Usage Summary Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.237" extension="2016-08-01" />
  <code codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="3467-8"
    displayName="Total number of units transfused - Whole blood" />
  <statusCode code="completed" />
  <value xsi:type="INT" value="100" />
  <!--
    If the value = 0 or type of product is one of the following,
    there SHALL NOT be a contained observation:
      Red Blood Cells/Whole Blood Derived/Total (3401-7, 3402-5, 3470-2)
      Red Blood Cells/Apheresis/Total (3409-0, 3410-8, 3477-7)
      Platelets/Whole Blood Derived/Total (3417-3, 3484-3)
      Platelets/Apheresis/Total (3421-5, 3422-3, 3490-0)
      Red Blood Cells/Whole Blood Derived/S-303 and Riboflavin Treated/Total (3544-4, 3545-
1, 3546-9)
      Red Blood Cells/Apheresis/S-303 and Riboflavin Treated/Total (3553-5, 3554-3, 3555-0)
      Platelets/Whole Blood Derived/Psoralen and Riboflavin Treated/Total (3502-2, 3504-8)
      Platelets/Apheresis/Psoralen and Riboflavin Treated/Total (3511-3, 3512-1, 3513-9)
      Plasma/Whole Blood Derived/Psoralen and Riboflavin Treated/Total (3520-4, 3521-2,
3522-0)
      Plasma/Apheresis/Psoralen and Riboflavin Treated/Total (3529-5, 3530-3, 3531-1)
      Cryoprecipitate/Psoralen and Riboflavin Treated/Total (3562-6, 3563-4)
    If the value is > 0 and the type of product is not one of those listed above,
    then each specific subcategory product that is > 0 SHALL be listed in a
    separate contained ISBT Product Code Summary Observation.
  -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ISBT Product Code Summary Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.238" extension="2016-08-01" />
      ..
    </observation>
  </entryRelationship>
  ...
</observation>
```

3.17 Blood Sample Collected for Culture Observation

[observation: identifier urn:h17ii:2.16.840.1.113883.10.20.5.6.239:2016-08-01 (closed)]

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Table 180: Blood Sample Collected for Culture Observation Contexts

Contained By:	Contains:
IV Antibiotic Start Clinical Statement (V4) (optional)	

This observation records whether a blood sample was collected for culture when there was a new antimicrobial start. If there was no antimicrobial start then this template will not be included.

When a blood sample was collected for culture when there was a new antimicrobial start, set the value of @negationInd to false. When a blood sample was not collected for culture when there was a new antimicrobial start, set the value of @negationInd to true.

Table 181: Blood Sample Collected for Culture Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.239:2016-08-01)					
@classCode	1..1	SHALL		3247-11	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3247-12	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		3247-14	
templateId	1..1	SHALL		3247-1	
@root	1..1	SHALL		3247-5	2.16.840.1.113883.10.20.5.6.239
@extension	1..1	SHALL		3247-6	2016-08-01
code	1..1	SHALL		3247-2	
@code	1..1	SHALL		3247-7	ASSERTION
@codeSystem	1..1	SHALL		3247-8	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		3247-4	
@code	1..1	SHALL		3247-13	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	3247-3	
@code	1..1	SHALL		3247-9	2339-0
@codeSystem	1..1	SHALL		3247-10	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-11).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-12).

When a blood sample was collected for culture when there was a new antimicrobial start, set the value of @negationInd to false. When a blood sample was not collected for culture when there was a new antimicrobial start, set the value of @negationInd to true.

3. **SHALL** contain exactly one [1..1] @negationInd (CONF:3247-14).
4. **SHALL** contain exactly one [1..1] templateId (CONF:3247-1) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.239" (CONF:3247-5).

- b. **SHALL** contain exactly one [1..1] **@extension**="2016-08-01" (CONF:3247-6).
- 5. **SHALL** contain exactly one [1..1] **code** (CONF:3247-2).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:3247-7).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3247-8).
- 6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3247-4).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3247-13).
- 7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:3247-3).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="2339-0" Blood sample collected for culture (CONF:3247-9).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3247-10).

Figure 60: Blood Sample Collected for Culture Example

```
<!-- Blood sample was collected so @negationInd="false" -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- [HAI R3D1.1] Blood Sample Collected for Culture Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.239" extension="2016-08-01" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed" />
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="2339-0"
    displayName="Blood sample collected for culture" />
</observation>
```

3.18 Bloodstream Infection Evidence Type Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.114 (closed)]

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Table 182: Bloodstream Infection Evidence Type Observation Contexts

Contained By:	Contains:
Infection-Type Observation (optional)	

This observation records whether the bloodstream infection being reported was confirmed by a positive blood culture.

Table 183: Bloodstream Infection Evidence Type Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.114)					
@classCode	1..1	SHALL		86-19597	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-19598	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-19599	false
templateId	1..1	SHALL		86-28215	
@root	1..1	SHALL		86-28216	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-19608	
@root	1..1	SHALL		86-19609	2.16.840.1.113883.10.20.5.6.114
id	1..1	SHALL		86-19610	
@nullFlavor	1..1	SHALL		86-22725	NA
code	1..1	SHALL		86-19600	
@code	1..1	SHALL		86-19601	ASSERTION
@codeSystem	1..1	SHALL		86-28371	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-19602	
@code	1..1	SHALL		86-19603	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-19604	urn:oid:2.16.840.1.113883.13.7 (NHSNBloodStreamInfectionEvidenceTypeCode)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-19597).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-19598).
4. **SHALL** contain exactly one [1..1] **@negationInd**="false" (CONF:86-19599).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28215) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28216).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-19608) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.114" (CONF:86-19609).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-19610).

- a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22725).
8. **SHALL** contain exactly one [1..1] code (CONF:86-19600).
 - a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-19601).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28371).
9. **SHALL** contain exactly one [1..1] statusCode (CONF:86-19602).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-19603).
10. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHALL** be selected from ValueSet [NHSNBloodStreamInfectionEvidenceTypeCode](#) urn:oid:2.16.840.1.113883.13.7 **DYNAMIC** (CONF:86-19604).

Table 184: NHSNBloodStreamInfectionEvidenceTypeCode

Value Set: NHSNBloodStreamInfectionEvidenceTypeCode urn:oid:2.16.840.1.113883.13.7 (Clinical Focus: NHSN surveillance reporting: Used to express a laboratory-confirmed bloodstream infection),(Data Element Scope: This observation value records whether the bloodstream infection being reported was confirmed by a positive blood culture.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.7/expansion			
Code	Code System	Code System OID	Print Name
1613-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Laboratory-confirmed bloodstream infection

Figure 61: Bloodstream Infection Evidence Type Observation Example

```

<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Bloodstream Infection Evidence Type Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.114"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4"
        code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
        codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        value="1613-9"
        displayName=" Laboratory-confirmed bloodstream infection"/>
</observation>

```

3.19 Buttonhole Cannulation Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.115 (closed)]

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Table 185: Buttonhole Cannulation Observation Contexts

Contained By:	Contains:
Vascular Access Type Observation (optional)	

This observation records whether the patient's fistula is accessed by buttonhole cannulation. This observation does not record a specific dialysis event but rather the technique in current use with the patient.

When buttonhole cannulation is used, set the value of @negationInd to false. When the buttonhole cannulation is not used, set the value of @negationInd to true.

Table 186: Buttonhole Cannulation Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.115)					
@classCode	1..1	SHALL		86-21764	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21765	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21766	
templateId	1..1	SHALL		86-28217	
@root	1..1	SHALL		86-28218	2.16.840.1.113883.10.20.22.4.13
templateId	1..1	SHALL		86-21775	
@root	1..1	SHALL		86-21776	2.16.840.1.113883.10.20.5.6.115
id	1..1	SHALL		86-21777	
@nullFlavor	1..1	SHALL		86-22726	NA
code	1..1	SHALL		86-21767	
@code	1..1	SHALL		86-21768	ASSERTION
@codeSystem	1..1	SHALL		86-28372	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-21769	
@code	1..1	SHALL		86-21770	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-21771	
@code	1..1	SHALL		86-21772	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2308-5

1. Conforms to Procedure Activity Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.13).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21764).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21765).

When buttonhole cannulation is used, set the value of **@negationInd** to false. When the buttonhole cannulation is not used, set the value of **@negationInd** to true.

4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-21766).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28217) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.13" (CONF:86-28218).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21775) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.115" (CONF:86-21776).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-21777).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22726).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-21767).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-21768).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28372).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21769).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21770).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:86-21771).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="2308-5" Buttonhole cannulation (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:86-21772).

Figure 62: Buttonhole Cannulation Observation Example

```
<!-- Buttonhole cannulation is used -->
<observation classCode="OBS" moodCode="EVN" negationInd="true">
  <!-- C-CDA Procedure Activity Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.13"/>
  <!-- HAI Buttonhole Cannulation Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.115"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4"
        code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
        codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="2308-5"
        displayName="Buttonhole cannulation"/>
</observation>
```

3.20 Carbapenemase Test Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.224:2014-12-01
(closed)]

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Release 2, DSTU 2.1 - US Realm

Table 187: Carbapenemase Test Observation Contexts

Contained By:	Contains:
Carbapenemase Test Organizer (required)	

This clinical statement represents a carbapenemase test. The type of test is recorded in the code element.

If the type of test is other than one specified in NHSNCarbaTestMethod, use code/@nullFlavor="OTH" and enter the testing method in code/originalText. If the type of test is unknown, use code/@nullFlavor="UNK".

Table 188: Carbapenemase Test Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.224:2014-12-01)					
@classCode	1..1	SHALL		1129-30379	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1129-30380	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1129-30375	
@root	1..1	SHALL		1129-30381	2.16.840.1.113883.10.20.22.4.2
templateId	1..1	SHALL		1129-30507	
@root	1..1	SHALL		1129-30508	2.16.840.1.113883.10.20.5.6.224
@extension	1..1	SHALL		1129-30509	2014-12-01
id	1..1	SHALL		1129-30376	
@nullFlavor	1..1	SHALL		1129-30382	NA
code	1..1	SHALL		1129-30383	urn:oid:2.16.840.1.114222.4.11.7240 (NHSNCarbaTestMethod)
@nullFlavor	0..1	MAY		1129-30389	urn:oid:2.16.840.1.113883.10.20.5.9.1 (NullValues_UNK_OTH)
originalText	0..1	MAY		1129-30390	
statusCode	1..1	SHALL		1129-30377	
@code	1..1	SHALL		1129-30384	completed
effectiveTime	1..1	SHALL		1129-30378	
@nullFlavor	1..1	SHALL		1129-30385	NA
value	1..1	SHALL	CD	1129-30386	
@nullFlavor	1..1	SHALL		1129-30388	NA

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).

2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1129-30379).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1129-30380).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30375) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.2" (CONF:1129-30381).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30507) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.224" (CONF:1129-30508).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30509).
6. **SHALL** contain exactly one [1..1] **id** (CONF:1129-30376).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:1129-30382).

If the type of test is other than one specified in **NHSCarbaTestMethod**, use code/**@nullFlavor**="OTH" and enter the testing method in code/originalText. If the type of test is unknown, use code/**@nullFlavor**="UNK".

7. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [NHSCarbaTestMethod](#) urn:oid:2.16.840.1.114222.4.11.7240 **DYNAMIC** (CONF:1129-30383).
 - a. This code **MAY** contain zero or one [0..1] **@nullFlavor**, which **SHALL** be selected from ValueSet [NullValues UNK OTH](#) urn:oid:2.16.840.1.113883.10.20.5.9.1 **STATIC** 2014-11-01 (CONF:1129-30389).
 - b. This code **MAY** contain zero or one [0..1] **originalText** (CONF:1129-30390).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1129-30377).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CONF:1129-30384).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1129-30378).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:1129-30385).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1129-30386).
 - a. This value **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:1129-30388).

Table 189: NHSNCarbaTestMethod

Value Set: NHSNCarbaTestMethod urn:oid:2.16.840.1.114222.4.11.7240 (Clinical Focus: NHSN surveillance reporting: Test methods to identify carbapenemase producers),(Data Element Scope: Code identifying the type of observation.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 12/8/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7240/expansion			
Code	Code System	Code System OID	Print Name
2039-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	PCR: Klebsiella pneumoniae carbapenemase
2040-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	PCR: New Delhi metallo-beta-lactamase
2041-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	PCR: Imipenemase
2042-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	PCR: Verona integron-encoded metallo-beta-lactamase
2043-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	PCR: Oxacillinase-48 like
2044-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Modified Hodge test
2045-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Carba NP
2046-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Metallo-beta-lactamase gradient strip
2047-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Metallo-beta-lactamase screen

Table 190: NullValues_UNK_OTH

Value Set: NullValues_UNK_OTH urn:oid:2.16.840.1.113883.10.20.5.9.1 Null values of unknown and other. Value Set Source: https://trifolia.lantanagroup.com/TerminologyManagement/ValueSet/View/2843			
Code	Code System	Code System OID	Print Name
UNK	HL7NullFlavor	urn:oid:2.16.840.1.113883.5.1008	Unknown
OTH	HL7NullFlavor	urn:oid:2.16.840.1.113883.5.1008	Other

Figure 63: Carbapenemase Test Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- C-CDA Result Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
  <!-- Carbapenemase Test Observation templateId-->
  <templateId root="2.16.840.1.113883.10.20.5.6.224"
    extension="2014-12-01"/>
  <id nullFlavor="NA"/>
  <code code="2039-6"
    displayName="(PCR-KPC) Polymerase chain reaction -
      Klebsiella pneumoniae carbapenemase"
    codeSystem="2.16.840.1.113883.6.277" codeSystemName="cdcNHSN"/>
  <statusCode code="completed"/>
  <effectiveTime nullFlavor="NA"/>
  <value xsi:type="CD" nullFlavor="NA"/>
</observation>
```

Figure 64: Carbapenemase Test Observation - Other Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- C-CDA Result Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
  <!-- Carbapenemase Test Observation templateId-->
  <templateId root="2.16.840.1.113883.10.20.5.6.224"
    extension="2014-12-01"/>
  <id nullFlavor="NA"/>
  <code nullFlavor="OTH">
    <originalText>Other carbapenemase test not in value set</originalText>
  </code>
  <statusCode code="completed"/>
  <effectiveTime nullFlavor="NA"/>
  <value xsi:type="CD" nullFlavor="NA"/>
</observation>
```

3.21 Carbapenemase Test Organizer

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.223:2014-12-01
(closed)]

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Table 191: Carbapenemase Test Organizer Contexts

Contained By:	Contains:
Bacterial Isolate Tested for Carbapenemase Observation (optional)	Carbapenemase Test Observation (required)

This organizer represents the set of specific tests conducted on a bacterial isolate to test for carbapenemase.

Table 192: Carbapenemase Test Organizer Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.223:2014-12-01)					
@classCode	1..1	SHALL		1129-30367	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1129-30368	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1129-30362	
@root	1..1	SHALL		1129-30369	2.16.840.1.113883.10.20.22.4.1
templateId	1..1	SHALL		1129-30510	
@root	1..1	SHALL		1129-30511	2.16.840.1.113883.10.20.5.6.223
@extension	1..1	SHALL		1129-30512	2014-12-01
id	1..1	SHALL		1129-30363	
@nullFlavor	1..1	SHALL		1129-30370	NA
code	1..1	SHALL		1129-30364	
@code	1..1	SHALL		1129-30371	18725-2
@codeSystem	1..1	SHALL		1129-30374	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1129-30365	
@code	1..1	SHALL		1129-30372	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
component	1..*	SHALL		1129-30361	
@typeCode	1..1	SHALL		1129-30391	COMP
observation	1..1	SHALL		1129-30366	Carbapenemase Test Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.224:2014-12-01)

1. Conforms to Result Organizer template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.1).
2. **SHALL** contain exactly one [1..1] @classCode="CLUSTER" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1129-30367).

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1129-30368).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30362) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.1" (CONF:1129-30369).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30510) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.223" (CONF:1129-30511).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30512).
6. **SHALL** contain exactly one [1..1] **id** (CONF:1129-30363).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:1129-30370).
7. **SHALL** contain exactly one [1..1] **code** (CONF:1129-30364).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="18725-2" Microbiology studies (CONF:1129-30371).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1129-30374).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1129-30365).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1129-30372).
9. **SHALL** contain at least one [1..*] **component** (CONF:1129-30361) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" (CONF:1129-30391).
 - b. **SHALL** contain exactly one [1..1] [Carbapenemase Test Observation](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.224:2014-12-01) (CONF:1129-30366).

Figure 65: Carbapenemase Test Organizer Example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <!-- C-CDA Result Organizer templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.1"/>
  <!-- Carbapenemase Test Organizer templateId-->
  <templateId root="2.16.840.1.113883.10.20.5.6.223"
    extension="2014-12-01"/>
  <id nullFlavor="NA"/>
  <code code="18725-2" displayName="Microbiology Studies"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"/>
  <statusCode code="completed"/>
  <component typeCode="COMP">
    <!-- Carbapenemase Test Observation -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- C-CDA Result Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
      <!-- Carbapenemase Test Observation templateId-->
      <templateId root="2.16.840.1.113883.10.20.5.6.224"
        extension="2014-12-01"/>
      ...
    </observation>
  </component>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- C-CDA Result Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
      <!-- Carbapenemase Test Observation templateId-->
      <templateId root="2.16.840.1.113883.10.20.5.6.224"
        extension="2014-12-01"/>
      ...
    </observation>
  </component>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- C-CDA Result Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
      <!-- Carbapenemase Test Observation templateId-->
      <templateId root="2.16.840.1.113883.10.20.5.6.224"
        extension="2014-12-01"/>
      ...
    </observation>
  </component>
</organizer>
```


3.22 Carbapenemase Type Identified Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.226:2014-12-01 (closed)]

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Table 193: Carbapenemase Type Identified Observation Contexts

Contained By:	Contains:
Positive Test for Carbapenemase Observation (optional)	

This template represents a carbapenemase type identified when the bacterial isolate was tested. If the type of carbapenemase is other than one specified in NHSNCarbaDetectType, use value/@nullFlavor="OTH" and enter the carbapenemase type in value/originalText.

Table 194: Carbapenemase Type Identified Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.226:2014-12-01)					
@classCode	1..1	SHALL		1129-30453	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1129-30454	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1129-30442	
@root	1..1	SHALL		1129-30448	2.16.840.1.113883.10.20.22.4.2
templateId	1..1	SHALL		1129-30513	
@root	1..1	SHALL		1129-30514	2.16.840.1.113883.10.20.5.6.226
@extension	1..1	SHALL		1129-30515	2014-12-01
id	1..1	SHALL		1129-30443	
@nullFlavor	1..1	SHALL		1129-30450	NA
code	1..1	SHALL		1129-30459	
@code	1..1	SHALL		1129-30460	2049-5
@codeSystem	1..1	SHALL		1129-30461	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
statusCode	1..1	SHALL		1129-30444	
@code	1..1	SHALL		1129-30451	completed
effectiveTime	1..1	SHALL		1129-30445	
@nullFlavor	1..1	SHALL		1129-30452	NA
value	1..1	SHALL	CD	1129-30447	urn:oid:2.16.840.1.114222.4.11.7241 (NHSNCarbaDetectType)
@nullFlavor	0..1	MAY		1129-30457	OTH
originalText	0..1	MAY		1129-30458	

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1129-30453).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1129-30454).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30442) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.2" (CONF:1129-30448).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30513) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.226" (CONF:1129-30514).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30515).
6. **SHALL** contain exactly one [1..1] **id** (CONF:1129-30443).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:1129-30450).
7. **SHALL** contain exactly one [1..1] **code** (CONF:1129-30459).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="2049-5" Carbapenemase Type Identified (CONF:1129-30460).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1129-30461).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1129-30444).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CONF:1129-30451).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1129-30445).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:1129-30452).

If the type of carbapenemase is other than one specified in NHSNCarbaDetectType, use value/**@nullFlavor**="OTH" and enter the carbapenemase type in value/originalText.

10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHOULD** be selected from ValueSet [NHSNCarbaDetectType](#) urn:oid:2.16.840.1.114222.4.11.7241 **DYNAMIC** (CONF:1129-30447).
 - a. This value **MAY** contain zero or one [0..1] **@nullFlavor**="OTH" (CONF:1129-30457).
 - b. This value **MAY** contain zero or one [0..1] **originalText** (CONF:1129-30458).

Table 195: NHSNCarbaDetectType

Value Set: NHSNCarbaDetectType urn:oid:2.16.840.1.114222.4.11.7241 (Clinical Focus: NHSN surveillance reporting: Types of carbapenemase detected in a bacterial isolate),(Data Element Scope: Coded observation value that represents a carbapenemase type identified when the bacterial isolate was tested.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 12/8/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7241/expansion			
Code	Code System	Code System OID	Print Name
2050-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Klebsiella pneumoniae carbapenemase
2051-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	New Delhi metallo-beta-lactamase
2052-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Imipenemase
2053-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Verona integron-encoded metallo-beta-lactamase
2054-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Oxacillinase-48-like
2055-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Nonspecific carbapenemase activity
2056-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Nonspecific metallo-beta-lactamase activity

Figure 66: Carbapenemase Type Identified Observation Example

<pre><observation classCode="OBS" moodCode="EVN"> <!-- C-CDA Result Observation templateId --> <templateId root="2.16.840.1.113883.10.20.22.4.2"/> <!-- Carbapenemase Type Identified Observation templateId--> <templateId root="2.16.840.1.113883.10.20.5.6.226" extension="2014-12-01"/> <id nullFlavor="NA"/> <code code="2049-5" displayName="Carbapenemase Type Identified" codeSystem="2.16.840.1.113883.6.277" codeSystemName="cdcNHSN"/> <statusCode code="completed"/> <effectiveTime nullFlavor="NA"/> <value xsi:type="CD" code="2052-9" displayName="(IMP) Imipenemase" codeSystem="2.16.840.1.113883.6.277" codeSystemName="cdcNHSN"/> </observation></pre>

Figure 67: Carbapenemase Type Identified Observation - Other Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- C-CDA Result Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
  <!-- Carbapenemase Type Identified Observation templateId-->
  <templateId root="2.16.840.1.113883.10.20.5.6.226"
    extension="2014-12-01"/>
  <id nullFlavor="NA"/>
  <code code="2049-5"
    displayName="Carbapenemase Type Identified"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"/>
  <statusCode code="completed"/>
  <effectiveTime nullFlavor="NA"/>
  <value xsi:type="CD" nullFlavor="OTH">
    <originalText>Other carbapenemase type not in value set</originalText>
  </value>
</observation>
```

3.23 Central-Line Insertion Practice Clinical Statement (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.116:2014-12-01
(closed)]

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Table 196: Central-Line Insertion Practice Clinical Statement (V2) Contexts

Contained By:	Contains:
Infection Risk Factors Section in a CLIP Report (V2) (required)	Solutions Dried Observation (required) Central-Line Insertion Preparation Organizer (V2) (required)

This clinical statement records whether specified infection-prevention actions were performed in a specified sequence.

Recording sequence is expressed with the CDA entryRelationship/sequenceNumber feature. This follows the RIM modeling for definitions (e.g., of a protocol).

A @negationInd on each step expresses whether the step did or did not occur in sequence.

Below are the items, in sequence, to record within the Central-Line Insertion Practice Report:

- preparation
- hand hygiene
- sterile barriers
- skin solution(s) applied
- skin solution(s) had dried

Table 197: Central-Line Insertion Practice Clinical Statement (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.116:2014-12-01)					
@classCode	1..1	SHALL		1129-22005	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1129-22006	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		1129-22007	false
templateId	1..1	SHALL		1129-30516	
@root	1..1	SHALL		1129-30517	2.16.840.1.113883.10.20.22.4.12
templateId	1..1	SHALL		1129-22965	
@root	1..1	SHALL		1129-28111	2.16.840.1.113883.10.20.5.6.116
@extension	1..1	SHALL		1129-30518	2014-12-01
id	1..1	SHALL		1129-22966	
@nullFlavor	1..1	SHALL		1129-22968	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA
code	1..1	SHALL		1129-22018	
@code	1..1	SHALL		1129-22019	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 3108-8
entryRelationship	1..1	SHALL		1129-22008	
@typeCode	1..1	SHALL		1129-22009	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
sequenceNumber	1..1	SHALL		1129-22011	
@value	1..1	SHALL		1129-22012	1
organizer	1..1	SHALL		1129-30425	Central-Line Insertion Preparation Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.179:2014-12-01)
entryRelationship	1..1	SHALL		1129-22013	
@typeCode	1..1	SHALL		1129-22014	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP

XPath	Card.	Verb	Data Type	CONF#	Value
sequenceNumber	1..1	SHALL		1129-22016	
@value	1..1	SHALL		1129-22017	2
observation	1..1	SHALL		1129-22015	Solutions Dried Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.163)

1. Conforms to Procedure Activity Act template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.12).
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-22005).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-22006).
4. **SHALL** contain exactly one [1..1] **@negationInd**="false" (CONF:1129-22007).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30516) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.12" (CONF:1129-30517).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-22965) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.116" (CONF:1129-28111).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30518).
7. **SHALL** contain exactly one [1..1] **id** (CONF:1129-22966).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1129-22968).
8. **SHALL** contain exactly one [1..1] **code** (CONF:1129-22018).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="3108-8" Central line insertion practice (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:1129-22019).
9. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1129-22008) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1129-22009).
 - b. **SHALL** contain exactly one [1..1] **sequenceNumber** (CONF:1129-22011).
 - i. This sequenceNumber **SHALL** contain exactly one [1..1] **@value**="1" (CONF:1129-22012).
 - c. **SHALL** contain exactly one [1..1] [Central-Line Insertion Preparation Organizer \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.179:2014-12-01) (CONF:1129-30425).
10. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1129-22013) such that it

- a. **SHALL** contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1129-22014).
- b. **SHALL** contain exactly one [1..1] **sequenceNumber** (CONF:1129-22016).
 - i. This **sequenceNumber** **SHALL** contain exactly one [1..1] @value="2" (CONF:1129-22017).
- c. **SHALL** contain exactly one [1..1] Solutions Dried Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.163) (CONF:1129-22015).

Figure 68: Central-Line Insertion Practice Clinical Statement (V2) Example

```

<act moodCode="EVN" classCode="ACT" negationInd="false">
  <!-- C-CDA Procedure Activity Act templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.12" />
  <!-- HAI Central-line Insertion Practice Clinical Statement (V2) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.116"
    extension="2014-12-01" />
  <id nullFlavor="NA" />
  <code code="3108-8"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    displayName="Central line insertion practice" />
  <entryRelationship typeCode="COMP">
    <sequenceNumber value="1" />
    <organizer moodCode="EVN" classCode="CLUSTER">
      <!-- HAI Central-Line Insertion Preparation Organizer (V2) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.179"
        extension="2014-12-01" />
      ...
    </organizer>
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <sequenceNumber value="2" />
    <observation moodCode="EVN" classCode="OBS" negationInd="false">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" />
      <!-- HAI Solutions Dried Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.163" />
      ...
    </observation>
  </entryRelationship>
</act>

```


3.24 Central-Line Insertion Preparation Organizer (V2)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.179:2014-12-01 (closed)]

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Table 198: Central-Line Insertion Preparation Organizer (V2) Contexts

Contained By:	Contains:
Central-Line Insertion Practice Clinical Statement (V2) (required)	Sterile Barriers Applied Clinical Statement (required) Hand Hygiene Performed Clinical Statement (required) Skin-Preparation Solutions Applied Organizer (V2) (required)

This organizer represents the first step in the central-line insertion practice sequence. It records three types of preparations (which may have occurred in any order): hand hygiene, skin-preparation solutions, and sterile barriers.

Table 199: Central-Line Insertion Preparation Organizer (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.179:2014-12-01)					
@classCode	1..1	SHALL		1129-22086	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1129-22087	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1129-22088	
@root	1..1	SHALL		1129-22089	2.16.840.1.113883.10.20.5.6.179
@extension	1..1	SHALL		1129-30279	2014-12-01
id	1..1	SHALL		1129-22090	
@nullFlavor	1..1	SHALL		1129-22733	NA
statusCode	1..1	SHALL		1129-22091	
@code	1..1	SHALL		1129-23060	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
component	1..1	SHALL		1129-22092	
procedure	1..1	SHALL		1129-23057	Hand Hygiene Performed Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.130)
component	1..1	SHALL		1129-22093	
organizer	1..1	SHALL		1129-30426	Skin-Preparation Solutions Applied Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.183:2014-12-01)
component	1..1	SHALL		1129-22094	
procedure	1..1	SHALL		1129-23059	Sterile Barriers Applied Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.167)

1. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-22086).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-22087).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-22088) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.179" (CONF:1129-22089).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30279).
- 4. **SHALL** contain exactly one [1..1] **id** (CONF:1129-22090).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:1129-22733).
- 5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1129-22091).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1129-23060).
- 6. **SHALL** contain exactly one [1..1] **component** (CONF:1129-22092) such that it
 - a. **SHALL** contain exactly one [1..1] Hand Hygiene Performed Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.130) (CONF:1129-23057).
- 7. **SHALL** contain exactly one [1..1] **component** (CONF:1129-22093) such that it
 - a. **SHALL** contain exactly one [1..1] Skin-Preparation Solutions Applied Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.183:2014-12-01) (CONF:1129-30426).
- 8. **SHALL** contain exactly one [1..1] **component** (CONF:1129-22094) such that it
 - a. **SHALL** contain exactly one [1..1] Sterile Barriers Applied Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.167) (CONF:1129-23059).

Figure 69: Central-Line Insertion Preparation Organizer (V2) Example

```
<organizer moodCode="EVN" classCode="CLUSTER">
  <templateId root="2.16.840.1.113883.10.20.5.6.179"
    extension="2014-12-01"/>
  <id nullFlavor="NA"/>
  <statusCode code="completed"/>
  <component>
    <procedure moodCode="EVN" classCode="PROC" negationInd="false">
      <!-- Hand hygiene performed -->
      <!-- C-CDA Procedure Activity Procedure templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
      <!-- HAI Hand Hygiene Performed Clinical Statement templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.130"/>
      ...
    </procedure>
  </component>
  <component>
    <organizer moodCode="EVN" classCode="CLUSTER">
      <!-- Skin Preparation Solutions Applied Organizer (V2) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.183"
        extension="2014-12-01"/>
      ...
    </organizer>
  </component>
  <component>
    <procedure moodCode="EVN" classCode="PROC" negationInd="false">
      <!-- Sterile Barriers Applied Clinical Statement -->
      <!-- C-CDA Procedure Activity Procedure templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.14"/>
      <!-- HAI Sterile Barriers Applied Clinical Statement templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.167"/>
      ...
    </procedure>
  </component>
</organizer>
```

3.25 Closure Technique Procedure

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.117 (closed)]

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Table 200: Closure Technique Procedure Contexts

Contained By:	Contains:
Procedure Details Clinical Statement in a Procedure Report (V2) (required)	

This procedure identifies the closure technique used in surgical procedures.

Table 201: Closure Technique Procedure Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.117)					
@classCode	1..1	SHALL		86-21028	PROC
@moodCode	1..1	SHALL		86-21029	EVN
templateId	1..1	SHALL		86-28219	
@root	1..1	SHALL		86-28220	2.16.840.1.113883.10.20.22.4.14
templateId	1..1	SHALL		86-21038	
@root	1..1	SHALL		86-21039	2.16.840.1.113883.10.20.5.6.117
id	1..1	SHALL		86-21040	
@nullFlavor	1..1	SHALL		86-22734	NA
code	1..1	SHALL		86-21032	
@code	1..1	SHALL		86-21033	112695004
@codeSystem	1..1	SHALL		86-28352	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		86-21034	
@code	1..1	SHALL		86-21035	completed
methodCode	1..1	SHALL		86-21036	urn:oid:2.16.840.1.114222.4.11.6051 (NHSNClosureTechniqueCode)

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. **SHALL** contain exactly one [1..1] **@classCode**="PROC" (CONF:86-21028).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CONF:86-21029).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28219) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28220).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21038) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.117" (CONF:86-21039).
6. **SHALL** contain exactly one [1..1] **id** (CONF:86-21040).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22734).
7. **SHALL** contain exactly one [1..1] **code** (CONF:86-21032).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="112695004" Surgical Closure (CONF:86-21033).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28352).

8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21034).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** (CONF:86-21035).
9. **SHALL** contain exactly one [1..1] **methodCode**, which **SHALL** be selected from ValueSet [NHSClosureTechniqueCode](#) urn:oid:2.16.840.1.114222.4.11.6051 **DYNAMIC** (CONF:86-21036).

Table 202: NHSClosureTechniqueCode

Value Set: NHSClosureTechniqueCode urn:oid:2.16.840.1.114222.4.11.6051 (Clinical Focus: NHSN surveillance reporting: Used to distinguish between primary and non-primary surgical closure techniques),(Data Element Scope: A method code identifying the closure technique used in surgical procedures.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.6051/expansion			
Code	Code System	Code System OID	Print Name
2406-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Primary
2407-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Other than primary

Figure 70: Closure Technique Procedure Example

```

<!-- Closure Technique Procedure -->
<procedure classCode="PROC" moodCode="EVN">
  <!-- C-CDA Procedure Activity Procedure templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" />
  <!-- HAI Closure Technique Procedure templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.117" />
  <id nullFlavor="NA" />
  <code code="112695004"
        displayName="Surgical Closure"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT" />
  <statusCode code="completed" />
  <methodCode code="2406-7"
              displayName="Primary"
              codeSystem="2.16.840.1.113883.6.277"
              codeSystemName="cdcNHSN" />
</procedure>

```

3.26 Contraindicated Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.118:2014-12-01 (closed)]

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Table 203: Contraindicated Observation (V2) Contexts

Contained By:	Contains:
Skin Preparation Clinical Statement (V2) (optional)	Contraindication Type Observation (optional)

This observation records whether the target statement was contraindicated. If the target statement was contraindicated, set the value of @negationInd to false. If the target statement was not contraindicated (i.e., ok to proceed with the treatment specified by the target statement), set the value of @negationInd to true. If it is not known whether the target statement was contraindicated, set the value of @nullFlavor to "UNK". If the skin preparation choice was not chlorhexidine and there was a contraindication to chlorhexidine, then the contraindication type is required.

Table 204: Contraindicated Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.118:2014-12-01)					
@nullFlavor	0..1	SHOULD		1129-21778	
@classCode	1..1	SHALL		1129-21780	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1129-21781	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	0..1	SHOULD		1129-21782	
templateId	1..1	SHALL		1129-30519	
@root	1..1	SHALL		1129-30520	2.16.840.1.113883.10.20.22.4.19
templateId	1..1	SHALL		1129-21785	
@root	1..1	SHALL		1129-28109	2.16.840.1.113883.10.20.5.6.118
@extension	1..1	SHALL		1129-30521	2014-12-01
id	1..1	SHALL		1129-21786	
@nullFlavor	1..1	SHALL		1129-21793	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA
code	1..1	SHALL		1129-21787	
@code	1..1	SHALL		1129-21788	ASSERTION
@codeSystem	1..1	SHALL		1129-30604	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1129-21789	
@code	1..1	SHALL		1129-21790	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	1129-21791	
@code	1..1	SHALL		1129-21792	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 410536001
entryRelationship	0..*	MAY		1129-28106	
@typeCode	1..1	SHALL		1129-28107	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1129-	Contraindication Type

XPath	Card.	Verb	Data Type	CONF#	Value
				30427	Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.216:2014-12-01)

1. Conforms to Indication template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.19).
2. **SHOULD** contain zero or one [0..1] **@nullFlavor** (CONF:1129-21778).
 - a. If it is not known whether the target statement was contraindicated, the value of **@nullFlavor** **SHALL** be UNK. If the value of **@nullFlavor** is set to UNK then the value of **@negationInd** **SHALL NOT** be set (CONF:1129-21779).
3. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-21780).
4. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-21781).
5. **SHOULD** contain zero or one [0..1] **@negationInd** (CONF:1129-21782).
 - a. If the target statement was contraindicated, the value of **@negationInd** **SHALL** be false. If the target statement was not contraindicated (i.e., ok to proceed with the treatment specified by the target statement), the value of **@negationInd** **SHALL** be true. If the value of **@negationInd** is set then the value of **@nullFlavor** **SHALL NOT** be set (CONF:1129-21783).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30519) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.19"** (CONF:1129-30520).
7. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-21785) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.6.118"** (CONF:1129-28109).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-12-01"** (CONF:1129-30521).
8. **SHALL** contain exactly one [1..1] **id** (CONF:1129-21786).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1129-21793).
9. **SHALL** contain exactly one [1..1] **code** (CONF:1129-21787).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** Assertion (CONF:1129-21788).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1129-30604).
10. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1129-21789).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1129-21790).
11. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:1129-21791).

- a. This value **SHALL** contain exactly one [1..1] @code="410536001" Contraindicated (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:1129-21792).

If the skin preparation choice was not chlorhexidine and there was a contraindication to chlorhexidine, the following entryRelationship is required.

12. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1129-28106) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1129-28107).
 - b. **SHALL** contain exactly one [1..1] [Contraindication Type Observation](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.216:2014-12-01) (CONF:1129-30427).

Figure 71: Contraindicated Observation (V2) Example - Contraindicated

```
<!-- It is true (not negated) that the target statement was contraindicated -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Indication templateId-->
  <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
  <!-- HAI Contraindicated Observation (V2) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.118"
    extension="2014-12-01"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="410536001"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT" displayName="Contraindicated"/>
  <entryRelationship typeCode="RSON">
    <!-- Contraindication Type Observation -->
    <observation moodCode="EVN" classCode="OBS">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- Contraindication Type Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.216"
        extension="2014-12-01"/>
      ...
    </observation>
  </entryRelationship>
</observation>
```

Figure 72: Contraindicated Observation (V2) Example - Not contraindicated

```
<!-- It is false (negated) that the target statement was contraindicated -->
<observation classCode="OBS" moodCode="EVN" negationInd="true">
  <!-- C-CDA Indication templateId-->
  <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
  <!-- HAI Contraindicated Observation (V2) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.118"
    extension="2014-12-01" />
  <id nullFlavor="NA" />
  <code codeSystem="2.16.840.1.113883.5.4"
    code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    code="410536001"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED"
    displayName="Contraindicated"/>
</observation>
```

3.27 Contraindication Type Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.216:2014-12-01
(closed)]

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Release 2, DSTU 2.1 - US Realm

Table 205: Contraindication Type Observation Contexts

Contained By:	Contains:
Contraindicated Observation (V2) (optional)	

This template represents the type of contraindication.

Table 206: Contraindication Type Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.216:2014-12-01)					
@classCode	1..1	SHALL		1129-5	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1129-6	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1129-30522	
@root	1..1	SHALL		1129-30523	2.16.840.1.113883.10.20.5.6.216
@extension	1..1	SHALL		1129-30524	2014-12-01
code	1..1	SHALL		1129-2	
@code	1..1	SHALL		1129-8	6130-9
@codeSystem	1..1	SHALL		1129-9	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
statusCode	1..1	SHALL		1129-4	
@code	1..1	SHALL		1129-12	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	1129-10	urn:oid:2.16.840.1.114222.4.11.7239 (NHSNContraindicationType)

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-5).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-6).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30522) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.6.216"** (CONF:1129-30523).
 - b. **SHALL** contain exactly one [1..1] **@extension="2014-12-01"** (CONF:1129-30524).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1129-2).
 - a. This code **SHALL** contain exactly one [1..1] **@code="6130-9"** Contraindication type (CONF:1129-8).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.277"** (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:1129-9).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1129-4).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1129-12).

6. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", where the code **SHALL** be selected from ValueSet [NHSNContraindicationType](#) urn:oid:2.16.840.1.114222.4.11.7239 **DYNAMIC** (CONF:1129-10).

Table 207: NHSNContraindicationType

Value Set: NHSNContraindicationType urn:oid:2.16.840.1.114222.4.11.7239 (Clinical Focus: NHSN surveillance reporting: Contraindication for using chlorhexidine gluconate (CHG) for Central Line Insertion Practices (CLIP) adherence monitoring),(Data Element Scope: A coded observation value representing the type of contraindication.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7239/expansion			
Code	Code System	Code System OID	Print Name
6131-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Patient is less than 2 months of age - chlorhexidine gluconate is to be used with caution in patients less than 2 months of age
6132-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Patient has a documented/known allergy/reaction to chlorhexidine gluconate-based products that would preclude its use
6133-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Facility restrictions or safety concerns for chlorhexidine gluconate use in premature infants precludes its use

Figure 73: Contraindication Type Observation Example

```

<observation moodCode="EVN" classCode="OBS">
  <!-- Contraindication Type Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.216"
    extension="2014-12-01" />
  <code code="6130-9"
    displayName="Contraindication type"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    code="6133-3"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    displayName="Facility restrictions or safety concerns for CHG use in
      premature infants precludes its use"/>
</observation>

```

3.28 Criteria of Diagnosis Organizer

[organizer: identifier urn:oid:2.16.840.1.113883.10.20.5.6.180 (closed)]

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Release 1 - US Realm

Table 208: Criteria of Diagnosis Organizer Contexts

Contained By:	Contains:
Infection-Type Observation (required) Details Section in an Evidence of Infection (Dialysis) Report (V6) (required) Infection-Type Observation in an OPC SSI Event (required)	Criterion of Diagnosis Observation (required)

This organizer groups together the criteria used in the diagnosis of an infection or the identification of an adverse reaction. Each criterion is recorded as a Criterion of Diagnosis Observation.

The Criteria of Diagnosis Organizer is used in several report types. The NHSN protocol specifies which criteria are to be recorded for each report type. Those rules do not form part of this template. The NHSN submission requirement is that, in a given report type, a Criterion of Diagnosis Observation must be present for every datum required by the NHSN protocol for that report type, with an appropriate value for @negationInd.

In an Evidence of Infection (Dialysis) Report, to record that none of the criteria of diagnosis was present, set the value of the observation/@negationInd to true for each criterion required in this report.

Table 209: Criteria of Diagnosis Organizer Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.180)					
@classCode	1..1	SHALL		86-22101	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		86-22102	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-22103	
@root	1..1	SHALL		86-22104	2.16.840.1.113883.10.20.5.6.180
statusCode	1..1	SHALL		86-22106	
@code	1..1	SHALL		86-23061	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
component	1..*	SHALL		86-22107	
observation	1..1	SHALL		86-23062	Criterion of Diagnosis Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.119)

1. **SHALL** contain exactly one [1..1] @classCode="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22101).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22102).
3. **SHALL** contain exactly one [1..1] templateId (CONF:86-22103) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.180" (CONF:86-22104).
4. **SHALL** contain exactly one [1..1] statusCode (CONF:86-22106).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-23061).
5. **SHALL** contain at least one [1..*] component (CONF:86-22107).
 - a. Such components **SHALL** contain exactly one [1..1] [Criterion of Diagnosis Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.119) (CONF:86-23062).

Figure 74: Criteria of Diagnosis Organizer Example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.5.6.180"/>
  <statusCode code="completed"/>
  <component>
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Indication templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
      <!-- HAI Criteria of Diagnosis Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.119"/>
      ...
    </observation>
  </component>
  ...
</organizer>
```

3.29 Criterion of Diagnosis Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.119 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 1 - US Realm

Table 210: Criterion of Diagnosis Observation Contexts

Contained By:	Contains:
Criteria of Diagnosis Organizer (required)	

This observation records a criterion used in the diagnosis of the infection type or the identification of an adverse reaction. It appears within the Criterion of Diagnosis Organizer. In infection-type reports it is used with the Criterion of Diagnosis vocabulary.

If the criterion was present, set the value of @negationInd to false. If the criterion was not present, set the value of @negationInd to true.

The NHSN protocol specifies which Criterion of Diagnosis Observations must appear in each report type for which they are required. Those rules do not form part of this template.

Table 211: Criterion of Diagnosis Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.119)					
@classCode	1..1	SHALL		86-22126	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-22127	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-22128	
templateId	1..1	SHALL		86-28221	
@root	1..1	SHALL		86-28222	2.16.840.1.113883.10.20.22.4.19
templateId	1..1	SHALL		86-22129	
@root	1..1	SHALL		86-22140	2.16.840.1.113883.10.20.5.6.119
id	1..1	SHALL		86-22130	
@nullFlavor	1..1	SHALL		86-22736	NA
code	1..1	SHALL		86-22131	
@code	1..1	SHALL		86-22132	ASSERTION
@codeSystem	0..1	MAY		86-28373	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-22133	
@code	1..1	SHALL		86-22134	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL		86-22135	

1. Conforms to Indication template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.19).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22126).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22127).
4. **SHALL** contain exactly one [1..1] @negationInd (CONF:86-22128).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-28221) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.19" (CONF:86-28222).
6. **SHALL** contain exactly one [1..1] templateId (CONF:86-22129) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.119" (CONF:86-22140).
- 7. **SHALL** contain exactly one [1..1] **id** (CONF:86-22130).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22736).
- 8. **SHALL** contain exactly one [1..1] **code** (CONF:86-22131).
 - a. This **code** **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-22132).
 - b. This **code** **MAY** contain zero or one [0..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28373).
- 9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-22133).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-22134).
- 10. **SHALL** contain exactly one [1..1] **value** (CONF:86-22135).
 - a. In an infection-type report, a criterion is reported as a code. The value of **@xsi:type** **SHALL** be CD and the value of **@code** **SHALL** be selected from Value Set 2.16.840.1.114222.4.11.3195 NHSNCriterionOfDiagnosisCode **DYNAMIC** (CONF:86-22136).
 - b. In an Evidence of Infection (Dialysis) Report, (CONF:86-22137).
 - i. To record a criterion of diagnosis as a code, the value of **@xsi:type** **SHALL** be CD and the value of **@code** **SHALL** be selected from Value Set 2.16.840.1.114222.4.11.3195 NHSNCriterionOfDiagnosisCode **DYNAMIC** (CONF:86-22138).
 - ii. To record a criterion not included in the NHSNCriterionOfDiagnosisCode value set, the value of **@xsi:type** **SHALL** be ST and a text value **SHALL** be present (CONF:86-22139).

Table 212: NHSNCriterionOfDiagnosisCode

Value Set: NHSNCriterionOfDiagnosisCode urn:oid:2.16.840.1.114222.4.11.3195 (Clinical Focus: NHSN surveillance reporting: Criteria used to diagnose an infection type or identify an adverse reaction),(Data Element Scope: A coded observation value that records a criterion used in the diagnosis of the infection type or the identification of an adverse reaction.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3195/expansion			
Code	Code System	Code System OID	Print Name
1023001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Apnea (finding)
102830001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Renal angle tenderness (finding)
123767004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Hemoglobinemia (disorder)
126485001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Urticaria (disorder)
12763006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Finding of decreased blood pressure (finding)
128045006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Cellulitis (disorder)
128477000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Abscess (disorder)
128601007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Infectious disease of lung (disorder)
161891005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Backache (finding)
162053006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Suprapubic pain (finding)
...			

Figure 75: Criterion of Diagnosis Observation Examples

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Indication templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
  <!-- HAI Criteria of Diagnosis Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.119"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED"
    code="255320000"
    displayName="Purulent drainage"/>
</observation>
<observation classCode="OBS" moodCode="EVN" negationInd="true">
  <!-- C-CDA Indication templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
  <!-- HAI Criteria of Diagnosis Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.119"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED"
    code="386661006"
    displayName="Fever"/>
  <!-- In the EOID Report, if there is no applicable
    coded value, a text string can be used:
  <value xsi:type="ST">An itchy sensation</value>
  -->
</observation>
```

3.30 Death Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.120 (closed)]

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Release 1 – US Realm

Table 213: Death Observation Contexts

Contained By:	Contains:
Infection Details Section in a BSI Report (optional) Infection Details Section in a UTI Report (optional) Infection Details Section in an SSI Report (V2) (optional) Infection Details Section in a VAE Report (required) Infection Details in Late Onset Sepsis Report (required)	Infection Contributed to Death Observation (optional)

This observation records whether the patient died and, if so, whether the infection being recorded contributed to that death.

If the patient died, set the value of @negationInd to false. If the patient did not die, set the value of @negationInd to true.

If the patient died, the Death Observation must also indicate whether the infection contributed to the death using an entryRelationship element containing an Infection Contributed to Death Observation. An inversionInd attribute on this entryRelationship element indicates that it should be interpreted as if the roles of the source and target entries were reversed. Thus, the observation reports whether the infection “supported” (contributed to) the death. The CAUS value does not have the force of “cause of death” on a death certificate; it indicates that the infection is causal or contributory to the death.

Table 214: Death Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120)					
@classCode	1..1	SHALL		86-19611	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-19612	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-19613	
templateId	1..1	SHALL		86-28223	
@root	1..1	SHALL		86-28224	2.16.840.1.113883.10.20.22.4.79
templateId	1..1	SHALL		86-19623	
@root	1..1	SHALL		86-19624	2.16.840.1.113883.10.20.5.6.120
id	1..1	SHALL		86-19625	
@nullFlavor	1..1	SHALL		86-22739	NA
code	1..1	SHALL		86-19614	
@code	1..1	SHALL		86-19615	ASSERTION
@codeSystem	1..1	SHALL		86-28374	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-19616	
@code	1..1	SHALL		86-19617	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		86-19626	
low	1..1	SHALL		86-19627	
@nullFlavor	1..1	SHALL		86-22740	NA
value	1..1	SHALL	CD	86-19618	
@code	1..1	SHALL		86-19619	419099009
@codeSystem	1..1	SHALL		86-28353	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
entryRelationship	0..1	MAY		86-23063	
@typeCode	1..1	SHALL		86-23064	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS
@inversionInd	1..1	SHALL		86-23065	true
@negationInd	1..1	SHALL		86-23066	
observation	1..1	SHALL		86-23068	Infection Contributed to Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.136)

1. Conforms to Deceased Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.79).
2. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-19611).
3. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-19612).
4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-19613).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28223) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.79"** (CONF:86-28224).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-19623) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.6.120"** (CONF:86-19624).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-19625).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CONF:86-22739).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-19614).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** Assertion (CONF:86-19615).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28374).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-19616).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-19617).
10. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-19626).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:86-19627).
 - i. This low **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CONF:86-22740).
11. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:86-19618).
 - a. This value **SHALL** contain exactly one [1..1] **@code="419099009"** Dead (CONF:86-19619).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.96"** (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28353).
12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:86-23063).
 - a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **@typeCode="CAUS"** is etiology for (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-23064).
 - b. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:86-23065).
 - c. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-23066).

- i. If the infection contributed to death, set the value of @negationInd to false. If the infection did not contribute to the death, set the value of @negationInd to true (CONF:86-23067).
- d. The entryRelationship, if present, **SHALL** contain exactly one [1..1] [Infection Contributed to Death Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.136) (CONF:86-23068).
- e. If the patient died, an entryRelationship element **SHALL** be present and **SHALL** contain an Infection Contributed to Death Observation (CONF:86-23069).

Figure 76: Death Observation Example

```
<!-- "Dead" is not negated = patient died -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Deceased Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.79"/>
  <!-- HAI Death Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.120"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4"
        code="ASSERTION"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low nullFlavor="NA"/>
  </effectiveTime>
  <value xsi:type="CD"
        code="419099009"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED"
        displayName="Dead"/>
  <!-- The infection did contribute to the death (causality is not negated) -->
  <entryRelationship typeCode="CAUS" inversionInd="true" negationInd="false">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Infection Contributed to Death Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.136"/>
      ...
    </observation>
  </entryRelationship>
</observation>
```

3.31 Death Observation in an Evidence of Infection (Dialysis) Report

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.121 (closed)]

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Table 215: Death Observation in an Evidence of Infection (Dialysis) Report Contexts

Contained By:	Contains:
Details Section in an Evidence of Infection (Dialysis) Report (V6) (required)	

This observation records whether the outpatient died subsequent to the observation of an infection indicator.

When the patient died, set the value of @negationInd to false. When the patient did not die, set the value of @negationInd to true. When it is unknown whether the patient died, set the value of @nullFlavor to NI.

Table 216: Death Observation in an Evidence of Infection (Dialysis) Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.121)					
@nullFlavor	0..1	MAY		86-19644	
@classCode	1..1	SHALL		86-19628	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-19629	urn:oid:2.16.840.1.113883.5.1 001 (HL7ActMood) = EVN
@negationInd	0..1	MAY		86-19645	
templateId	1..1	SHALL		86-28225	
@root	1..1	SHALL		86-28226	2.16.840.1.113883.10.20.22.4 .79
templateId	1..1	SHALL		86-19639	
@root	1..1	SHALL		86-19640	2.16.840.1.113883.10.20.5.6. 121
id	1..1	SHALL		86-19641	
@nullFlavor	1..1	SHALL		86-22742	NA
code	1..1	SHALL		86-19630	
@code	1..1	SHALL		86-19631	ASSERTION
@codeSystem	0..1	MAY		86-28375	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-19632	
@code	1..1	SHALL		86-19633	urn:oid:2.16.840.1.113883.5.1 4 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		86-19642	
low	1..1	SHALL		86-19643	
@nullFlavor	1..1	SHALL		86-22743	NA
value	1..1	SHALL	CD	86-19634	
@code	1..1	SHALL		86-19635	urn:oid:2.16.840.1.113883.6.9 6 (SNOMED CT) = 419099009

1. Conforms to Deceased Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.79).
2. **MAY** contain zero or one [0..1] @nullFlavor (CONF:86-19644).
 - a. If @negationInd is present then @nullFlavor **SHALL NOT** contain a value (CONF:86-19646).

3. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-19628).
4. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-19629).
5. **MAY** contain zero or one [0..1] **@negationInd** (CONF:86-19645).
 - a. If **@nullFlavor** is present then **@negationInd** **SHALL NOT** contain a value (CONF:86-19647).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28225) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.79" (CONF:86-28226).
7. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-19639) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.121" (CONF:86-19640).
8. **SHALL** contain exactly one [1..1] **id** (CONF:86-19641).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22742).
9. **SHALL** contain exactly one [1..1] **code** (CONF:86-19630).
 - a. This **code** **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-19631).
 - b. This **code** **MAY** contain zero or one [0..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28375).
10. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-19632).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-19633).
11. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-19642).
 - a. This **effectiveTime** **SHALL** contain exactly one [1..1] **low** (CONF:86-19643).
 - i. This **low** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22743).
12. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:86-19634).
 - a. This **value** **SHALL** contain exactly one [1..1] **@code**="419099009" Dead (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:86-19635).
13. **SHALL** contain either **@nullFlavor** or **@negationInd**, but **SHALL NOT** contain both (CONF:86-19648).

Figure 77: Death Observation in an EOID Report Example

```
<!-- There is no information about whether the patient has died -->
<observation classCode="OBS" moodCode="EVN" nullFlavor="NI">
  <!-- C-CDA Deceased Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.79"/>
  <!-- HAI Death Observation in an Evidence of Infection (Dialysis) Report -->
  <templateId root="2.16.840.1.113883.10.20.5.6.121"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4"
    code="ASSERTION"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low nullFlavor="NA"/>
  </effectiveTime>
  <value xsi:type="CD"
    code="419099009"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED"
    displayName="Dead"/>
</observation>
```

3.32 Device Insertion Time and Location Procedure

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.122 (closed)]

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Table 217: Device Insertion Time and Location Procedure Contexts

Contained By:	Contains:
Infection Risk Factors Observation (optional)	
Urinary Catheter Observation (optional)	

This clinical statement records the location of the patient and the time when the device was inserted.

Table 218: Device Insertion Time and Location Procedure Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.122)					
@classCode	1..1	SHALL		86-21041	PROC
@moodCode	1..1	SHALL		86-21042	EVN
templateId	1..1	SHALL		86-28227	
@root	1..1	SHALL		86-28228	2.16.840.1.113883.10.20.22.4.14
templateId	1..1	SHALL		86-21063	
@root	1..1	SHALL		86-21064	2.16.840.1.113883.10.20.5.6.122
id	1..1	SHALL		86-21065	
@nullFlavor	1..1	SHALL		86-22744	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA
code	1..1	SHALL		86-21044	
@code	1..1	SHALL		86-21066	71861002
@codeSystem	1..1	SHALL		86-28103	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		86-21046	
@code	1..1	SHALL		86-28106	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		86-21047	
low	1..1	SHALL		86-21048	
participant	0..*	MAY		86-21049	
@typeCode	1..1	SHALL		86-21050	LOC
participantRole	1..1	SHALL		86-21051	
@classCode	1..1	SHALL		86-21052	SDLOC
id	1..1	SHALL		86-21053	
@root	1..1	SHALL		86-21054	
@extension	1..1	SHALL		86-21056	
playingEntity	1..1	SHALL		86-21057	
@classCode	1..1	SHALL		86-21058	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PLC
code	1..1	SHALL		86-21059	urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode)

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. **SHALL** contain exactly one [1..1] @classCode="PROC" (CONF:86-21041).

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CONF:86-21042).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28227) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28228).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21063) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.122" (CONF:86-21064).
6. **SHALL** contain exactly one [1..1] **id** (CONF:86-21065).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:86-22744).
7. **SHALL** contain exactly one [1..1] **code** (CONF:86-21044).
 - a. This **code** **SHALL** contain exactly one [1..1] **@code**="71861002" Insertion procedure (CONF:86-21066).
 - b. This **code** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28103).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21046).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28106).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-21047).
 - a. This **effectiveTime** **SHALL** contain exactly one [1..1] **low** (CONF:86-21048).
10. **MAY** contain zero or more [0..*] **participant** (CONF:86-21049).
 - a. The **participant**, if present, **SHALL** contain exactly one [1..1] **@typeCode**="LOC" (CONF:86-21050).
 - b. The **participant**, if present, **SHALL** contain exactly one [1..1] **participantRole** (CONF:86-21051).
 - i. This **participantRole** **SHALL** contain exactly one [1..1] **@classCode**="SDLOC" (CONF:86-21052).
 - ii. This **participantRole** **SHALL** contain exactly one [1..1] **id** (CONF:86-21053).
 1. This **id** **SHALL** contain exactly one [1..1] **@root** (CONF:86-21054).
 - a. This **id/@root** **SHALL** contain the facility identifier (CONF:86-21055).
 2. This **id** **SHALL** contain exactly one [1..1] **@extension** (CONF:86-21056).
 - iii. This **participantRole** **SHALL** contain exactly one [1..1] **playingEntity** (CONF:86-21057).
 1. This **playingEntity** **SHALL** contain exactly one [1..1] **@classCode**="PLC" (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:86-21058).
 2. This **playingEntity** **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNHealthcareServiceLocationCode](#) urn:oid:2.16.840.1.113883.13.19 **DYNAMIC** (CONF:86-21059).

Figure 78: Device Insertion Time and Location Procedure Example

```
<!-- Device Insertion Time and Location Procedure -->
<procedure classCode="PROC" moodCode="EVN">
  <!-- C-CDA Procedure Activity Procedure templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" />
  <!-- HAI Device Insertion Time and Location Procedure templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.122" />
  <id nullFlavor="NA" />
  <code code="71861002"
        displayName="Insertion procedure"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20120808" />
  </effectiveTime>
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <!-- root = facility assigned OID; extension = NHSN location ("your code") -->
      <id root="2.16.840.1.114222.4.3.2.11" extension="123456" />
      <playingEntity classCode="PLC">
        <code codeSystem="2.16.840.1.113883.6.259"
              codeSystemName="HL7 HealthcareServiceLocation"
              code="1029-8"
              displayName="Medical/Surgical Critical Care" />
      </playingEntity>
    </participantRole>
  </participant>
</procedure>
```

3.33 Diabetes Mellitus Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.123 (closed)]

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Table 219: Diabetes Mellitus Observation Contexts

Contained By:	Contains:
Infection Risk Factors Section in a Procedure Report (required) Infection Risk Factors Section in an OPC Denominator for Procedure (required)	

This observation records whether the person had diabetes mellitus.

If the person did have diabetes, set the value of @negationInd to false. If the person did not have diabetes mellitus, set the value of @negationInd to true.

Table 220: Diabetes Mellitus Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.123)					
@classCode	1..1	SHALL		86-21000	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21001	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21002	
templateId	1..1	SHALL		86-28229	
@root	1..1	SHALL		86-28230	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-21005	
@root	1..1	SHALL		86-21006	2.16.840.1.113883.10.20.5.6.123
id	1..1	SHALL		86-21007	
@nullFlavor	1..1	SHALL		86-22745	NA
code	1..1	SHALL		86-21008	
@code	1..1	SHALL		86-21009	ASSERTION
@codeSystem	1..1	SHALL		86-28376	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-21010	
@code	1..1	SHALL		86-21011	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-21012	
@code	1..1	SHALL	CS	86-21013	73211009
@codeSystem	1..1	SHALL		86-28354	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21000).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21001).

If the person did have diabetes, set the value of @negationInd to false. If the person did not have diabetes mellitus, set the value of @negationInd to true.

4. **SHALL** contain exactly one [1..1] @negationInd (CONF:86-21002).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-28229) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28230).

6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21005) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.123" (CONF:86-21006).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-21007).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22745).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-21008).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-21009).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28376).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21010).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21011).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:86-21012).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="73211009" Diabetes mellitus (CONF:86-21013).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28354).

Figure 79: Diabetes Mellitus Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Diabetes Mellitus Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.123"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION"
        codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
        code="73211009"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED"
        displayName="Diabetes mellitus"/>
</observation>
```

3.34 Dialysis Clinic Admission Clinical Statement

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.5.6.124 (closed)]

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Table 221: Dialysis Clinic Admission Clinical Statement Contexts

Contained By:	Contains:
Details Section in an Evidence of Infection (Dialysis) Report (V6) (required)	

This statement records whether the patient was (re)admitted to the dialysis facility on the same day as, or after, the dialysis event. The infection (dialysis event) observation is specified in the entryRelationship/observation/value element.

If the infection (dialysis event) began on or after the date the patient was admitted, set the value of entryRelationship/@inversionInd to true. If the infection (dialysis event) began before the date the patient was admitted, set the value of entryRelationship/@inversionInd to false.

Table 222: Dialysis Clinic Admission Clinical Statement Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.124)					
@classCode	1..1	SHALL		86-23263	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		86-23264	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-23265	
@root	1..1	SHALL		86-23266	2.16.840.1.113883.10.20.5.6.124
id	1..1	SHALL		86-23267	
entryRelationship	1..1	SHALL		86-23269	
@typeCode	1..1	SHALL		86-23272	SAS
@inversionInd	1..1	SHALL		86-23273	
observation	1..1	SHALL		86-23275	
@classCode	1..1	SHALL		86-23276	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-23277	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
id	1..1	SHALL		86-23278	
@nullFlavor	1..1	SHALL		86-27747	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA
code	1..1	SHALL		86-23280	
@code	1..1	SHALL		86-23281	ASSERTION
@codeSystem	1..1	SHALL		86-23282	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-23283	
@code	1..1	SHALL		86-23284	completed
value	1..1	SHALL	CD	86-23285	
@code	1..1	SHALL		86-27748	40733004
@codeSystem	1..1	SHALL		86-27749	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96

1. **SHALL** contain exactly one [1..1] **@classCode**="ENC" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-23263).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-23264).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-23265) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.124" (CONF:86-23266).
4. **SHALL** contain exactly one [1..1] **id** (CONF:86-23267).

- a. This is the id of the encompassing encounter (CONF:86-23268).
- 5. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:86-23269).
 - a. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode="SAS"** (CONF:86-23272).
 - b. This entryRelationship **SHALL** contain exactly one [1..1] **@inversionInd** (CONF:86-23273).
 - i. If the infection (dialysis event) began on or after the date the patient was admitted, set the value of **@inversionInd** to true. If the infection (dialysis event) began before the date the patient was admitted, set the value of **@inversionInd** to false (CONF:86-23274).
 - c. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:86-23275).
 - i. This observation **SHALL** contain exactly one [1..1] **@classCode="OBS"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:86-23276).
 - ii. This observation **SHALL** contain exactly one [1..1] **@moodCode="EVN"** (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:86-23277).
 - iii. This observation **SHALL** contain exactly one [1..1] **id** (CONF:86-23278).
 - 1. This id **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:86-27747).
 - iv. This observation **SHALL** contain exactly one [1..1] **code** (CONF:86-23280).
 - 1. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** (CONF:86-23281).
 - 2. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-23282).
 - v. This observation **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-23283).
 - 1. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** (CONF:86-23284).
 - vi. This observation **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:86-23285).
 - 1. This value **SHALL** contain exactly one [1..1] **@code="40733004"** Infection (CONF:86-27748).
 - 2. This value **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.96"** (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-27749).

Figure 80: Dialysis Clinic Admission Clinical Statement Example

```
<encounter classCode="ENC" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.5.6.124" />
  <!-- the id of the encompassingEncounter -->
  <!-- Facility-generated Event/Procedure number -->
  <id root="2.16.840.1.113883.3.117.1.1.5.2.1.1.3" extension="31" />
  <entryRelationship typeCode="SAS" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <id nullFlavor="NA"/>
      <code code="ASSERTION"
        codeSystem="2.16.840.1.113883.5.4"/>
      <statusCode code="completed"/>
      <value xsi:type="CD"
        code="40733004"
        codeSystem="2.16.840.1.113883.6.96"
        displayName="Infection" />
    </observation>
  </entryRelationship>
</encounter>
```

3.35 Dialysis Patient Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.125 (closed)]

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Table 223: Dialysis Patient Observation Contexts

Contained By:	Contains:
Risk Factors Section in an Evidence of Infection (Dialysis) Report (V3) (required)	Transient Patient Observation (required)

This observation records that the patient is a maintenance hemodialysis patient. It is used in the Evidence of Infection (Dialysis) Report.

These reports are submitted for outpatients for whom an infection indicator is observed. The encounter is recorded in the CDA header as being an outpatient encounter

Table 224: Dialysis Patient Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.125)					
@classCode	1..1	SHALL		86-21747	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21748	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21749	false
templateId	1..1	SHALL		86-28231	
@root	1..1	SHALL		86-28232	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-21752	
@root	1..1	SHALL		86-21753	2.16.840.1.113883.10.20.5.6.125
id	1..1	SHALL		86-21754	
@nullFlavor	1..1	SHALL		86-22747	NA
code	1..1	SHALL		86-21755	
@code	1..1	SHALL		86-21756	ASSERTION
@codeSystem	1..1	SHALL		86-28377	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-21757	
@code	1..1	SHALL		86-21758	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-21759	
@code	1..1	SHALL		86-21760	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 236435004
entryRelationship	1..1	SHALL		86-21761	
@typeCode	1..1	SHALL		86-21762	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		86-21763	Transient Patient Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.169)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21747).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21748).
4. **SHALL** contain exactly one [1..1] **@negationInd**="false" (CONF:86-21749).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28231) such that it

- a. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.22.4.4"` (CONF:86-28232).
6. **SHALL** contain exactly one [1..1] `templateId` (CONF:86-21752) such that it
 - a. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.5.6.125"` (CONF:86-21753).
7. **SHALL** contain exactly one [1..1] `id` (CONF:86-21754).
 - a. This `id` **SHALL** contain exactly one [1..1] `@nullFlavor="NA"` (CONF:86-22747).
8. **SHALL** contain exactly one [1..1] `code` (CONF:86-21755).
 - a. This `code` **SHALL** contain exactly one [1..1] `@code="ASSERTION"` Assertion (CONF:86-21756).
 - b. This `code` **SHALL** contain exactly one [1..1] `@codeSystem="2.16.840.1.113883.5.4"` (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28377).
9. **SHALL** contain exactly one [1..1] `statusCode` (CONF:86-21757).
 - a. This `statusCode` **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21758).
10. **SHALL** contain exactly one [1..1] `value` with `@xsi:type="CD"` (CONF:86-21759).
 - a. This `value` **SHALL** contain exactly one [1..1] `@code="236435004"` End-stage renal failure, on dialysis (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:86-21760).
11. **SHALL** contain exactly one [1..1] `entryRelationship` (CONF:86-21761) such that it
 - a. **SHALL** contain exactly one [1..1] `@typeCode="COMP"` Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-21762).
 - b. **SHALL** contain exactly one [1..1] Transient Patient Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.169) (CONF:86-21763).

Figure 81: Dialysis Patient Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Dialysis Patient Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.125"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    code="236435004"
    displayName="End-stage renal failure, on dialysis"/>
  <!-- Transient Patient Observation -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- HAI Transient Patient Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.169 "/>
      ...
    </observation>
  </entryRelationship>
</observation>
```

3.36 Dialyzer Reused Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.231:2015-10-01
(closed)]

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This observation records whether the patient's dialyzer is reprocessed for reuse or whether a new dialyzer is used for each hemodialysis treatment.

When the patient's dialyzer is reused, set the value of @negationInd to false. When the patient's dialyzer is not reused, set the value of @negationInd to true.

Table 225: Dialyzer Reused Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.231:2015-10-01)					
@classCode	1..1	SHALL		1202-4	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1202-5	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		1202-30547	
templateId	1..1	SHALL		1202-1	
@root	1..1	SHALL		1202-6	2.16.840.1.113883.10.20.5.6.231
@extension	1..1	SHALL		1202-7	2015-10-01
code	1..1	SHALL		1202-2	
@code	1..1	SHALL		1202-8	ASSERTION
@codeSystem	1..1	SHALL		1202-9	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1202-12	
@code	1..1	SHALL		1202-13	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	1202-3	
@code	1..1	SHALL		1202-10	2334-1
@codeSystem	1..1	SHALL		1202-11	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1202-4).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1202-5).

When the patient's dialyzer is reused, set the value of @negationInd to false. When the patient's dialyzer is not reused, set the value of @negationInd to true.

3. **SHALL** contain exactly one [1..1] @negationInd (CONF:1202-30547).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1202-1) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.231" (CONF:1202-6).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-10-01" (CONF:1202-7).
5. **SHALL** contain exactly one [1..1] code (CONF:1202-2).
 - a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1202-8).

- b. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode
urn:oid:2.16.840.1.113883.5.4) (CONF:1202-9).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1202-12).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1202-13).
7. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:1202-3).
 - a. This value **SHALL** contain exactly one [1..1] @code="2334-1" Patient's dialyzer is reused (CONF:1202-10).
 - b. This value **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN
urn:oid:2.16.840.1.113883.6.277) (CONF:1202-11).

Figure 82: Dialyzer Reused Observation Example

```
<!-- When the patient's dialyzer is reused, set the value of @negationInd to false.
      When the patient's dialyzer is not reused, set the value of @negationInd to true. -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- Dialyzer Reused Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.231"
    extension="2015-10-01"/>
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION" />
  <statusCode code="completed" />
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="2334-1"
    displayName="Patient's dialyzer is reused" />
</observation>
```

3.37 Drug-Susceptibility Test Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.126 (closed)]

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Table 226: Drug-Susceptibility Test Observation Contexts

Contained By:	Contains:
Findings Organizer (optional)	

This observation uses two codes: one to identify the drug and the other to record the pathogen's susceptibility to it. A LOINC code represents a methodless isolate drug-susceptibility test; an HL7 ObservationInterpretation code represents the susceptibility finding.

Table 227: Drug-Susceptibility Test Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.126)					
@classCode	1..1	SHALL		86-21014	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21015	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-28233	
@root	1..1	SHALL		86-28234	2.16.840.1.113883.10.20.22.4.2
templateId	1..1	SHALL		86-21018	
@root	1..1	SHALL		86-21019	2.16.840.1.113883.10.20.5.6.126
id	1..1	SHALL		86-21020	
@nullFlavor	1..1	SHALL		86-22748	NA
code	1..1	SHALL		86-21021	urn:oid:2.16.840.1.113883.13.15 (NHSNDrugSusceptibilityTests Code)
statusCode	1..1	SHALL		86-21023	
@code	1..1	SHALL		86-21024	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		86-21025	
@nullFlavor	1..1	SHALL		86-22749	NA
value	1..1	SHALL		86-28406	
interpretationCode	1..1	SHALL		86-21026	

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21014).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21015).
4. **SHALL** contain exactly one [1..1] templateId (CONF:86-28233) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.2" (CONF:86-28234).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-21018) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.126" (CONF:86-21019).
6. **SHALL** contain exactly one [1..1] id (CONF:86-21020).
 - a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22748).

7. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNDrugSusceptibilityTestsCode](#) urn:oid:2.16.840.1.113883.13.15 **DYNAMIC** (CONF:86-21021).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21023).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21024).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-21025).
 - a. This **effectiveTime** **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CONF:86-22749).
10. **SHALL** contain exactly one [1..1] **value** (CONF:86-28406).
11. **SHALL** contain exactly one [1..1] **interpretationCode** (CONF:86-21026).
 - a. If the interpretation result is known, the value of **interpretationCode/@code** **SHALL** be selected from Value Set 2.16.840.1.113883.13.13 [NHSNDrugSusceptibilityFindingCode](#) **DYNAMIC**. If the drug was not tested, the value of **@nullFlavor** **SHALL** be **NASK** (CONF:86-21027).

Figure 83: Drug-Susceptibility Test Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- C-CDA Result Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2" />
  <!-- HAI Drug-susceptibility Test Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.126" />
  <id nullFlavor="NA" />
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="19000-9"
        displayName="Vancomycin Susc Islt" />
  <statusCode code="completed" />
  <effectiveTime nullFlavor="NA" />
  <value xsi:type="CD" nullFlavor="NA" />
  <interpretationCode codeSystem="2.16.840.1.113883.5.83"
        codeSystemName="HL7 Observation Interpretation"
        code="S" displayName="susceptible" />
</observation>
```

3.38 Duration of Labor Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.127 (closed)]

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Table 228: Duration of Labor Observation Contexts

Contained By:	Contains:
Infection Risk Factors Section in a Procedure Report (optional)	

This observation records the duration of labor in value/width. NHSN protocol requires that the duration be expressed as an integer.

Table 229: Duration of Labor Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.127)					
@classCode	1..1	SHALL		86-22208	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-22209	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-22210	
@root	1..1	SHALL		86-22211	2.16.840.1.113883.10.20.5.6.127
code	1..1	SHALL		86-22212	
@code	1..1	SHALL		86-22213	289248003
@codeSystem	1..1	SHALL		86-28355	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		86-22214	
@code	1..1	SHALL		86-22215	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	IVL_TS	86-22216	
width	1..1	SHALL		86-22217	
@value	1..1	SHALL		86-22218	
@unit	1..1	SHALL		86-22219	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22208).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22209).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22210) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.127" (CONF:86-22211).
4. **SHALL** contain exactly one [1..1] **code** (CONF:86-22212).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="289248003" Duration of labor (CONF:86-22213).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28355).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-22214).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-22215).

6. **SHALL** contain exactly one [1..1] **value** with @xsi:type="IVL_TS" (CONF:86-22216).
 - a. This value **SHALL** contain exactly one [1..1] **width** (CONF:86-22217).
 - i. This width **SHALL** contain exactly one [1..1] **@value** (CONF:86-22218).
 - ii. This width **SHALL** contain exactly one [1..1] **@unit** (CONF:86-22219).
7. The value of width/@value **SHALL** be a non-negative integer representing the duration of labor in terms of the units specified in @unit (CONF:86-22221).

Figure 84: Duration of Labor Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- HAI Duration of Labor Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.127"/>
  <code code="289248003"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED"
    displayName="Duration of labor"/>
  <statusCode code="completed"/>
  <value xsi:type="IVL_TS">
    <width value="8" unit="h"/>
  </value>
</observation>
```

3.39 Endoscope Used Clinical Statement

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.128 (closed)]

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Release 1 - US Realm

Table 230: Endoscope Used Clinical Statement Contexts

Contained By:	Contains:
Procedure Risk Factors Clinical Statement in a Procedure Report (required)	

This clinical statement records whether an endoscope was used.

If an endoscope was used, set the value of @negationInd to false. If an endoscope was not used, set the value of @negationInd to true.

Table 231: Endoscope Used Clinical Statement Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.128)					
@classCode	1..1	SHALL		86-21992	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		86-21993	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21994	
templateId	1..1	SHALL		86-28235	
@root	1..1	SHALL		86-28236	2.16.840.1.113883.10.20.22.4.14
templateId	1..1	SHALL		86-22160	
@root	1..1	SHALL		86-22161	2.16.840.1.113883.10.20.5.6.128
id	1..1	SHALL		86-22162	
code	1..1	SHALL		86-21995	
@code	1..1	SHALL		86-21996	423827005
@codeSystem	1..1	SHALL		86-28184	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		86-22163	
@code	1..1	SHALL		86-28107	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21992).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21993).
4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-21994).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28235) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28236).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22160) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.128" (CONF:86-22161).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-22162).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-21995).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="423827005" Endoscopy (CONF:86-21996).

- b. This code **SHALL** contain exactly one [1..1] `@codeSystem="2.16.840.1.113883.6.96"` (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28184).
9. **SHALL** contain exactly one [1..1] `statusCode` (CONF:86-22163).
 - a. This `statusCode` **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28107).

Figure 85: Endoscope Used Clinical Statement Example

```
<procedure classCode="PROC" moodCode="EVN" negationInd="false">
  <!-- C-CDA Procedure Activity Procedure templateId. -->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" />
  <!-- HAI Endoscope Used Clinical Statement templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.128" />
  <id root="807007ba-c8f0-4842-9c3c-4a4e4c570849" />
  <code codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED"
    code="423827005"
    displayName="Endoscopy" />
  <statusCode code="completed" />
</procedure>
```

3.40 Epidermolysis Bullosa Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.252:2018-04-01 (closed)]

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Table 232: Epidermolysis Bullosa Observation Contexts

Contained By:	Contains:
Infection Risk Factors Section in a BSI Report (V3) (required)	

This observation records whether the person had epidermolysis bullosa.

If the person did have epidermolysis bullosa, set the value of `@negationInd` to false. If the person did not have epidermolysis bullosa, set the value of `@negationInd` to true.

Table 233: Epidermolysis Bullosa Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.252:2018-04-01)					
@classCode	1..1	SHALL		3357-30665	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3357-30666	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		3357-30667	
templateId	1..1	SHALL		3357-30650	
@root	1..1	SHALL		3357-30656	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		3357-30655	
@root	1..1	SHALL		3357-30663	2.16.840.1.113883.10.20.5.6.252
@extension	1..1	SHALL		3357-30664	2018-04-01
id	1..1	SHALL		3357-30651	
@nullFlavor	1..1	SHALL		3357-30657	NA
code	1..1	SHALL		3357-30652	
@code	1..1	SHALL		3357-30658	ASSERTION
@codeSystem	1..1	SHALL		3357-30659	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		3357-30653	
@code	1..1	SHALL		3357-30660	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	3357-30654	
@code	1..1	SHALL	CS	3357-30661	3057-7
@codeSystem	1..1	SHALL		3357-30662	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).

2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3357-30665).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3357-30666).

If the person did have epidermolysis bullosa, set the value of **@negationInd** to false. If the person did not have epidermolysis bullosa, set the value of **@negationInd** to true.

4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:3357-30667).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-30650) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:3357-30656).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-30655) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.252" (CONF:3357-30663).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2018-04-01" (CONF:3357-30664).
7. **SHALL** contain exactly one [1..1] **id** (CONF:3357-30651).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:3357-30657).
8. **SHALL** contain exactly one [1..1] **code** (CONF:3357-30652).
 - a. This **code** **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:3357-30658).
 - b. This **code** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3357-30659).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3357-30653).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:3357-30660).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:3357-30654).
 - a. This **value** **SHALL** contain exactly one [1..1] **@code**="3057-7" Epidermolysis bullosa during current admission (CONF:3357-30661).
 - b. This **value** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-30662).

Figure 86: Epidermolysis Bullosa Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- [C-CDA R1.1] Problem Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- [HAI R3D3] Epidermolysis Bullosa Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.252" extension="2018-04-01"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    code="3057-7"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    displayName="Epidermolysis bullosa during current admission "/>
</observation>
```

3.41 Extracorporeal Life Support Present

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.246:2017-04-01
(closed)]

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Release 3, STU 2 – US Realm

Table 234: Extracorporeal Life Support Present Contexts

Contained By:	Contains:
Infection Risk Factors Section in a BSI Report (V3) (required)	

This procedure represents whether or not an extracorporeal life support (ECLS) system is present. The code for the procedure is represented with nullFlavor="UNK" as the procedure to implant the ECLS is unknown. The ECLS device is represented by the participant.

If an extracorporeal life support system was present, set the value of @negationInd to false. If an extracorporeal life support system was not present, set the value of @negationInd to true.

Table 235: Extracorporeal Life Support Present Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.246:2017-04-01)					
@classCode	1..1	SHALL		3311-212	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		3311-213	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		3311-214	
templateId	1..1	SHALL		3311-204	
@root	1..1	SHALL		3311-210	2.16.840.1.113883.10.20.5.6.246
@extension	1..1	SHALL		3311-211	2017-04-01
code	1..1	SHALL		3311-201	
@nullFlavor	1..1	SHALL		3311-28438	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = UNK
statusCode	1..1	SHALL		3311-202	
@code	1..1	SHALL		3311-207	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
participant	1..1	SHALL		3311-28434	
@typeCode	1..1	SHALL		3311-28439	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV
participantRole	1..1	SHALL		3311-28435	
@classCode	1..1	SHALL		3311-28440	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
playingDevice	1..1	SHALL		3311-28436	
code	1..1	SHALL		3311-28437	
@code	1..1	SHALL		3311-28441	261258006
@codeSystem	1..1	SHALL		3311-28442	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96

1. **SHALL** contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3311-212).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3311-213).

If an extracorporeal life support system was present, set the value of @negationInd to false. If an extracorporeal life support system was not present set the value of @negationInd to true.

3. **SHALL** contain exactly one [1..1] @negationInd (CONF:3311-214).

4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3311-204) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.246" (CONF:3311-210).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-04-01" (CONF:3311-211).

The code for the procedure is represented with nullFlavor="UNK" as the procedure to implant the ECLS is unknown.

5. **SHALL** contain exactly one [1..1] **code** (CONF:3311-201).
 - a. This code **SHALL** contain exactly one [1..1] **@nullFlavor**="UNK" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:3311-28438).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3311-202).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:3311-207).

The ECLS device is represented by the participant.

7. **SHALL** contain exactly one [1..1] **participant** (CONF:3311-28434).
 - a. This participant **SHALL** contain exactly one [1..1] **@typeCode**="DEV" Device (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3311-28439).
 - b. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:3311-28435).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="MANU" manufactured product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3311-28440).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **playingDevice** (CONF:3311-28436).
 1. This playingDevice **SHALL** contain exactly one [1..1] **code** (CONF:3311-28437).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="261258006" Extracorporeal membrane oxygenation circuit (CONF:3311-28441).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3311-28442).

Figure 87: Extracorporeal Life Support Present Example

```
<procedure classCode="PROC" moodCode="EVN" negationInd="false">
  <!-- [HAI R3D2] Extracorporeal Life Support Present -->
  <templateId root="2.16.840.1.113883.10.20.5.6.246" extension="2017-04-01" />
  <code nullFlavor="UNK" />
  <statusCode code="completed" />
  <participant typeCode="DEV">
    <participantRole classCode="MANU">
      <playingDevice>
        <code code="261258006"
          displayName="Extracorporeal membrane oxygenation circuit"
          codeSystem="2.16.840.1.113883.6.96"
          codeSystemName="SNOMED CT" />
      </playingDevice>
    </participantRole>
  </participant>
</procedure>
```

3.42 Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.236:2016-08-01 (closed)]

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Release 3, DSTU 1.1 – US Realm

Table 236: Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2) Contexts

Contained By:	Contains:
Summary Encounter (HV) (V2) (required)	

This clinical statement represents whether or not the facility transfuses blood products treated with pathogen reduction technology.

If the facility does transfuse blood products treated with pathogen reduction technology, set the value of @negationInd to false. If the facility does not transfuse blood products treated with pathogen reduction technology, set the value of @negationInd to true.

**Table 237: Facility Transfuses Blood Products Treated with Pathogen Reduction Technology
Observation (V2) Constraints Overview**

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.236:2016-08-01)					
@classCode	1..1	SHALL		3247-30698	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3247-30699	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		3247-30700	
templateId	1..1	SHALL		3247-30690	
@root	1..1	SHALL		3247-30696	2.16.840.1.113883.10.20.5.6.236
@extension	1..1	SHALL		3247-30697	2016-08-01
code	1..1	SHALL		3247-30687	
@code	1..1	SHALL	CS	3247-30691	ASSERTION
@codeSystem	1..1	SHALL		3247-30692	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		3247-30688	
@code	1..1	SHALL		3247-30693	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	3247-30689	
@code	1..1	SHALL		3247-30694	3542-8
@codeSystem	1..1	SHALL		3247-30695	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3247-30698).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3247-30699).

If the facility does transfuse blood products treated with pathogen reduction technology, set the value of **@negationInd** to false. If the facility does not transfuse blood products treated with pathogen reduction technology, set the value of **@negationInd** to true.

3. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:3247-30700).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3247-30690) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.236" (CONF:3247-30696).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2016-08-01" (CONF:3247-30697).
5. **SHALL** contain exactly one [1..1] **code** (CONF:3247-30687).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:3247-30691).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3247-30692).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3247-30688).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:3247-30693).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:3247-30689).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="3542-8" Facility transfuses blood products treated with pathogen reduction technology (CONF:3247-30694).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3247-30695).

Figure 88: Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2) Example

```
<!-- Facility Transfuses Blood Products Treated with Pathogen Reduction Technology
Observation -->
<!-- If the facility does transfuse blood products treated with pathogen reduction
technology,
    set the value of @negationInd to false.
    If the facility does not transfuse blood products treated with pathogen reduction
technology,
    set the value of @negationInd to true. -->
<!-- The facility does transfuse blood products treated with pathogen reduction technology
so negationInd='false' -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- [HAI R3D1.1] Facility Transfuses Blood Products Treated with
    Pathogen Reduction Technology Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.236" extension="2016-08-01" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed" />
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="3542-8"
    displayName="Facility transfuses blood products treated with pathogen reduction
technology" />
</observation>
```

3.43 Findings Organizer

[organizer: identifier urn:oid:2.16.840.1.113883.10.20.5.6.182 (closed)]

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Table 238: Findings Organizer Contexts

Contained By:	Contains:
Findings Section in an Infection-Type Report (optional) Findings Section in an OPC SSI Report (optional)	Pathogen Ranking Observation (required) Pathogen Identified Observation (required) Drug-Susceptibility Test Observation (optional)

Each Findings Organizer represents a set of information concerning a single pathogen identified. The organizer contains two component elements that record the pathogen and its rank in regard to the other pathogens identified, and can contain additional component elements recording drug-susceptibility test findings. For pathogen antibiogram reporting requirements, refer to the NHSN protocol and the Information Data Model (IDM).

Table 239: Findings Organizer Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.182)					
@classCode	1..1	SHALL		86-22239	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		86-22240	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-22241	
@root	1..1	SHALL		86-22242	2.16.840.1.113883.10.20.5.6.182
id	1..1	SHALL		86-22243	
@nullFlavor	1..1	SHALL		86-22770	NA
statusCode	1..1	SHALL		86-22244	
@code	1..1	SHALL		86-22245	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
component	1..1	SHALL		86-22246	
observation	1..1	SHALL		86-22247	Pathogen Identified Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.145)
component	1..1	SHALL		86-22248	
observation	1..1	SHALL		86-22249	Pathogen Ranking Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.147)
component	0..*	MAY		86-22250	
observation	1..1	SHALL		86-22251	Drug-Susceptibility Test Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.126)

1. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22239).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22240).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22241) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.182" (CONF:86-22242).
4. **SHALL** contain exactly one [1..1] **id** (CONF:86-22243).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22770).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-22244).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-22245).

6. **SHALL** contain exactly one [1..1] **component** (CONF:86-22246) such that it
 - a. **SHALL** contain exactly one [1..1] [Pathogen Identified Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.145) (CONF:86-22247).
7. **SHALL** contain exactly one [1..1] **component** (CONF:86-22248) such that it
 - a. **SHALL** contain exactly one [1..1] [Pathogen Ranking Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.147) (CONF:86-22249).
8. **MAY** contain zero or more [0..*] **component** (CONF:86-22250) such that it
 - a. **SHALL** contain exactly one [1..1] [Drug-Susceptibility Test Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.126) (CONF:86-22251).

Figure 89: Findings Organizer Example

```

<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.5.6.182"/>
  <id nullFlavor="NA"/ >
  <statusCode code="completed"/>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- C-CDA Result Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
      <!-- Pathogen Identified Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.145"/>
      ...
    </observation>
  </component>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- HAI Pathogen Ranking Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.147"/>
      ...
    </observation>
  </component>
  <component>
    <observation classCode="OBS" moodCode="EVN">
      <!-- C-CDA Result Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
      <!-- HAI Drug-Susceptibility Test Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.126"/>
      ...
    </observation>
  </component>
</organizer>

```

3.44 Gender Identity Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.34.3.45:2022-06-01
(open)]

Draft as part of C-CDA 2.1 Companion Guide V3

Table 240: Gender Identity Observation (V3) Contexts

Contained By:	Contains:
NHSN Social History Section (optional)	

This observation represents the gender identity of the patient, defined as:

"One's basic sense of being male, female, or other gender (for example, transgender or gender queer). Gender identity can be congruent or incongruent with one's sex assigned at birth based on the appearance of external genitalia." (Advancing Effective Communication, Cultural Competence, and Patient- and Family-Centered Care for the Lesbian, Gay, Bisexual, and Transgender (LGBT) Community—A Field Guide, The Joint Commission (2011).)

This template follows the guidelines from the HL7 Gender Harmony project . This template is based on C-CDA Social History Observation template.

This observation is not appropriate for recording patient gender (administrativeGender) or birth sex.

Table 241: Gender Identity Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.34.3.45:2022-06-01)					
@classCode	1..1	SHALL		4515-1230	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		4515-1231	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		4515-1221	
@root	1..1	SHALL		4515-1225	2.16.840.1.113883.10.20.34.3.45
@extension	1..1	SHALL		4515-1226	2022-06-01
code	1..1	SHALL		4515-1222	
@code	1..1	SHALL		4515-1227	76691-5
@codeSystem	1..1	SHALL		4515-1228	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		4515-33031	
@code	1..1	SHALL		4515-33032	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		4515-33033	
low	1..1	SHALL		4515-33034	
high	0..1	MAY		4515-33035	
value	1..1	SHALL	CD	4515-1223	urn:oid:2.16.840.1.113762.1.4.1021.101 (Gender Identity USCDI core)
@nullFlavor	0..1	MAY		4515-1232	urn:oid:2.16.840.1.113762.1.4.1114.17 (Asked but Unknown and Other)

1. Conforms to Social History Observation (V3) template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.38:2015-08-01).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4515-1230).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4515-1231).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4515-1221) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.34.3.45" (CONF:4515-1225).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-06-01" (CONF:4515-1226).
- 5. **SHALL** contain exactly one [1..1] **code** (CONF:4515-1222).
 - a. This code **SHALL** contain exactly one [1..1] **@code**=" 76691-5" Gender identity (CONF:4515-1227).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:4515-1228).
- 6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4515-33031).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4515-33032).
- 7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4515-33033).

The effectiveTime represents the clinically relevant time of the observation. A patient's "gender identity" may change and using effectiveTime/low and effectiveTime/high defines the time during which the patient had identified as specified.

- a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4515-33034).
 - b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4515-33035).
- 8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [Gender Identity USCDI core](#) urn:oid:2.16.840.1.113762.1.4.1021.101 **DYNAMIC** (CONF:4515-1223).

To represent additional Gender Identities, set nullFlavor="OTH". To represent "choose not to disclose", set nullFlavor="ASKU".

- a. This value **MAY** contain zero or one [0..1] **@nullFlavor**, which **SHOULD** be selected from ValueSet [Asked but Unknown and Other](#) urn:oid:2.16.840.1.113762.1.4.1114.17 **DYNAMIC** (CONF:4515-1232).

Table 242: Gender Identity USCDI core

<p>Value Set: Gender Identity USCDI core urn:oid:2.16.840.1.113762.1.4.1021.101</p> <p>(Clinical Focus: Concepts that are used to describe a person's socially acknowledged gender that are used, at a minimum, in the USA. This is the gender they identify as. These are not concepts used to describe a person's sexual orientation (who they are attracted to).),(Data Element Scope: gender identity),(Inclusion Criteria: Concepts that can represent a type of gender that as used in the USA. This is not restricted to male and female.),(Exclusion Criteria: Concepts that are improper to use in the USA for gender identity. Concepts used to describe a person's sexual orientation. Concepts that are used to represent when data is absent or not represented in the provided list.)</p> <p>This value set was imported on 3/16/2022 with a version of Latest.</p> <p>Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1021.101/expansion</p>			
Code	Code System	Code System OID	Print Name
407376001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Male-to-female transsexual (finding)
407377005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Female-to-male transsexual (finding)
44613100012 4102	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Identifies as non-conforming gender (finding)
44614100012 4107	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Identifies as female gender (finding)
44615100012 4109	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Identifies as male gender (finding)

Table 243: Asked but Unknown and Other

<p>Value Set: Asked but Unknown and Other urn:oid:2.16.840.1.113762.1.4.1114.17</p> <p>(Clinical Focus: Data absent reasons specific for representing only asked but unknown and other),(Data Element Scope: any data representation that supports inclusion of data absent reasons),(Inclusion Criteria: Asked but no answer known and Other meant to mean data not available for selection),(Exclusion Criteria: all other codes)</p> <p>This value set was imported on 3/16/2022 with a version of Latest.</p> <p>Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1114.17/expansion</p>			
Code	Code System	Code System OID	Print Name
ASKU	HL7NullFlavor	urn:oid:2.16.840.1.113883.5.10 08	asked but unknown
OTH	HL7NullFlavor	urn:oid:2.16.840.1.113883.5.10 08	other

Figure 90: Gender Identity Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Gender Identity Observation -->
  <templateId root="2.16.840.1.113883.10.20.34.3.45" extension="2019-04-01" />
  <templateId root="2.16.840.1.113883.10.20.34.3.45" extension="2022-06-01" />
  <id root="5501b49a-32ea-4c78-9c31-3dbe782871b7" />
  <code code="76691-5"
    displayName="Gender identity"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20180703" />
  </effectiveTime>
  <value xsi:type="CD" code="446141000124107"
    displayName="Identifies as female gender (finding)"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT" />
</observation>
```

3.45 Gestational Age at Birth Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2019-04-01
(closed)]

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Table 244: Gestational Age at Birth Observation (V2) Contexts

Contained By:	Contains:
Risk Factors Section in a LOS/Men Denominator (required)	
Risk Factors Section in a LOS/Men Event (V2) (required)	

This template represents gestational age at birth, as measured in days. Although gestational age of an infant is typically recorded in weeks plus days (e.g., 27 weeks and 3 days), the xsi:type PQ does not allow for mixed units. The gestational age must be represented in days. For example, 27 weeks and 3 days would be represented with 192 days. If unknown, set value/@nullFlavor="UNK".

Table 245: Gestational Age at Birth Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2019-04-01)					
@classCode	1..1	SHALL		4395-30769	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		4395-30770	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		4395-30771	false
templateId	1..1	SHALL		4395-30764	
@root	1..1	SHALL		4395-30773	2.16.840.1.113883.10.20.5.6.255
@extension	1..1	SHALL		4395-30976	2019-04-01
code	1..1	SHALL		4395-30765	
@code	1..1	SHALL		4395-30977	76516-4
@codeSystem	1..1	SHALL		4395-30978	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL	PQ	4395-30768	
@nullFlavor	0..1	MAY		4395-30980	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = UNK
@unit	0..1	SHOULD		4395-30979	urn:oid:2.16.840.1.113883.6.8 (UCUM) = d

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4395-30769).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4395-30770).
3. **SHALL** contain exactly one [1..1] **@negationInd**="false" (CONF:4395-30771).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30764) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.255" (CONF:4395-30773).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30976).
5. **SHALL** contain exactly one [1..1] **code** (CONF:4395-30765).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="76516-4" Gestational age at birth (CONF:4395-30977).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4395-30978).

6. **SHALL** contain exactly one [1..1] **value** with @xsi:type="PQ" (CONF:4395-30768).

If unknown, set @nullFlavor to "UNK".

- a. This value **MAY** contain zero or one [0..1] @nullFlavor="UNK" Unknown (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:4395-30980).
- b. This value **SHOULD** contain zero or one [0..1] @unit="d" Days (CodeSystem: UCUM urn:oid:2.16.840.1.113883.6.8) (CONF:4395-30979).

Figure 91: Gestational Age Observation (V2) Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- [HAI R3D4] Gestational Age Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.255" extension="2019-04-01"/>
  <code code="76516-4" codeSystem="2.16.840.1.113883.6.1" displayName="Gestational age at
birth" codeSystemName="LOINC"/>
  <value xsi:type="PQ" value="276" unit="d"/>
</observation>
```

3.46 Guidewire Used Clinical Statement

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.129 (closed)]

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Table 246: Guidewire Used Clinical Statement Contexts

Contained By:	Contains:
Reason for Procedure Observation (optional)	

This clinical statement records whether the performance of a central-line exchange used a guidewire. If the central line was exchanged over a guidewire, set the value of @negationInd to false. If the central line was not exchanged over a guidewire, set the value of @negationInd to true.

Table 247: Guidewire Used Clinical Statement Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.129)					
@classCode	1..1	SHALL		86-22151	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		86-22152	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-22153	
templateId	1..1	SHALL		86-28237	
@root	1..1	SHALL		86-28238	2.16.840.1.113883.10.20.22.4.14
templateId	1..1	SHALL		86-22154	
@root	1..1	SHALL		86-22155	2.16.840.1.113883.10.20.5.6.129
id	1..1	SHALL		86-22156	
@nullFlavor	1..1	SHALL		86-22751	NA
code	1..1	SHALL		86-22157	
@code	1..1	SHALL		86-22158	3121-1
@codeSystem	1..1	SHALL		86-28185	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
statusCode	1..1	SHALL		86-22159	
@code	1..1	SHALL		86-28108	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22151).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22152).
4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-22153).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28237) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28238).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22154) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.129" (CONF:86-22155).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-22156).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22751).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-22157).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="3121-1" Central line exchanged over guidewire (CONF:86-22158).

- b. This code **SHALL** contain exactly one [1..1] `@codeSystem="2.16.840.1.113883.6.277"` (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:86-28185).
9. **SHALL** contain exactly one [1..1] `statusCode` (CONF:86-22159).
 - a. This `statusCode` **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28108).

Figure 92: Guidewire Used Clinical Statement Example

```
<procedure moodCode="EVN" classCode="PROC" negationInd="false">
  <!-- C-CDA Procedure Activity Procedure templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" />
  <!-- HAI Guidewire Used Clinical Statement templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.129" />
  <id nullFlavor="NA" />
  <code code="3121-1"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    displayName="Central line exchanged over guidewire" />
  <statusCode code="completed" />
</procedure>
```

3.47 Hand Hygiene Performed Clinical Statement

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.130 (closed)]

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Table 248: Hand Hygiene Performed Clinical Statement Contexts

Contained By:	Contains:
Central-Line Insertion Preparation Organizer (V2) (required)	

This clinical statement reports whether hand hygiene was performed. It is one of the actions recorded in the first, preparatory step of the central-line insertion practice sequence.

If the preparation step included hand hygiene, set the value of `@negationInd` to false. If the preparation step did not include hand hygiene, set the value of `@negationInd` to true.

Table 249: Hand Hygiene Performed Clinical Statement Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.130)					
@classCode	1..1	SHALL		86-22141	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		86-22142	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-22143	
templateId	1..1	SHALL		86-28239	
@root	1..1	SHALL		86-28240	2.16.840.1.113883.10.20.22.4.14
templateId	1..1	SHALL		86-22144	
@root	1..1	SHALL		86-22145	2.16.840.1.113883.10.20.5.6.130
id	1..1	SHALL		86-22146	
@nullFlavor	1..1	SHALL		86-22752	NA
code	1..1	SHALL		86-22147	
@code	1..1	SHALL		86-22148	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 3109-6
statusCode	1..1	SHALL		86-22149	
@code	1..1	SHALL		86-22150	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. **SHALL** contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22141).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22142).
4. **SHALL** contain exactly one [1..1] @negationInd (CONF:86-22143).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-28239) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28240).
6. **SHALL** contain exactly one [1..1] templateId (CONF:86-22144) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.130" (CONF:86-22145).
7. **SHALL** contain exactly one [1..1] id (CONF:86-22146).
 - a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22752).
8. **SHALL** contain exactly one [1..1] code (CONF:86-22147).
 - a. This code **SHALL** contain exactly one [1..1] @code="3109-6" Hand hygiene (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:86-22148).

9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-22149).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-22150).

Figure 93: Hand Hygiene Performed Clinical Statement Example

```
<component>
  <procedure moodCode="EVN" classCode="PROC" negationInd="false">
    <!-- C-CDA Procedure Activity Procedure templateId -->
    <templateId root="2.16.840.1.113883.10.20.22.4.14" />
    <!-- HAI Hand Hygiene Performed Clinical Statement templateId -->
    <templateId root="2.16.840.1.113883.10.20.5.6.130" />
    <id nullFlavor="NA" />
    <code code="3109-6"
      codeSystem="2.16.840.1.113883.6.277"
      codeSystemName="cdcNHSN"
      displayName="Hand hygiene" />
    <statusCode code="completed"/>
  </procedure>
</component>
```

3.48 Height Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.131 (closed)]

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Table 250: Height Observation Contexts

Contained By:	Contains:
Infection Risk Factors Section in a Procedure Report (required) Infection Risk Factors Section in an OPC Denominator for Procedure (required)	

This observation records a body height.

Table 251: Height Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.131)					
@classCode	1..1	SHALL		86-19729	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-19730	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-19731	false
templateId	1..1	SHALL		86-28241	
@root	1..1	SHALL		86-28242	2.16.840.1.113883.10.20.22.4.27
templateId	1..1	SHALL		86-19746	
@root	1..1	SHALL		86-27434	2.16.840.1.113883.10.20.5.6.131
id	1..1	SHALL		86-19748	
@nullFlavor	1..1	SHALL		86-22753	NA
code	1..1	SHALL		86-19732	
@code	1..1	SHALL		86-19733	50373000
@codeSystem	1..1	SHALL		86-28191	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		86-19734	
@code	1..1	SHALL		86-19735	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		86-19749	
@nullFlavor	1..1	SHALL		86-22754	NA
value	1..1	SHALL	PQ	86-19736	
@value	1..1	SHALL		86-19750	
@unit	1..1	SHALL		86-19752	

1. Conforms to Vital Sign Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.27).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-19729).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-19730).
4. **SHALL** contain exactly one [1..1] @negationInd="false" (CONF:86-19731).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-28241) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.27" (CONF:86-28242).
6. **SHALL** contain exactly one [1..1] templateId (CONF:86-19746) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.131" (CONF:86-27434).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-19748).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22753).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-19732).
 - a. This **code** **SHALL** contain exactly one [1..1] **@code**="50373000" Body height (CONF:86-19733).
 - b. This **code** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28191).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-19734).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-19735).
10. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-19749).
 - a. This **effectiveTime** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22754).
11. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:86-19736).
 - a. This **value** **SHALL** contain exactly one [1..1] **@value** (CONF:86-19750).
 - i. The value of **@value** **SHALL** be a non-negative real number representing the body height in terms of the units specified in **@unit** (CONF:86-19751).
 - b. This **value** **SHALL** contain exactly one [1..1] **@unit** (CONF:86-19752).

Figure 94: Height Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Vital Sign Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.27"/>
  <!-- HAI Height Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.131"/>
  <id nullFlavor="NA"/>
  <code code="50373000"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED"
    displayName="Body Height"/>
  <statusCode code="completed"/>
  <effectiveTime nullFlavor="NA"/>
  <value xsi:type="PQ" value="1.9" unit="m"/>
</observation>
```

3.49 Hemodialysis Catheter Present

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.245:2017-04-01 (closed)]

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Release 3, STU 2 - US Realm

Table 252: Hemodialysis Catheter Present Contexts

Contained By:	Contains:
Infection Risk Factors Section in a BSI Report (V3) (required)	

This procedure represents whether or not a hemodialysis catheter is present. The code for the procedure is represented with nullFlavor="UNK" as the procedure to implant the hemodialysis catheter is unknown. The hemodialysis catheter device is represented by the participant.

If a hemodialysis catheter was present, set the value of @negationInd to false. If a hemodialysis catheter was not present, set the value of @negationInd to true.

Table 253: Hemodialysis Catheter Present Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.245:2017-04-01)					
@classCode	1..1	SHALL		3311-196	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		3311-197	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		3311-198	
templateId	1..1	SHALL		3311-190	
@root	1..1	SHALL		3311-199	2.16.840.1.113883.10.20.5.6.245
@extension	1..1	SHALL		3311-200	2017-04-01
code	1..1	SHALL		3311-187	
@nullFlavor	1..1	SHALL		3311-28444	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = UNK
statusCode	1..1	SHALL		3311-188	
@code	1..1	SHALL		3311-193	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
participant	1..1	SHALL		3311-28453	
@typeCode	1..1	SHALL		3311-28458	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV
participantRole	1..1	SHALL		3311-28454	
@classCode	1..1	SHALL		3311-28459	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
playingDevice	1..1	SHALL		3311-28460	
code	1..1	SHALL		3311-28461	
@code	1..1	SHALL		3311-28462	450866001
@codeSystem	1..1	SHALL		3311-28463	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96

1. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3311-196).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3311-197).

If a hemodialysis catheter was present, set the value of @negationInd to false. If a hemodialysis catheter was not present set the value of @negationInd to true.

3. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:3311-198).

4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3311-190) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.245" (CONF:3311-199).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-04-01" (CONF:3311-200).

The code for the procedure is represented with nullFlavor="UNK" as the procedure to implant the hemodialysis catheter is unknown.

5. **SHALL** contain exactly one [1..1] **code** (CONF:3311-187).
 - a. This code **SHALL** contain exactly one [1..1] **@nullFlavor**="UNK" Unknown (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:3311-28444).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3311-188).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:3311-193).

The hemodialysis catheter device is represented by the participant.

7. **SHALL** contain exactly one [1..1] **participant** (CONF:3311-28453).
 - a. This participant **SHALL** contain exactly one [1..1] **@typeCode**="DEV" Device (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3311-28458).
 - b. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:3311-28454).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="MANU" Manufactured product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3311-28459).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **playingDevice** (CONF:3311-28460).
 1. This playingDevice **SHALL** contain exactly one [1..1] **code** (CONF:3311-28461).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="450866001" Hemodialysis catheter (CONF:3311-28462).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3311-28463).

Figure 95: Hemodialysis Catheter Present Example

```
<procedure classCode="PROC" moodCode="EVN" negationInd="false">
  <!-- [HAI R3D2] Hemodialysis Catheter Present-->
  <templateId root="2.16.840.1.113883.10.20.5.6.245" extension="2017-04-01" />
  <code nullFlavor="UNK" />
  <statusCode code="completed" />
  <participant typeCode="DEV">
    <participantRole classCode="MANU">
      <playingDevice>
        <code code="450866001"
          codeSystem="2.16.840.1.113883.6.96"
          codeSystemName="SNOMED CT"
          displayName="Hemodialysis catheter" />
      </playingDevice>
    </participantRole>
  </participant>
</procedure>
```

3.50 History of Object Presence Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.132 (closed)]

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Table 254: History of Object Presence Observation Contexts

Contained By:	Contains:
Urinary Catheter Observation (optional)	

This observation records a fact about the history of an object's presence. The observation is intended for use within a context that specifies the object.

When used within the Urinary Catheter Observation, if the patient had a urinary catheter removed within 48 hours, set the value of @negationInd to false. If the patient did not have a urinary catheter removed within 48 hours, set the value of @negationInd to true.

Table 255: History of Object Presence Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.132)					
@classCode	1..1	SHALL		86-22196	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-22197	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-22198	
templateId	1..1	SHALL		86-22199	
@root	1..1	SHALL		86-22200	2.16.840.1.113883.10.20.5.6.132
id	1..1	SHALL		86-22201	
@nullFlavor	1..1	SHALL		86-22755	NA
code	1..1	SHALL		86-22202	
@code	1..1	SHALL		86-22203	ASSERTION
@codeSystem	1..1	SHALL		86-28378	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-22204	
@code	1..1	SHALL		86-22205	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-22206	
@code	1..1	SHALL		86-22207	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2404-2

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22196).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22197).
3. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-22198).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22199) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.132" (CONF:86-22200).
5. **SHALL** contain exactly one [1..1] **id** (CONF:86-22201).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22755).
6. **SHALL** contain exactly one [1..1] **code** (CONF:86-22202).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-22203).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28378).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-22204).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-22205).
8. **SHALL** contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-22206).
 - a. This value **SHALL** contain exactly one [1..1] @code="2404-2" Removed within 48 hours prior (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:86-22207).

Figure 96: History of Object Presence Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- HAI History of Object Presence Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.132"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4"
    code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="2404-2"
    displayName="Removed within 48 hours prior"/>
</observation>
```

3.51 Hospital Admission Clinical Statement

[act: identifier urn:oid:2.16.840.1.113883.10.20.5.6.133 (closed)]

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Table 256: Hospital Admission Clinical Statement Contexts

Contained By:	Contains:
Details Section in an Evidence of Infection (Dialysis) Report (V6) (required)	

This clinical statement records whether the outpatient was hospitalized. A causal relationship to the infection indicator(s) is not recorded.

When the outpatient was hospitalized, set the value of act/@negationInd to false. When the outpatient was not hospitalized, set the value of act/@negationInd to true. When it is not known whether the outpatient was hospitalized, set the value of act/@nullFlavor to "UNK".

Table 257: Hospital Admission Clinical Statement Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.133)					
@nullFlavor	0..1	MAY		86-22185	UNK
@classCode	1..1	SHALL		86-22187	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		86-22188	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	0..1	MAY		86-22189	
templateId	1..1	SHALL		86-22191	
@root	1..1	SHALL		86-22192	2.16.840.1.113883.10.20.5.6.133
id	1..1	SHALL		86-22193	
@nullFlavor	1..1	SHALL		86-22756	NA
code	1..1	SHALL		86-22194	
@code	1..1	SHALL		86-22195	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 32485007

- MAY** contain zero or one [0..1] **@nullFlavor**="UNK" (CONF:86-22185).
 - If it is not known whether the outpatient was hospitalized, the value of act/**@nullFlavor** **SHALL** be UNK (CONF:86-22186).
- SHALL** contain exactly one [1..1] **@classCode**="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22187).
- SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22188).
- MAY** contain zero or one [0..1] **@negationInd** (CONF:86-22189).
 - If the outpatient was hospitalized, the value of act/**@negationInd** **SHALL** be false. If the outpatient was not hospitalized, the value of act/**@negationInd** **SHALL** be true (CONF:86-22190).
- SHALL** contain exactly one [1..1] **templateId** (CONF:86-22191) such that it
 - SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.133" (CONF:86-22192).
- SHALL** contain exactly one [1..1] **id** (CONF:86-22193).
 - This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22756).
- SHALL** contain exactly one [1..1] **code** (CONF:86-22194).
 - This code **SHALL** contain exactly one [1..1] **@code**="32485007" Hospital Admission (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:86-22195).

Figure 97: Hospital Admission Clinical Statement Example

```
<act classCode="ACT" moodCode="EVN" negationInd="false">
  <!-- HAI Hospital Admission templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.133" />
  <id nullFlavor="NA" />
  <code codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED"
        code="32485007"
        displayName="Hospital Admission" />
</act>
```

3.52 Imputability Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.134 (closed)]

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Table 258: Imputability Observation Contexts

Contained By:	Contains:
Suspected Source Observation (required)	

This observation records the strength of certainty of a relationship between events. The relationship is recorded in the code element.

Table 259: Imputability Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.134)					
@classCode	1..1	SHALL		86-21796	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21797	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21798	
templateId	1..1	SHALL		86-28243	
@root	1..1	SHALL		86-28244	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-21801	
@root	1..1	SHALL		86-21802	2.16.840.1.113883.10.20.5.6.134
id	1..1	SHALL		86-21803	
@nullFlavor	1..1	SHALL		86-22757	
code	1..1	SHALL		86-21804	
statusCode	1..1	SHALL		86-21806	
@code	1..1	SHALL		86-21807	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL		86-21808	

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21796).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21797).
4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-21798).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28243) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28244).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21801) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.134" (CONF:86-21802).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-21803).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor** (CONF:86-22757).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-21804).
 - a. To record imputability of a positive blood culture to the suspected source of contamination, the value of **@code** **SHALL** be 2307-7 Imputability of positive blood culture to the suspected source 2.16.840.1.113883.6.277 cdcNHSN (CONF:86-21805).

9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21806).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21807).
10. **SHALL** contain exactly one [1..1] **value** (CONF:86-21808).
 - a. In an Evidence of Infection (Dialysis) Report, (CONF:86-21809).
 - i. The value of the observation's **@negationInd** **SHALL** be 'false' (CONF:86-21810).
 - ii. The value of **@code** **SHALL** be 60022001 Possible 2.16.840.1.113883.6.96 SNOMED CT (CONF:86-21811).

Figure 98: Imputability Observation Example

```
<!-- Imputability of positive blood culture to suspected source example -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Imputability Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.134"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="2307-7"
        displayName="Imputability of positive blood culture to the suspected source"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT" code="60022001"
        displayName="Possible"/>
</observation>
```

3.53 Inborn/Outborn Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.257:2018-04-01 (open)]

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Table 260: Inborn/Outborn Observation Contexts

Contained By:	Contains:
Infection Details in Late Onset Sepsis Report (required)	

This observation represents whether an infant was born at the reporting hospital or some other location. If the negation indicator is false the infant was outborn (born before arrival at reporting hospital), if the negation indicator is true the infant was inborn (born at the reporting hospital).

Table 261: Inborn/Outborn Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.257:2018-04-01)					
@classCode	1..1	SHALL		3357-30831	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3357-30832	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		3357-30902	
templateId	1..1	SHALL		3357-30837	
@root	1..1	SHALL		3357-30838	2.16.840.1.113883.10.20.5.6.257
@extension	1..1	SHALL		3357-30839	2018-04-01
code	1..1	SHALL		3357-30834	
@code	1..1	SHALL		3357-30840	ASSERTION
@codeSystem	1..1	SHALL		3357-30841	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		3357-30835	
@code	1..1	SHALL		3357-30872	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	3357-30836	
@code	1..1	SHALL		3357-30903	445087001
@codeSystem	1..1	SHALL		3357-30904	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3357-30831).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3357-30832).
3. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:3357-30902).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-30837).
 - a. This templateId **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.6.257"** (CONF:3357-30838).
 - b. This templateId **SHALL** contain exactly one [1..1] **@extension="2018-04-01"** (CONF:3357-30839).
5. **SHALL** contain exactly one [1..1] **code** (CONF:3357-30834).

- a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:3357-30840).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3357-30841).
6. **SHALL** contain exactly one [1..1] statusCode (CONF:3357-30835).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3357-30872).
7. **SHALL** contain exactly one [1..1] value with @xsi:type="CD" (CONF:3357-30836).
 - a. This value **SHALL** contain exactly one [1..1] @code="445087001" Born before arrival to hospital (situation) (CONF:3357-30903).
 - b. This value **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3357-30904).

Figure 99: Inborn/Outborn Observation Example

```
<!-- If the negation indicator is false the infant was outborn
      (born before arrival at reporting hospital),
      if the negation indicator is true the infant was inborn (born at the reporting
      hospital). -->
<!-- This infant was inborn (negationInd="true" -->
<observation classCode="OBS" moodCode="EVN" negationInd="true">
  <!-- [HAI R3D3] Inborn/Outborn Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.257" extension="2018-04-01"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed"/>
  <value xsi:type="CD" code="445087001"
    displayName="Born before arrival to hospital (situation)"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"/>
</observation>
```

3.54 Infection Condition Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.135 (closed)]

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Table 262: Infection Condition Observation Contexts

Contained By:	Contains:
Infection-Type Observation (optional) Infection-Type Observation in an OPC SSI Event (required)	

This observation records the infection condition being reported.

Table 263: Infection Condition Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.135)					
@classCode	1..1	SHALL		86-19883	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-19884	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-19885	false
templateId	1..1	SHALL		86-28245	
@root	1..1	SHALL		86-28246	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-19888	
@root	1..1	SHALL		86-19889	2.16.840.1.113883.10.20.5.6.135
id	1..1	SHALL		86-19890	
@nullFlavor	1..1	SHALL		86-22758	NA
code	1..1	SHALL		86-19891	
@code	1..1	SHALL		86-19892	ASSERTION
@codeSystem	1..1	SHALL		86-28379	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-19893	
@code	1..1	SHALL		86-19894	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-19895	urn:oid:2.16.840.1.114222.4.11.3196 (NHSNInfectionConditionCode)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-19883).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-19884).
4. **SHALL** contain exactly one [1..1] @negationInd="false" (CONF:86-19885).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-28245) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28246).
6. **SHALL** contain exactly one [1..1] templateId (CONF:86-19888) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.135" (CONF:86-19889).
7. **SHALL** contain exactly one [1..1] id (CONF:86-19890).
 - a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22758).

8. **SHALL** contain exactly one [1..1] **code** (CONF:86-19891).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** Assertion (CONF:86-19892).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28379).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-19893).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-19894).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"**, where the code **SHALL** be selected from ValueSet [NHSNInfectionConditionCode](#) urn:oid:2.16.840.1.114222.4.11.3196 **DYNAMIC** (CONF:86-19895).

Table 264: NHSNInfectionConditionCode

Value Set: NHSNInfectionConditionCode urn:oid:2.16.840.1.114222.4.11.3196 (Clinical Focus: NHSN surveillance reporting: Infection condition being reported),(Data Element Scope: A coded observation value describing the infection condition.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3196/expansion			
Code	Code System	Code System OID	Print Name
12463005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Infectious gastroenteritis (disorder)
128241005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Inflammatory disease of liver (disorder)
1601-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Breast abscess or mastitis
1602-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Myocarditis or pericarditis
1603-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Clinical sepsis
1604-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Deep incisional primary surgical site infection (SSI)
1605-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Deep incisional secondary surgical site infection (SSI)
1606-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Vertebral disc space infection
1607-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Ear or mastoid infection (otitis externa, otitis media, otitis interna, mastoiditis)
1608-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Eye infection, other than conjunctivitis
...			

Figure 100: Infection Condition Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Infection Condition Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.135"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="1601-4"
    displayName="Breast abscess or mastitis"/>
</observation>
```

3.55 Infection Contributed to Death Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.136 (closed)]

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Table 265: Infection Contributed to Death Observation Contexts

Contained By:	Contains:
Death Observation (optional)	

In some HAI Reports, this observation is required in a Death Observation if the patient died. To point to the observation of the infection that contributed to death, the value of the id in this template must be the same as the value of the id element in the Infection-type Observation.

Table 266: Infection Contributed to Death Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.136)					
@classCode	1..1	SHALL		86-22164	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-22165	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-22166	
@root	1..1	SHALL		86-22167	2.16.840.1.113883.10.20.5.6.136
id	1..1	SHALL		86-22168	
code	1..1	SHALL		86-22170	
@code	1..1	SHALL	CS	86-22174	ASSERTION
@codeSystem	1..1	SHALL		86-28380	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-22172	
@code	1..1	SHALL		86-22173	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22164).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22165).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22166) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.136" (CONF:86-22167).
4. **SHALL** contain exactly one [1..1] **id** (CONF:86-22168).
 - a. The value of the id **SHALL** be the same as the value of the id element in the Infection-type Observation (templateId 2.16.840.1.113883.10.20.5.6.139) (CONF:86-22169).
5. **SHALL** contain exactly one [1..1] **code** (CONF:86-22170).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-22174).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28380).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-22172).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-22173).

Figure 101: Infection Contributed to Death Observation Example

```
<!-- patient did die -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!--Death Observation template-->
  ...
  <!--Infection did not contribute to death -->
  <entryRelationship typeCode="CAUS" inversionInd="true" negationInd="true">
    <observation classCode="OBS" moodCode="EVN">
      <!-- HAI Infection Contributed to Death Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.136" />
      <id root="2.16.840.1.113883.3.117.1.1.5.2.1.1.5" extension="21987654321" />
      <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION" />
      <statusCode code="completed" />
    </observation>
  </entryRelationship>
</observation>
```

3.56 Infection Indicator Organizer (V5)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.181:2019-04-01
(closed)]

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Table 267: Infection Indicator Organizer (V5) Contexts

Contained By:	Contains:
Details Section in an Evidence of Infection (Dialysis) Report (V6) (required)	IV Antifungal Start Clinical Statement (required) IV Antibiotic Start Clinical Statement (V4) (required) Positive Blood Culture Observation (V3) (required) Pus, Redness, or Increased Swelling Observation (V2) (required)

This organizer groups together four required infection indicators. An Evidence of Infection (Dialysis) Report is submitted when at least one is true. The infection indicators are recorded as facts associated with the patient, but without asserting a causal relationship to an infection.

The organizer's effectiveTime/low element represents the earliest date at which one of these indicators was observed. The NHSN protocol specifies that this date represents:

- For pus/redness/swelling, the symptom onset date
- For IV antibiotic or antifungal start, the first day the substance was administered as an outpatient
- For positive blood culture, the day the specimen was drawn.

Table 268: Infection Indicator Organizer (V5) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.181:2019-04-01)					
@classCode	1..1	SHALL		4395-22222	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		4395-22223	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		4395-22224	
@root	1..1	SHALL		4395-22225	2.16.840.1.113883.10.20.5.6.181
@extension	1..1	SHALL		4395-30287	2019-04-01
id	1..1	SHALL		4395-22226	
@nullFlavor	1..1	SHALL		4395-22771	NA
statusCode	1..1	SHALL		4395-22227	
@code	1..1	SHALL		4395-22228	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		4395-22229	
low	1..1	SHALL		4395-22230	
component	1..1	SHALL		4395-22231	
observation	1..1	SHALL		4395-22232	Pus, Redness, or Increased Swelling Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.157:2019-04-01)
component	1..1	SHALL		4395-22233	
substanceAdministration	1..1	SHALL		4395-22234	IV Antibiotic Start Clinical Statement (V4) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.140:2019-04-01)
component	1..1	SHALL		4395-22235	
substanceAdministration	1..1	SHALL		4395-22236	IV Antifungal Start Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.141)
component	1..1	SHALL		4395-22237	
observation	1..1	SHALL		4395-	Positive Blood Culture

XPath	Card.	Verb	Data Type	CONF#	Value
				30429	Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.149:2019-04-01)

1. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4395-22222).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4395-22223).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-22224) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.181" (CONF:4395-22225).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30287).
4. **SHALL** contain exactly one [1..1] **id** (CONF:4395-22226).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:4395-22771).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4395-22227).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:4395-22228).
6. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4395-22229).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4395-22230).
7. **SHALL** contain exactly one [1..1] **component** (CONF:4395-22231) such that it
 - a. **SHALL** contain exactly one [1..1] [Pus, Redness, or Increased Swelling Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.157:2019-04-01) (CONF:4395-22232).
8. **SHALL** contain exactly one [1..1] **component** (CONF:4395-22233) such that it
 - a. **SHALL** contain exactly one [1..1] [IV Antibiotic Start Clinical Statement \(V4\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.140:2019-04-01) (CONF:4395-22234).
9. **SHALL** contain exactly one [1..1] **component** (CONF:4395-22235) such that it
 - a. **SHALL** contain exactly one [1..1] [IV Antifungal Start Clinical Statement](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.141) (CONF:4395-22236).
10. **SHALL** contain exactly one [1..1] **component** (CONF:4395-22237) such that it
 - a. **SHALL** contain exactly one [1..1] [Positive Blood Culture Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.149:2019-04-01) (CONF:4395-30429).

Figure 102: Infection Indicator Organizer (V5) Example

```

<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.5.6.181"
    extension="2019-04-01" />
  <id nullFlavor="NA" />
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="20180404"/>
  </effectiveTime>
  <component>
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- HAI Pus, Redness, or Increased Swelling Observation (V2) templateId-->
      <templateId root="2.16.840.1.113883.10.20.5.6.157" extension="2019-04-01" />
      ...
    </observation>
  </component>
  <component>
    <substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">
      <!-- C-CDA Medication Activity templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
      <!-- HAI IV Antibiotic Start Clinical Statement (V4) templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.140"
        extension="2019-04-01"/>
      ...
    </substanceAdministration>
  </component>
  <component>
    <substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">
      <!-- C-CDA Medication Activity templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
      <!-- HAI IV Antifungal Start Clinical Statement templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.141"/>
      ...
    </substanceAdministration >
  </component>
  <component>
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- HAI Positive Blood Culture Observation (V3) templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.149"
        extension="2019-04-01" />
      ...
    </observation>
  </component>
  ...
</organizer>

```

3.57 Infection Present at the Time of Surgery Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.205 (closed)]

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Table 269: Infection Present at the Time of Surgery Observation Contexts

Contained By:	Contains:
Infection Details Section in an SSI Report (V2) (required)	

This template records whether or not an infection was present at the time that a surgical procedure was performed. It is based on the C-CDA Problem Observation template.

When an infection was present at the time that a surgical procedure was performed, set the value of @negationInd to false. When an infection was not present at the time that a surgical procedure was performed, set the value of @negationInd to true.

Table 270: Infection Present at the Time of Surgery Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.205)					
@classCode	1..1	SHALL		1101-30257	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1101-30258	EVN
@negationInd	1..1	SHALL		1101-30259	
templateId	1..1	SHALL		1101-30299	
@root	1..1	SHALL		1101-30300	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		1101-30261	
@root	1..1	SHALL		1101-30262	2.16.840.1.113883.10.20.5.6.205
id	1..1	SHALL		1101-30263	
@nullFlavor	1..1	SHALL		1101-30264	NA
code	1..1	SHALL		1101-30265	
@code	1..1	SHALL		1101-30266	ASSERTION
@codeSystem	1..1	SHALL		1101-30267	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1101-30268	
@code	1..1	SHALL		1101-30269	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	1101-30270	
@code	1..1	SHALL		1101-30271	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 1237-7
@codeSystem	1..1	SHALL		1101-30272	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1101-30257).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CONF:1101-30258).

4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:1101-30259).
 - a. If an infection was present at the time that a surgical procedure was performed, the value of **@negationInd** **SHALL** be false. If an infection was not present at the time that a surgical procedure was performed, the value of **@negationInd** **SHALL** be true (CONF:1101-30260).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1101-30299) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.4"** (CONF:1101-30300).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:1101-30261) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.6.205"** (CONF:1101-30262).
7. **SHALL** contain exactly one [1..1] **id** (CONF:1101-30263).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CONF:1101-30264).
8. **SHALL** contain exactly one [1..1] **code** (CONF:1101-30265).
 - a. This **code** **SHALL** contain exactly one [1..1] **@code="ASSERTION"** (CONF:1101-30266).
 - b. This **code** **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1101-30267).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1101-30268).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1101-30269).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:1101-30270).
 - a. This **value** **SHALL** contain exactly one [1..1] **@code="1237-7"** Infection present at the time of surgery (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1101-30271).
 - b. This **value** **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.277"** (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1101-30272).

Figure 103: Infection Present at Time of Surgery Observation Example

```
<!--
  If an infection was present at the time that a surgical procedure
  was performed, the value of @negationInd SHALL be false.
  If an infection was not present at the time that a surgical
  procedure was performed, the value of @negationInd SHALL be true
-->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" />
  <!-- Infection Present at the Time of Surgery Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.205" />
  <id nullFlavor="NA" />
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION" />
  <statusCode code="completed" />
  <value xsi:type="CD"
    code="1237-7"
    displayName="Infection present at the time of surgery"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN" />
</observation>
```

3.58 Infection Risk Factors Measurement Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.137 (closed)]

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Table 271: Infection Risk Factors Measurement Observation Contexts

Contained By:	Contains:
Infection Risk Factors Section in a BSI Report (V3) (optional) Risk Factors Section in a LOS/Men Denominator (required) Risk Factors Section in a LOS/Men Event (V2) (required)	

This observation records the risk factor of birth weight.

The BSI report uses this observation. The NHSN protocol specifies which measurements are required for each report type. Those rules do not form part of the guide. The NHSNInfectionRiskFactorsCode value set table (included with the Infection Risk Factors Observation template) shows requirements at the time of publication.

Table 272: Infection Risk Factors Measurement Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.137)					
@classCode	1..1	SHALL		86-19769	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-19770	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-19771	false
templateId	1..1	SHALL		86-28247	
@root	1..1	SHALL		86-28248	2.16.840.1.113883.10.20.22.4.27
templateId	1..1	SHALL		86-19780	
@root	1..1	SHALL		86-19781	2.16.840.1.113883.10.20.5.6.137
id	1..1	SHALL		86-19782	
@nullFlavor	1..1	SHALL		86-22759	NA
code	1..1	SHALL		86-19772	
@code	1..1	SHALL		86-19773	364589006
@codeSystem	1..1	SHALL		86-28104	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		86-19774	
@code	1..1	SHALL		86-19775	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		86-19899	
@nullFlavor	1..1	SHALL		86-22760	NA
value	1..1	SHALL	PQ	86-19776	

1. Conforms to Vital Sign Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.27).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-19769).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-19770).
4. **SHALL** contain exactly one [1..1] @negationInd="false" (CONF:86-19771).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-28247) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.27" (CONF:86-28248).
6. **SHALL** contain exactly one [1..1] templateId (CONF:86-19780) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.137" (CONF:86-19781).
7. **SHALL** contain exactly one [1..1] id (CONF:86-19782).

- a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22759).
8. **SHALL** contain exactly one [1..1] code (CONF:86-19772).
 - a. This code **SHALL** contain exactly one [1..1] @code="364589006" Birth weight (CONF:86-19773).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28104).
9. **SHALL** contain exactly one [1..1] statusCode (CONF:86-19774).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-19775).
10. **SHALL** contain exactly one [1..1] effectiveTime (CONF:86-19899).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22760).
11. **SHALL** contain exactly one [1..1] value with @xsi:type="PQ" (CONF:86-19776).

Figure 104: Infection Risk Factors Measurement Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Vital Sign Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.27"/>
  <!-- HAI Infection Risk Factors Measurement Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.137"/>
  <id nullFlavor="NA"/>
  <code code="364589006"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="Birth weight"/>
  <statusCode code="completed"/>
  <effectiveTime nullFlavor="NA"/>
  <value xsi:type="PQ" value="700" unit="g"/>
</observation>
```

3.59 Infection Risk Factors Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.138 (closed)]

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Table 273: Infection Risk Factors Observation Contexts

Contained By:	Contains:
Infection Risk Factors Section in a BSI Report (V3) (required) Risk Factors Section in a LOS/Men Event (V2) (optional)	Device Insertion Time and Location Procedure (optional)

This observation records the presence of infection risk factors. See also the Infection Risk Factors Measurement Observation.

The NHSNInfectionRiskFactorsCode value set includes infection risk factors for all reports in this guide. The NHSN protocol specifies which risk factors are to be recorded in each report type. Those rules do not form part of the guide.

If the risk factor is present, set the value of @negationInd to false. If the risk factor is not present, set the value of @negationInd to true.

Table 274: Infection Risk Factors Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.138)					
@classCode	1..1	SHALL		86-19800	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-19801	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-19802	
templateId	1..1	SHALL		86-28249	
@root	1..1	SHALL		86-28250	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-19814	
@root	1..1	SHALL		86-19816	2.16.840.1.113883.10.20.5.6.138
id	1..1	SHALL		86-19817	
@nullFlavor	1..1	SHALL		86-22761	NA
code	1..1	SHALL		86-19803	
@code	1..1	SHALL		86-19804	ASSERTION
@codeSystem	1..1	SHALL		86-28381	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-19805	
@code	1..1	SHALL		86-19806	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-19807	urn:oid:2.16.840.1.113883.13.6 (NHSNInfectionRiskFactorsCode)
entryRelationship	0..1	MAY		86-19809	
@typeCode	1..1	SHALL		86-19810	REFR
@inversionInd	1..1	SHALL		86-19811	true
procedure	1..1	SHALL		86-19812	Device Insertion Time and Location Procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.122)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).

2. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-19800).
3. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-19801).
4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-19802).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28249) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.4"** (CONF:86-28250).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-19814) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.6.138"** (CONF:86-19816).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-19817).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CONF:86-22761).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-19803).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** Assertion (CONF:86-19804).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28381).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-19805).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-19806).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"**, where the code **SHALL** be selected from ValueSet [NHSNInfectionRiskFactorsCode](#) urn:oid:2.16.840.1.113883.13.6 **DYNAMIC** (CONF:86-19807).
11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:86-19809).
 - a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CONF:86-19810).
 - b. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:86-19811).
 - c. The entryRelationship, if present, **SHALL** contain exactly one [1..1] [Device Insertion Time and Location Procedure](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.122) (CONF:86-19812).

Table 275: NHSNInfectionRiskFactorsCode

Value Set: NHSNInfectionRiskFactorsCode urn:oid:2.16.840.1.113883.13.6 (Clinical Focus: NHSN surveillance reporting: risk factors for bloodstream infection),(Data Element Scope: A coded observation value describing the infection risk factors.),(Inclusion Criteria:),(Exclusion Criteria:)			
This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.6/expansion			
Code	Code System	Code System OID	Print Name
1002-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Central line
1003-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Permanent central line
1005-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Temporary central line
1006-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Central line including umbilical catheter

Figure 105: Infection Risk Factors Observation Example

```

<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Infection Risk Factors Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.138"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="1003-3"
    displayName="permanent central line"/>

  <entryRelationship typeCode="REFR" inversionInd="true">
    <procedure classCode="PROC" moodCode="EVN">
      <!-- C-CDA Procedure Activity Procedure templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.14" />
      <!-- HAI Device Insertion Time and Location Procedure templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.122" />
      ...
    </procedure>
  </entryRelationship>
</observation>

```

3.60 Infection-Type Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.139 (closed)]

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Release 1 - US Realm

Table 276: Infection-Type Observation Contexts

Contained By:	Contains:
Infection Details Section in a BSI Report (required)	Bloodstream Infection Evidence Type Observation (optional)
Infection Details Section in a UTI Report (required)	Secondary Bloodstream Infection Observation (optional)
Infection Details Section in an SSI Report (V2) (required)	Infection Condition Observation (optional)
Infection Details Section in a VAE Report (required)	Occasion of HAI Detection Observation (optional)
Infection Details in Late Onset Sepsis Report (required)	Criteria of Diagnosis Organizer (required)

The Infection-Type Observation is used in all infection reports. It is an assertion of the infection type, and contains entryRelationships to record the “criteria”—the information used to arrive at a diagnosis of the infection type.

The value of the id element must be globally unique and need not be an identifier used outside the document. Its function within the document is to identify this infection as being the same as that recorded in the Infection Contributed to Death Observation, if present.

Table 277: Infection-Type Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139)					
@classCode	1..1	SHALL		86-21181	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21182	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21183	false
templateId	1..1	SHALL		86-28251	
@root	1..1	SHALL		86-28252	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-21239	
@root	1..1	SHALL		86-21240	2.16.840.1.113883.10.20.5.6.139
id	1..1	SHALL		86-21184	
code	1..1	SHALL		86-21185	
@code	1..1	SHALL		86-21186	ASSERTION
@codeSystem	1..1	SHALL		86-28186	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-21187	
@code	1..1	SHALL		86-21188	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		86-21189	
low	1..1	SHALL		86-28190	
value	1..1	SHALL	CD	86-21190	urn:oid:2.16.840.1.113883.13.20 (NHSNInfectionTypeCode)
entryRelationship	1..1	SHALL		86-21192	
@typeCode	1..1	SHALL		86-21193	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SPRT
organizer	1..1	SHALL		86-21194	Criteria of Diagnosis Organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.180)
entryRelationship	0..1	MAY		86-23217	
@typeCode	1..1	SHALL		86-23218	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		86-23219	Infection Condition Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.135)
entryRelationship	0..1	MAY		86-23221	
@typeCode	1..1	SHALL		86-23222	urn:oid:2.16.840.1.113883.5.1

XPath	Card.	Verb	Data Type	CONF#	Value
					002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		86-23223	Secondary Bloodstream Infection Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.160)
entryRelationship	0..1	MAY		86-23225	
@typeCode	1..1	SHALL		86-23226	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		86-23227	Bloodstream Infection Evidence Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.114)
entryRelationship	0..1	MAY		86-23229	
@typeCode	1..1	SHALL		86-23230	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		86-23231	Occasion of HAI Detection Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.144)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21181).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21182).
4. **SHALL** contain exactly one [1..1] @negationInd="false" (CONF:86-21183).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-28251) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28252).
6. **SHALL** contain exactly one [1..1] templateId (CONF:86-21239) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.139" (CONF:86-21240).
7. **SHALL** contain exactly one [1..1] id (CONF:86-21184).
8. **SHALL** contain exactly one [1..1] code (CONF:86-21185).
 - a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21186).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28186).

9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21187).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21188).
10. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-21189).
 - a. This **effectiveTime** **SHALL** contain exactly one [1..1] **low** (CONF:86-28190).
11. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"**, where the code **SHALL** be selected from ValueSet [NHSNInfectionTypeCode](#) urn:oid:2.16.840.1.113883.13.20 **DYNAMIC** (CONF:86-21190).
12. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:86-21192) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SPRT"** Supports (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-21193).
 - b. **SHALL** contain exactly one [1..1] [Criteria of Diagnosis Organizer](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.180) (CONF:86-21194).
13. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:86-23217) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-23218).
 - b. **SHALL** contain exactly one [1..1] [Infection Condition Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.135) (CONF:86-23219).
 - c. If the report is a Ventilator Associated Event (VAE) Report, an HAI Surgical Site Infection Report (SSI), an HAI Urinary Tract Infection Numerator Report (UTI) or a Late Onset Sepsis/Meningitis Event (LOS) Report then an **entryRelationship** element **SHALL** be present containing an Infection Condition Observation (CONF:86-23220).
14. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:86-23221) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-23222).
 - b. **SHALL** contain exactly one [1..1] [Secondary Bloodstream Infection Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.160) (CONF:86-23223).
 - c. If the report is a Ventilator Associated Event (VAE) Report, an HAI Surgical Site Infection Report (SSI) or an HAI Urinary Tract Infection Numerator Report (UTI) then, an **entryRelationship** element **SHALL** be present containing a Secondary Bloodstream Infection Observation (CONF:86-23224).
15. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:86-23225) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-23226).
 - b. **SHALL** contain exactly one [1..1] [Bloodstream Infection Evidence Type Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.114) (CONF:86-23227).
 - c. If the report is a BSI Report, an **entryRelationship** element **SHALL** be present containing a Bloodstream Infection Evidence Type Observation (CONF:86-23228).

16. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:86-23229) such that it
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-23230).
 - SHALL** contain exactly one [1..1] Occasion of HAI Detection Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.144) (CONF:86-23231).
 - If the report is an SSI Report, an entryRelationship element **SHALL** be present containing an Occasion of HAI Detection Observation (CONF:86-23232).

Table 278: NHSNInfectionTypeCode

Value Set: NHSNInfectionTypeCode urn:oid:2.16.840.1.113883.13.20 (Clinical Focus: NHSN surveillance reporting: Type of infection for reporting NHSN healthcare-associated events),(Data Element Scope: A coded observation value describing the type of infection.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.20/expansion			
Code	Code System	Code System OID	Print Name
128116006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Infectious disease of nervous system (disorder)
128402005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Infectious disease of cardiovascular system (disorder)
1792-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Multi-drug resistant organism (MDRO) infection
1795-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	C. difficile-associated disease (CDAD) infection
1796-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Reproductive tract infection
1797-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Infection of the ear, eyes, nose, or throat
1798-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Bone or joint infection
19824006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Infection of skin and/or subcutaneous tissue (disorder)
2340-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Ventilator-associated event (VAE)
276674008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Neonatal meningitis (disorder)
...			

Figure 106: Infection-Type Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Infection Type Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.139"/>
  <!-- UUID for the infection being reported-->
  <id root="2.16.840.1.113883.3.117.1.1.5.2.1.1.5" extension="21987654321"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="20080807" />
  </effectiveTime>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    code="431193003"
    displayName="Blood Stream Infection"/>
  <!-- Criteria of Diagnosis Organizer -->
  <entryRelationship typeCode="SPRT">
    <organizer classCode="CLUSTER" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.5.6.180"/>
      ...
    </organizer>
  </entryRelationship>
  ...
  <!-- If infection report is NOT a BSI Report, the following two observations are
    required. If an SSI Report, an Occasion of HAI Detection Observation is
    ALSO required.
    If a BSI Report, a Bloodstream Infection Evidence Type Observation is required. -->
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- HAI Infection Condition Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.135"/>
      ...
    </observation>
  </entryRelationship>

  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- HAI Secondary Bloodstream Infection Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.160"/>
      ...
    </observation>
  </entryRelationship>
</observation>
```

3.61 Infection-Type Observation in an OPC SSI Event

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.263:2019-04-01 (closed)]

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Table 279: Infection-Type Observation in an OPC SSI Event Contexts

Contained By:	Contains:
Infection Details Section in an OPC SSI Report (required)	Infection Condition Observation (required) Criteria of Diagnosis Organizer (required) SSI Detection Method (required)

The Infection-Type Observation is used in OPC SSI infection reports. It is an assertion of the infection type, and contains entryRelationships to record the “criteria”—the information used to arrive at a diagnosis of the infection type.

Table 280: Infection-Type Observation in an OPC SSI Event Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.263:2019-04-01)					
@classCode	1..1	SHALL		4395-30865	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		4395-30866	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		4395-30867	false
templateId	1..1	SHALL		4395-30855	
@root	1..1	SHALL		4395-30875	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		4395-30864	
@root	1..1	SHALL		4395-30884	2.16.840.1.113883.10.20.5.6.263
@extension	1..1	SHALL		4395-30885	2019-04-01
id	1..1	SHALL		4395-30868	
code	1..1	SHALL		4395-30850	
@code	1..1	SHALL		4395-30869	ASSERTION
@codeSystem	1..1	SHALL		4395-30870	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		4395-30851	
@code	1..1	SHALL		4395-30871	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		4395-30852	
low	1..1	SHALL		4395-30872	
value	1..1	SHALL	CD	4395-30873	urn:oid:2.16.840.1.113883.13.20 (NHSNInfectionTypeCode)
entryRelationship	1..1	SHALL		4395-30853	
@typeCode	1..1	SHALL		4395-30874	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SPRT
organizer	1..1	SHALL		4395-30854	Criteria of Diagnosis Organizer (identifier: urn:oid:2.16.840.1.113883.10.

XPath	Card.	Verb	Data Type	CONF#	Value
					20.5.6.180
entryRelationship	1..1	SHALL		4395-30856	
@typeCode	1..1	SHALL		4395-30876	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		4395-30857	Infection Condition Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.135)
entryRelationship	1..1	SHALL		4395-30862	
@typeCode	1..1	SHALL		4395-30882	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		4395-30863	SSI Detection Method (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.261:2019-04-01)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4395-30865).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4395-30866).
4. **SHALL** contain exactly one [1..1] **@negationInd**="false" (CONF:4395-30867).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30855) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:4395-30875).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30864) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.263" (CONF:4395-30884).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30885).
7. **SHALL** contain exactly one [1..1] **id** (CONF:4395-30868).
8. **SHALL** contain exactly one [1..1] **code** (CONF:4395-30850).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:4395-30869).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4395-30870).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4395-30851).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:4395-30871).
- 10. **SHALL** contain exactly one [1..1] effectiveTime (CONF:4395-30852).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] low (CONF:4395-30872).
- 11. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHALL** be selected from ValueSet [NHSNInfectionTypeCode](#) urn:oid:2.16.840.1.113883.13.20 **DYNAMIC** (CONF:4395-30873).
- 12. **SHALL** contain exactly one [1..1] entryRelationship (CONF:4395-30853) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="SPRT" Supports (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:4395-30874).
 - b. **SHALL** contain exactly one [1..1] [Criteria of Diagnosis Organizer](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.180) (CONF:4395-30854).
- 13. **SHALL** contain exactly one [1..1] entryRelationship (CONF:4395-30856) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4395-30876).
 - b. **SHALL** contain exactly one [1..1] [Infection Condition Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.135) (CONF:4395-30857).
- 14. **SHALL** contain exactly one [1..1] entryRelationship (CONF:4395-30862) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4395-30882).
 - b. **SHALL** contain exactly one [1..1] [SSI Detection Method](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.261:2019-04-01) (CONF:4395-30863).

Figure 107: Infection-Type Observation in an OPC SSI Event Example

```

<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- [C-CDA R1.1] Problem Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" />
  <!-- [HAI R1] Infection-Type Observation in an OPC SSI Event-->
  <templateId root="2.16.840.1.113883.10.20.5.6.263" extension="2019-04-01"/>
  <id root="2.16.840.1.113883.3.117.1.1.5.2.1.1.5" extension="21987654321" />
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION" />
  <statusCode code="completed" />
  <!-- Record the date when the first element used to meet the SSI infection
        criterion occurred for the first time during the surveillance period.
        Synonyms: infection date, date of infection. -->
  <effectiveTime>
    <low value="20180806" />
  </effectiveTime>
  <!-- Infection Type -->
  <value xsi:type="CD" codeSystem="2.16.840.1.113883.6.96"
        code="433202001"
        displayName="Surgical Site Infection" />
  <!-- [HAI R1] Criteria of Diagnosis Organizer -->
  <entryRelationship typeCode="SPRT">
    <organizer classCode="CLUSTER" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.5.6.180" />
      ...
    </organizer>
    <!-- End of Criteria of Diagnosis Organizer -->
  </entryRelationship>
  <!-- Infection Condition Observation (SSI Level)-->
  <entryRelationship typeCode="REFR">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [C-CDA R1.1] Problem Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" />
      <!-- [HAI R1] Infection Condition Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.135" />
      ...
    </observation>
  </entryRelationship>
  <!-- SSI Detection Method -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- [HAI R3D4] SSI Detection Method -->
      <templateId root="2.16.840.1.113883.10.20.5.6.261" extension="2019-04-01" />
      ...
    </observation>
  </entryRelationship>
</observation>

```

3.62 Inpatient Psychiatric (IPF) Unit in Facility

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.272:2022-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection Reports Release 4, STU 2 - US Realm

Table 281: Inpatient Psychiatric (IPF) Unit in Facility Contexts

Contained By:	Contains:
Summary Data Section (POM) (V3) (optional)	

This observation records whether the facility contains a CMS-certified Inpatient Psychiatric (IPF) unit. When the facility does contain an IPF unit, set the value of @negationInd to false. When the facility does not contain an IPF unit, set the value of @negationInd to true.

Table 282: Inpatient Psychiatric (IPF) Unit in Facility Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.272:2022-04-01)					
@classCode	1..1	SHALL		4523-31019	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		4523-31020	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		4523-31021	
templateId	1..1	SHALL		4523-31008	
@root	1..1	SHALL		4523-31012	2.16.840.1.113883.10.20.5.6.272
@extension	1..1	SHALL		4523-31013	2022-04-01
code	1..1	SHALL		4523-31009	
@code	1..1	SHALL		4523-31014	ASSERTION
@codeSystem	1..1	SHALL		4523-31015	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		4523-31011	
@code	1..1	SHALL		4523-31018	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	4523-31010	
@code	1..1	SHALL		4523-31016	1265-8
@codeSystem	1..1	SHALL		4523-31017	urn:oid:2.16.840.1.113883.6.259 (HSLOC) = 2.16.840.1.113883.6.259

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4523-31019).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4523-31020).

When the facility does contain an IPF unit, set the value of **@negationInd** to false. When the facility does not contain an IPF unit, set the value of **@negationInd** to true.

3. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:4523-31021).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4523-31008) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.272" (CONF:4523-31012).

- b. **SHALL** contain exactly one [1..1] **@extension**="2022-04-01" (CONF:4523-31013).
- 5. **SHALL** contain exactly one [1..1] **code** (CONF:4523-31009).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:4523-31014).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4523-31015).
- 6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4523-31011).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4523-31018).
- 7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:4523-31010).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="1265-8" Inpatient Psychiatric Facility Unit(s) (CONF:4523-31016).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.259" (CodeSystem: HSLOC urn:oid:2.16.840.1.113883.6.259) (CONF:4523-31017).

Figure 108: Inpatient Psychiatric (IPF) Unit in Facility

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<!-- When the facility does contain an IPF unit, set the value of @negationInd to false.
When the facility does not contain an IPF unit, set the value of @negationInd to true. -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- Inpatient Psychiatric (IPF) Unit in Facility -->
  <templateId root="2.16.840.1.113883.10.20.5.6.272"
    extension="2022-04-01"/>
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION" />
  <statusCode code="completed" />
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.259"
    codeSystemName="HSLOC"
    code="1265-8"
    displayName="Inpatient Psychiatric Facility Unit(s)" />
</observation>

```

3.63 Inpatient Rehabilitation (IRF) Unit in Facility

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.271:2022-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection Reports Release 4, STU 2 - US Realm

Table 283: Inpatient Rehabilitation (IRF) Unit in Facility Contexts

Contained By:	Contains:
Summary Data Section (POM) (V3) (optional)	

This observation records whether the facility contains a CMS-certified Inpatient Rehabilitation (IRF) unit.

When the facility does contain an IRF unit, set the value of @negationInd to false. When the facility does not contain an IRF unit, set the value of @negationInd to true.

Table 284: Inpatient Rehabilitation (IRF) Unit in Facility Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.271:2022-04-01)					
@classCode	1..1	SHALL		4523-31004	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		4523-31005	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		4523-31007	
templateId	1..1	SHALL		4523-30994	
@root	1..1	SHALL		4523-30998	2.16.840.1.113883.10.20.5.6.271
@extension	1..1	SHALL		4523-30999	2022-04-01
code	1..1	SHALL		4523-30995	
@code	1..1	SHALL		4523-31000	ASSERTION
@codeSystem	1..1	SHALL		4523-31001	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		4523-30997	
@code	1..1	SHALL		4523-31006	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	4523-30996	
@code	1..1	SHALL		4523-31002	1264-1
@codeSystem	1..1	SHALL		4523-31003	urn:oid:2.16.840.1.113883.6.259 (HSLOC) = 2.16.840.1.113883.6.259

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4523-31004).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4523-31005).

When the facility does contain an IRF unit, set the value of @negationInd to false. When the facility does not contain an IRF unit, set the value of @negationInd to true.

3. **SHALL** contain exactly one [1..1] @negationInd (CONF:4523-31007).
4. **SHALL** contain exactly one [1..1] templateId (CONF:4523-30994) such that it

- a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.271" (CONF:4523-30998).
 - b. **SHALL** contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-30999).
5. **SHALL** contain exactly one [1..1] code (CONF:4523-30995).
 - a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:4523-31000).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4523-31001).
6. **SHALL** contain exactly one [1..1] statusCode (CONF:4523-30997).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4523-31006).
7. **SHALL** contain exactly one [1..1] value with @xsi:type="CD" (CONF:4523-30996).
 - a. This value **SHALL** contain exactly one [1..1] @code="1264-1" Inpatient Rehabilitation Facility Unit(s) (CONF:4523-31002).
 - b. This value **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.259" (CodeSystem: HSLOC urn:oid:2.16.840.1.113883.6.259) (CONF:4523-31003).

Figure 109: Inpatient Rehabilitation (IRF) Unit in Facility

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<!-- When the facility does contain an IRF unit, set the value of @negationInd to false.
When the facility does not contain an IRF unit, set the value of @negationInd to true. -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- Inpatient Rehabilitation (IRF) Unit in Facility -->
  <templateId root="2.16.840.1.113883.10.20.5.6.271"
    extension="2022-04-01"/>
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION" />
  <statusCode code="completed" />
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.259"
    codeSystemName="HSLOC"
    code="1264-1"
    displayName="Inpatient Rehabilitation Facility Unit(s)" />
</observation>

```

3.64 ISBT Product Code Summary Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01 (closed)]

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Release 3, DSTU 1.1 - US Realm

Table 285: ISBT Product Code Summary Observation (V2) Contexts

Contained By:	Contains:
Blood Product Usage Summary Observation (V2) (optional) Pathogen Reduced Apheresis Platelet Usage Summary Observation (optional)	

This observation represents the number of units transfused, aliquots transfused, or total discards for each group of blood product split out by type, collection method, and modification or pathogen-reduction methodology, broken down by ISBT (International Society for Blood Transfusion) Product Code.

Table 286: ISBT Product Code Summary Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01)					
@classCode	1..1	SHALL		3247-30724	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3247-30725	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3247-30716	
@root	1..1	SHALL		3247-30719	2.16.840.1.113883.10.20.5.6.238
@extension	1..1	SHALL		3247-30720	2016-08-01
code	1..1	SHALL		3247-30717	
statusCode	1..1	SHALL		3247-30718	
@code	1..1	SHALL		3247-30722	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	INT	3247-30723	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-30724).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-30725).

3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3247-30716) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.238" (CONF:3247-30719).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2016-08-01" (CONF:3247-30720).

The value sets bound to the code element can be sourced from NHSN.

4. **SHALL** contain exactly one [1..1] **code** (CONF:3247-30717).
 - a. If the product specified in the containing Blood Product Usage Summary Observation is Whole Blood (3467-8, 3468-6, 3469-4), then valueSet NHSN Whole Blood Total (urn:oid:2.16.840.1.114222.4.11.7292) **SHALL** be used (CONF:3247-30726).
 - b. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Whole Blood Derived/Not irradiated or Leukocyte Reduced (3471-0, 3472-8, 3473-6), then valueSet NHSN Red Blood Cells/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7294) **SHALL** be used (CONF:3247-30727).
 - c. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Whole Blood Derived/Irradiated (3403-3, 3404-1, 3474-4), then valueSet NHSN Red Blood Cells/Whole Blood Derived/Irradiated (urn:oid:2.16.840.1.114222.4.11.7295) **SHALL** be used (CONF:3247-30765).
 - d. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Whole Blood Derived/Irradiated and Leukocyte Reduced (3407-4, 3408-2, 3476-9), then valueSet NHSN Red Blood Cells/Whole Blood Derived/Irradiated and Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7297) **SHALL** be used (CONF:3247-30766).
 - e. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Apheresis/Not Irradiated or Leukocyte Reduced (3478-5, 3479-3, 3480-1), then valueSet NHSN Red Blood Cells/Apheresis/Not Irradiated or Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7299) **SHALL** be used (CONF:3247-30768).
 - f. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Apheresis/Irradiated (3411-6, 3412-4, 3481-9), then valueSet NHSN Red Blood Cells/Apheresis/Irradiated (urn:oid:2.16.840.1.114222.4.11.7300) **SHALL** be used (CONF:3247-30742).
 - g. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Apheresis/Leukocyte Reduced (3413-2, 3414-0, 3482-7), then valueSet NHSN Red Blood Cells/Apheresis/Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7301) **SHALL** be used (CONF:3247-30743).
 - h. If the product specified in the containing Blood Product Usage Summary Observation is Plasma/Apheresis/Riboflavin-Treated (3535-2, 3536-0, 3537-8), then valueSet NHSN Plasma/Apheresis/Riboflavin-Treated (urn:oid:2.16.840.1.114222.4.11.7327) **SHALL** be used (CONF:3247-30744).
 - i. If the product specified in the containing Blood Product Usage Summary Observation is Plasma/Apheresis/Psoralen-Treated (3532-9, 3533-7, 3534-5), then valueSet NHSN Plasma/Apheresis/Psoralen-Treated (urn:oid:2.16.840.1.114222.4.11.7326) **SHALL** be used (CONF:3247-30745).

- j. If the product specified in the containing Blood Product Usage Summary Observation is Plasma/Whole Blood Derived/Riboflavin-Treated (3526-1, 3527-9, 3528-7), then valueSet NHSN Plasma/Whole Blood Derived/Riboflavin-Treated (urn:oid:2.16.840.1.114222.4.11.7324) **SHALL** be used (CONF:3247-30746).
- k. If the product specified in the containing Blood Product Usage Summary Observation is Plasma/Whole Blood Derived/Psoralein-Treated (3523-8, 3524-6, 3525-3), then valueSet NHSN Plasma/Whole Blood Derived/Psoralein-Treated (urn:oid:2.16.840.1.114222.4.11.7323) **SHALL** be used (CONF:3247-30747).
- l. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Riboflavin-Treated (3517-0, 3518-8, 3519-6), then valueSet NHSN Platelets/Apheresis/Riboflavin-Treated (urn:oid:2.16.840.1.114222.4.11.7321) **SHALL** be used (CONF:3247-30748).
- m. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Psoralein-Treated (3514-7, 3515-4, 3516-2), then valueSet NHSN Platelets/Apheresis/Psoralein-Treated (urn:oid:2.16.840.1.114222.4.11.7320) **SHALL** be used (CONF:3247-30749).
- n. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Whole Blood Derived/Riboflavin-Treated (3517-0, 3518-8), then valueSet NHSN Platelets/Whole Blood Derived/Riboflavin-Treated (urn:oid:2.16.840.1.114222.4.11.7318) **SHALL** be used (CONF:3247-30750).
- o. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Whole Blood Derived/Psoralein-Treated (3505-5, 3507-1), then valueSet NHSN Platelets/Whole Blood Derived/Psoralein-Treated (urn:oid:2.16.840.1.114222.4.11.7317) **SHALL** be used (CONF:3247-30751).
- p. If the product specified in the containing Blood Product Usage Summary Observation is Cryoprecipitate (3562-6, 3563-4), then valueSet NHSN Cryoprecipitate (urn:oid:2.16.840.1.114222.4.11.7315) **SHALL** be used (CONF:3247-30752).
- q. If the product specified in the containing Blood Product Usage Summary Observation is Plasma/Apheresis/Total (3529-5, 3530-3, 3531-1), then valueSet NHSN Plasma/Apheresis/Total (urn:oid:2.16.840.1.114222.4.11.7314) **SHALL** be used (CONF:3247-30753).
- r. If the product specified in the containing Blood Product Usage Summary Observation is Plasma/Whole Blood Derived/Total (3520-4, 3521-2, 3522-0), then valueSet NHSN Plasma/Whole Blood Derived/Total (urn:oid:2.16.840.1.114222.4.11.7313) **SHALL** be used (CONF:3247-30754).
- s. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Irradiated or Leukocyte Reduced (3427-2, 3428-0, 3496-7), then valueSet NHSN Platelets/Apheresis/Irradiated or Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7312) **SHALL** be used (CONF:3247-30755).
- t. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Leukocyte Reduced (3425-6, 3426-4, 3495-9), then valueSet NHSN Platelets/Apheresis/Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7311) **SHALL** be used (CONF:3247-30756).
- u. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Irradiated (3423-1, 3424-9, 3494-2), then

valueSet NHSN Platelets/Apheresis/Irradiated
(urn:oid:2.16.840.1.114222.4.11.7310) **SHALL** be used (CONF:3247-30757).

- v. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Not Irradiated or Leukocyte Reduced (3491-8, 3492-6, 3493-4), then valueSet NHSN Platelets/Apheresis/Not Irradiated or Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7309) **SHALL** be used (CONF:3247-30758).
- w. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Whole Blood Derived/Irradiated and Leukocyte Reduced (3420-7, 3489-2), then valueSet NHSN Platelets/Whole Blood Derived/Irradiated and Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7307) **SHALL** be used (CONF:3247-30759).
- x. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Whole Blood Derived/Leukocyte Reduced (3419-9, 3488-4), then valueSet NHSN Platelets/Whole Blood Derived/Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7306) **SHALL** be used (CONF:3247-30760).
- y. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Whole Blood Derived/Irradiated (3418-1, 3487-6), then valueSet NHSN Platelets/Whole Blood Derived/Irradiated (urn:oid:2.16.840.1.114222.4.11.7305) **SHALL** be used (CONF:3247-30761).
- z. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (3485-0, 3486-8), then valueSet NHSN Platelets/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7304) **SHALL** be used (CONF:3247-30762).
- aa. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Apheresis/Irradiated or Leukocyte Reduced (3415-7, 3416-5, 3483-5), then valueSet NHSN Red Blood Cells/Apheresis/Irradiated or Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7302) **SHALL** be used (CONF:3247-30763).
- bb. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Whole Blood Derived/Leukocyte Reduced (3405-8, 3406-6, 3475-1), then valueSet NHSN Red Blood Cells/Whole Blood Derived/Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7296) **SHALL** be used (CONF:3247-30767).
- cc. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Whole Blood Derived/S-303-Treated (3547-7, 3548-5, 3549-3), then valueSet NHSN Red Blood Cells/Whole Blood Derived/S-303-Treated (urn:oid:2.16.840.1.114222.4.11.7498) **SHALL** be used (CONF:3247-30769).
- dd. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Whole Blood Derived/Riboflavin-Treated (3550-1, 3551-9, 3552-7), then valueSet NHSN Red Blood Cells/Whole Blood Derived/Riboflavin-Treated (urn:oid:2.16.840.1.114222.4.11.7499) **SHALL** be used (CONF:3247-30770).
- ee. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Apheresis/S-303-Treated (3556-8, 3557-6, 3558-4),

- then valueSet NHSN Red Blood Cells/Apheresis/S-303-Treated (urn:oid:2.16.840.1.114222.4.11.7500) **SHALL** be used (CONF:3247-30771).
- ff. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Apheresis/Riboflavin-Treated (3559-2, 3560-0, 3561-8), then valueSet NHSN Red Blood Cells/Apheresis/Riboflavin-Treated (urn:oid:2.16.840.1.114222.4.11.7501) **SHALL** be used (CONF:3247-30772).
 - gg. If the product specified in the containing Blood Product Usage Summary Observation is Cryoprecipitate/Psoralein-Treated (3564-2, 3565-9), then valueSet NHSN Cryoprecipitate/Psoralein-Treated (urn:oid:2.16.840.1.114222.4.11.7502) **SHALL** be used (CONF:3247-30773).
 - hh. If the product specified in the containing Blood Product Usage Summary Observation is Cryoprecipitate/Riboflavin-Treated (3566-7, 3567-5), then valueSet NHSN Cryoprecipitate/Riboflavin-Treated (urn:oid:2.16.840.1.114222.4.11.7503) **SHALL** be used (CONF:3247-30774).
 - ii. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Psoralein-Treated and In Plasma (3568-3, 3569-1, 3570-9), then valueSet NHSN Platelets/Apheresis/Psoralein-Treated and In Plasma (urn:oid:2.16.840.1.114222.4.11.7504) **SHALL** be used (CONF:3247-30775).
 - jj. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Psoralein-Treated and In Platelet Additive Solution (3571-7, 3572-5, 3573-3), then valueSet NHSN Platelets/Apheresis/Psoralein-Treated and In Platelet Additive Solution (urn:oid:2.16.840.1.114222.4.11.7505) **SHALL** be used (CONF:3247-30776).
 - kk. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Riboflavin-Treated and In Plasma (3574-1, 3575-8, 3576-6), then valueSet NHSN Platelets/Apheresis/Riboflavin-Treated and In Plasma (urn:oid:2.16.840.1.114222.4.11.7506) **SHALL** be used (CONF:3247-30777).
 - ll. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Riboflavin-Treated and In Platelet Additive Solution (3577-4, 3578-2, 3579-0), then valueSet NHSN Platelets/Apheresis/Riboflavin-Treated and In Platelet Additive Solution (urn:oid:2.16.840.1.114222.4.11.7507) **SHALL** be used (CONF:3247-30778).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3247-30718).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3247-30722).
 6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="INT"** (CONF:3247-30723).

Table 287: NHSN Whole Blood Total (1)

Value Set: NHSN Whole Blood Total (1) urn:oid:2.16.840.1.114222.4.11.7292 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for Whole Blood Total reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E0009	ISBT-128	urn:oid:2.16.840.1.113883.6.18	WHOLE BLOOD CPD/450mL/refg
E0013	ISBT-128	urn:oid:2.16.840.1.113883.6.18	WHOLE BLOOD CPD/450mL/refg Open
...			

Table 288: NHSN Red Blood Cells/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (3)

Value Set: NHSN Red Blood Cells/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (3) urn:oid:2.16.840.1.114222.4.11.7294 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Red Blood Cells/Whole Blood Derived/Not Irradiated or Leukocyte Reduced reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E0142	ISBT-128	urn:oid:2.16.840.1.113883.6.18	RED BLOOD CELLS ACD-A/450mL/refg
E0146	ISBT-128	urn:oid:2.16.840.1.113883.6.18	RED BLOOD CELLS ACD-B/450mL/refg
...			

Table 289: NHSN Red Blood Cells/Whole Blood Derived/Irradiated (4)

Value Set: NHSN Red Blood Cells/Whole Blood Derived/Irradiated (4) urn:oid:2.16.840.1.114222.4.11.7295 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Red Blood Cells/Whole Blood Derived/Irradiated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E0155	ISBT-128	urn:oid:2.16.840.1.113883.6.18	RED BLOOD CELLS CPD/450mL/ref g Open Irradiated
E0157	ISBT-128	urn:oid:2.16.840.1.113883.6.18	RED BLOOD CELLS CPD/450mL/ref g Open Irradiated Plas ma added
...			

Table 290: NHSN Red Blood Cells/Whole Blood Derived/Irradiated and Leukocyte Reduced (6)

Value Set: NHSN Red Blood Cells/Whole Blood Derived/Irradiated and Leukocyte Reduced (6) urn:oid:2.16.840.1.114222.4.11.7297 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Red Blood Cells/Whole Blood Derived/Irradiated and Leukocyte Reduced reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E0156	ISBT-128	urn:oid:2.16.840.1.113883.6.18	RED BLOOD CELLS CPD/450mL/ref g Open Irradiated ResL eu:<5E6
E0162	ISBT-128	urn:oid:2.16.840.1.113883.6.18	RED BLOOD CELLS CPD/450mL/ref g Irradiated ResLeu:<5 E6
...			

Table 291: NHSN Red Blood Cells/Whole Blood Derived/Leukocyte Reduced (5)

Value Set: NHSN Red Blood Cells/Whole Blood Derived/Leukocyte Reduced (5) urn:oid:2.16.840.1.114222.4.11.7296 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Red Blood Cells/Whole Blood Derived/Leukocyte Reduced reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E0158	ISBT-128	urn:oid:2.16.840.1.113883.6.18	RED BLOOD CELLS CPD/450mL/ref g Open ResLeu:<5E6
E0164	ISBT-128	urn:oid:2.16.840.1.113883.6.18	RED BLOOD CELLS CPD/450mL/ref g ResLeu:<5E6
...			

Table 292: NHSN Red Blood Cells/Apheresis/Not Irradiated or Leukocyte Reduced (8)

Value Set: NHSN Red Blood Cells/Apheresis/Not Irradiated or Leukocyte Reduced (8) urn:oid:2.16.840.1.114222.4.11.7299 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Red Blood Cells/Apheresis/Not Irradiated or Leukocyte Reduced reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E0605	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis RED BLOOD CELLS CP2D>AS3/XX/refg
E0624	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis RED BLOOD CELLS CP2D>AS3/XX/refg Open
...			

Table 293: NHSN Red Blood Cells/Apheresis/Irradiated (9)

Value Set: NHSN Red Blood Cells/Apheresis/Irradiated (9) urn:oid:2.16.840.1.114222.4.11.7300 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Red Blood Cells/Apheresis/Irradiated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E0625	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis RED BLOOD CELLS CP2D>AS3/XX/ refg Open Irradiated
E0635	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis RED BLOOD CELLS CP2D>AS3/XX/ refg Open Irradiated S upernat rem
...			

Table 294: NHSN Red Blood Cells/Apheresis/Leukocyte Reduced (10)

Value Set: NHSN Red Blood Cells/Apheresis/Leukocyte Reduced (10) urn:oid:2.16.840.1.114222.4.11.7301 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Red Blood Cells/Apheresis/Leukocyte Reduced reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E0643	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis RED BLOOD CELLS CP2D>AS3/XX/ refg Open ResLeu:<5E6
E0644	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis RED BLOOD CELLS CP2D>AS3/XX/ refg Open ResLeu:<5E6 Supernat rem
...			

Table 295: NHSN Plasma/Apheresis/Riboflavin-Treated (36)

Value Set: NHSN Plasma/Apheresis/Riboflavin-Treated (36) urn:oid:2.16.840.1.114222.4.11.7327 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Plasma/Apheresis/Riboflavin-Treated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E6544	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis FRESH FROZEN PLASMA ACD-A/XX/ <-25C Riboflavin-treated
E6545	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis FRESH FROZEN PLASMA NaCitrate/XX/ <-25C Frozen <=6h Riboflavin-treated
...			

Table 296: NHSN Plasma/Apheresis/Psoralen-Treated (35)

Value Set: NHSN Plasma/Apheresis/Psoralen-Treated (35) urn:oid:2.16.840.1.114222.4.11.7326 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Plasma/Apheresis/Psoralen-Treated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E4984	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis FRESH FROZEN PLASMA CPD-50/XX/ <-30C Psoralen-treated
E5732	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis FRESH FROZEN PLASMA CPD-50/XX/ <-25 C 1st container Psoralen-treated
...			

Table 297: NHSN Plasma/Whole Blood Derived/Riboflavin-Treated (33)

Value Set: NHSN Plasma/Whole Blood Derived/Riboflavin-Treated (33) urn:oid:2.16.840.1.114222.4.11.7324 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Plasma/Whole Blood Derived/Riboflavin-Treated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E6542	ISBT-128	urn:oid:2.16.840.1.113883.6.18	FRESH FROZEN PLASMA CPDA-1/XX/ <- 25C Riboflavin-treated
E6543	ISBT-128	urn:oid:2.16.840.1.113883.6.18	PLASMA CPDA-1/XX/ <- 25C Cryo reduced Riboflavin- treated
...			

Table 298: NHSN Plasma/Whole Blood Derived/Psoralen-Treated (32)

Value Set: NHSN Plasma/Whole Blood Derived/Psoralen-Treated (32) urn:oid:2.16.840.1.114222.4.11.7323 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Plasma/Whole Blood Derived/Psoralen-Treated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E4983	ISBT-128	urn:oid:2.16.840.1.113883.6.18	POOLED PLASMA CPD/450mL/ < -30C 2 units Psoralen- treated
E5735	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Liquid POOLED PLASMA CPD/450mL/r efg 2 units Psoralen- treated
...			

Table 299: NHSN Platelets/Apheresis/Riboflavin-Treated (30)

Value Set: NHSN Platelets/Apheresis/Riboflavin-Treated (30) urn:oid:2.16.840.1.114222.4.11.7321 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Platelets/Apheresis/Riboflavin-Treated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E5748	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS ACD- A/XX/20- 24C ResLeu:<5E6 Ribof lavin-treated
E5749	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS ACD- A/XX/20- 24C ResLeu:<5E6 1st container Riboflavin- treated
...			

Table 300: NHSN Platelets/Apheresis/Psoralen-Treated (29)

Value Set: NHSN Platelets/Apheresis/Psoralen-Treated (29) urn:oid:2.16.840.1.114222.4.11.7320 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Platelets/Apheresis/Psoralen-Treated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E4977	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS PAS- C/XX/20- 24C ResLeu:<1E6 1st container Approx 240 E9 plts Psoralen-treated
E4979	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS PAS- C/XX/20- 24C ResLeu:<1E6 2nd container Approx 240 E9 plts Psoralen-treated
...			

Table 301: NHSN Platelets/Whole Blood Derived/Riboflavin-Treated (27)

Value Set: NHSN Platelets/Whole Blood Derived/Riboflavin-Treated (27) urn:oid:2.16.840.1.114222.4.11.7318 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Platelets/Whole Blood Derived/Riboflavin-Treated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E5772	ISBT-128	urn:oid:2.16.840.1.113883.6.18	POOLED PLATELETS CPD/XX/2 0- 24C ResLeu:<1E6 Ribof lavin-treated
E5773	ISBT-128	urn:oid:2.16.840.1.113883.6.18	POOLED PLATELETS CPD/XX/2 0- 24C Irradiated ResLeu: <1E6 Riboflavin-treated
...			

Table 302: NHSN Platelets/Whole Blood Derived/Psoralein-Treated (26)

Value Set: NHSN Platelets/Whole Blood Derived/Psoralein-Treated (26) urn:oid:2.16.840.1.114222.4.11.7317 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Platelets/Whole Blood Derived/Psoralein-Treated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E4975	ISBT-128	urn:oid:2.16.840.1.113883.6.18	POOLED PLATELETS PAS- C/XX/20- 24C ResLeu:<1E6 Buffy coat plts prep Approx 240 E9 plts Psoralein- treated
E5297	ISBT-128	urn:oid:2.16.840.1.113883.6.18	POOLED PLATELETS CPD>PAS- C/XX/20- 24C ResLeu:<1E6 Buffy coat plts prep Approx 240 E9 plts Psoralein- treated
...			

Table 303: NHSN Cryoprecipitate (24)

Value Set: NHSN Cryoprecipitate (24) urn:oid:2.16.840.1.114222.4.11.7315 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Cryoprecipitate reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E3571	ISBT-128	urn:oid:2.16.840.1.113883.6.18	CRYOPRECIPITATE Non e/450mL/<=-18C
E3572	ISBT-128	urn:oid:2.16.840.1.113883.6.18	CRYOPRECIPITATE Non e/450mL/<=-18C Irradiated
...			

Table 304: NHSN Plasma/Apheresis/Total (23)

Value Set: NHSN Plasma/Apheresis/Total (23) urn:oid:2.16.840.1.114222.4.11.7314 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Plasma/Apheresis/Total reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E0829	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis FRESH FROZEN PLASMA ACD-B/XX/<=-18C
E0838	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis FRESH FROZEN PLASMA ACD-B/XX/<=-18C Irradiated
...			

Table 305: NHSN Plasma/Whole Blood Derived/Total (22)

Value Set: NHSN Plasma/Whole Blood Derived/Total (22) urn:oid:2.16.840.1.114222.4.11.7313 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Plasma/Whole Blood Derived/Total reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E0695	ISBT-128	urn:oid:2.16.840.1.113883.6.18	FRESH FROZEN PLASMA ACD-B/XX/≤-18C
E0698	ISBT-128	urn:oid:2.16.840.1.113883.6.18	FRESH FROZEN PLASMA ACD-B/XX/≤-18C Irradiated
...			

Table 306: NHSN Platelets/Apheresis/Irradiated or Leukocyte Reduced (21)

Value Set: NHSN Platelets/Apheresis/Irradiated or Leukocyte Reduced (21) urn:oid:2.16.840.1.114222.4.11.7312 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Platelets/Apheresis/Irradiated or Leukocyte Reduced reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E2983	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS ACD-A/XX/20-24C Open Irradiated ResLeu: <5E6
E2984	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS ACD-A/XX/20-24C Open Irradiated ResLeu: <5E6 Plasma reduced
...			

Table 307: NHSN Platelets/Apheresis/Leukocyte Reduced (20)

Value Set: NHSN Platelets/Apheresis/Leukocyte Reduced (20) urn:oid:2.16.840.1.114222.4.11.7311 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Platelets/Apheresis/Leukocyte Reduced reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E3014	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS ACD- A/XX/20- 24C Open ResLeu:<5E6
E3015	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS ACD- A/XX/20- 24C Open ResLeu:<5E6 Plasma reduced
...			

Table 308: NHSN Platelets/Apheresis/Irradiated (19)

Value Set: NHSN Platelets/Apheresis/Irradiated (19) urn:oid:2.16.840.1.114222.4.11.7310 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Platelets/Apheresis/Irradiated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E2982	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS ACD- A/XX/20- 24C Open Irradiated
E2999	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS ACD- A/XX/20- 24C Open Irradiated Plasma reduced
...			

Table 309: NHSN Platelets/Apheresis/Not Irradiated or Leukocyte Reduced (18)

Value Set: NHSN Platelets/Apheresis/Not Irradiated or Leukocyte Reduced (18) urn:oid:2.16.840.1.114222.4.11.7309 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Platelets/Apheresis/Not Irradiated or Leukocyte Reduced reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E2922	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS ACD- B/XX/refg
E2926	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS ACD- A/XX/refg
...			

Table 310: NHSN Platelets/Whole Blood Derived/Irradiated and Leukocyte Reduced (16)

Value Set: NHSN Platelets/Whole Blood Derived/Irradiated and Leukocyte Reduced (16) urn:oid:2.16.840.1.114222.4.11.7307 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Platelets/Whole Blood Derived/Irradiated and Leukocyte Reduced reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E2810	ISBT-128	urn:oid:2.16.840.1.113883.6.18	PLATELETS CPD/450m L/20- 24C Irradiated ResLeu: <8.3E5
E2811	ISBT-128	urn:oid:2.16.840.1.113883.6.18	PLATELETS CPD/450m L/20- 24C Irradiated ResLeu: <8.3E5 Plasma reduced
...			

Table 311: NHSN Platelets/Whole Blood Derived/Leukocyte Reduced (15)

Value Set: NHSN Platelets/Whole Blood Derived/Leukocyte Reduced (15) urn:oid:2.16.840.1.114222.4.11.7306 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Platelets/Whole Blood Derived/Leukocyte Reduced reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E2817	ISBT-128	urn:oid:2.16.840.1.113883.6.18	PLATELETS CPD/450m L/20-24C ResLeu:<8.3E5
E2818	ISBT-128	urn:oid:2.16.840.1.113883.6.18	PLATELETS CPD/450m L/20-24C ResLeu:<8.3E5 Plasma reduced
...			

Table 312: NHSN Platelets/Whole Blood Derived/Irradiated (14)

Value Set: NHSN Platelets/Whole Blood Derived/Irradiated (14) urn:oid:2.16.840.1.114222.4.11.7305 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Platelets/Whole Blood Derived/Irradiated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E2809	ISBT-128	urn:oid:2.16.840.1.113883.6.18	PLATELETS CPD/450m L/20-24C Irradiated
E2814	ISBT-128	urn:oid:2.16.840.1.113883.6.18	PLATELETS CPD/450m L/20-24C Irradiated Plasma reduced
...			

Table 313: NHSN Platelets/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (13)

Value Set: NHSN Platelets/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (13) urn:oid:2.16.840.1.114222.4.11.7304 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Platelets/Whole Blood Derived/Not Irradiated or Leukocyte Reduced reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E2790	ISBT-128	urn:oid:2.16.840.1.113883.6.18	PLATELETS CPD/450mL/refg
E2794	ISBT-128	urn:oid:2.16.840.1.113883.6.18	PLATELETS CPDA-1/450mL/refg
...			

Table 314: NHSN Red Blood Cells/Apheresis/Irradiated or Leukocyte Reduced (11)

Value Set: NHSN Red Blood Cells/Apheresis/Irradiated or Leukocyte Reduced (11) urn:oid:2.16.840.1.114222.4.11.7302 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Red Blood Cells/Apheresis/Irradiated or Leukocyte Reduced reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E0626	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis RED BLOOD CELLS CP2D>AS3/XX/refg Open Irradiated ResLeu:<5E6
E0627	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis RED BLOOD CELLS CP2D>AS3/XX/refg Open Irradiated ResLeu:<5E6 Supernat rem
...			

Table 315: NHSN Red Blood Cells/Whole Blood Derived/S-303-Treated

Value Set: NHSN Red Blood Cells/Whole Blood Derived/S-303-Treated urn:oid:2.16.840.1.114222.4.11.7498 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Red Blood Cells/Whole Blood Derived/Riboflavin-Treated reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
NA_RBC_WBD _S-303	ISBT-128	urn:oid:2.16.840.1.113883.6.18	NHSN Red Blood Cells/Whole Blood Derived/S-303-Treated: no codes available at this time please check with NHSN for updates

Table 316: NHSN Red Blood Cells/Whole Blood Derived/Riboflavin-Treated

Value Set: NHSN Red Blood Cells/Whole Blood Derived/Riboflavin-Treated urn:oid:2.16.840.1.114222.4.11.7499 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Red Blood Cells/Whole Blood Derived/S-303-Treated reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
NA_RBC_WBD _Riboflavin	ISBT-128	urn:oid:2.16.840.1.113883.6.18	NHSN Red Blood Cells/Whole Blood Derived/Riboflavin-Treated: no codes available at this time please check with NHSN for updates

Table 317: NHSN Red Blood Cells/Apheresis/S-303-Treated (41)

Value Set: NHSN Red Blood Cells/Apheresis/S-303-Treated (41) urn:oid:2.16.840.1.114222.4.11.7500 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Red Blood Cells/Apheresis/S-303-Treated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
NA_RBC_APH _S-303	ISBT-128	urn:oid:2.16.840.1.113883.6.18	NHSN Red Blood Cells/Apheresis/S-303-Treated: no codes available at this time please check with NHSN for updates

Table 318: NHSN Red Blood Cells/Apheresis/Riboflavin-Treated (42)

Value Set: NHSN Red Blood Cells/Apheresis/Riboflavin-Treated (42) urn:oid:2.16.840.1.114222.4.11.7501 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Red Blood Cells/Apheresis/Riboflavin-Treated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
NA_RBC_APH _Riboflavin	ISBT-128	urn:oid:2.16.840.1.113883.6.18	NHSN Red Blood Cells/Apheresis/Riboflavin-Treated: no codes available at this time please check with NHSN for any updates

Table 319: NHSN Cryoprecipitate/Psoralen-Treated (44)

Value Set: NHSN Cryoprecipitate/Psoralen-Treated (44) urn:oid:2.16.840.1.114222.4.11.7502 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.			
The ISBT blood product codes for NHSN Cryoprecipitate/Psoralen-Treated reporting, at the time of publication, are contained in this value set.			
A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E9288	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Thawed POOLED CRYOPRECIPITATE CP D/XX/rt 3 units Psoralen-treated From 3 donors

Table 320: NHSN Cryoprecipitate/Riboflavin-Treated (45)

Value Set: NHSN Cryoprecipitate/Riboflavin-Treated (45) urn:oid:2.16.840.1.114222.4.11.7503 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Cryoprecipitate/Riboflavin-Treated reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E7072	ISBT-128	urn:oid:2.16.840.1.113883.6.18	CRYOPRECIPITATE CP D/450mL/<= -25C Riboflavin-treated
E7073	ISBT-128	urn:oid:2.16.840.1.113883.6.18	CRYOPRECIPITATE CP DA-1/450mL/<= -25C Riboflavin-treated
...			

Table 321: NHSN Platelets/Apheresis/Psoralen-Treated and In Plasma (46)

Value Set: NHSN Platelets/Apheresis/Psoralen-Treated and In Plasma (46) urn:oid:2.16.840.1.114222.4.11.7504 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Platelets/Apheresis/Psoralen-Treated and In Plasma reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E5870	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Washed Apheresis PLATELETS None/XX/20-24C ResLeu:<1E6 1st container Psoralen-treated
E5871	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Washed Apheresis PLATELETS None/XX/20-24C ResLeu:<1E6 2nd container Psoralen-treated
...			

Table 322: NHSN Platelets/Apheresis/Psoralen-Treated and In Platelet Additive Solution (47)

Value Set: NHSN Platelets/Apheresis/Psoralen-Treated and In Platelet Additive Solution (47) urn:oid:2.16.840.1.114222.4.11.7505 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Platelets/Apheresis/Psoralen-Treated and In Platelet Additive Solution reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E4977	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS PAS- C/XX/20- 24C ResLeu:<1E6 1st container Approx 240 E9 plts Psoralen-treated
E4979	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS PAS- C/XX/20- 24C ResLeu:<1E6 2nd container Approx 240 E9 plts Psoralen-treated
...			

Table 323: NHSN Platelets/Apheresis/Riboflavin-Treated and In Plasma (48)

Value Set: NHSN Platelets/Apheresis/Riboflavin-Treated and In Plasma (48) urn:oid:2.16.840.1.114222.4.11.7506 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Platelets/Apheresis/Riboflavin-Treated and In Plasma reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E5748	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS ACD- A/XX/20- 24C ResLeu:<5E6 Ribof lavin-treated
E5749	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS ACD- A/XX/20- 24C ResLeu:<5E6 1st container Riboflavin- treated
...			

Table 324: NHSN Platelets/Apheresis/Riboflavin-Treated and In Platelet Additive Solution (49)

Value Set: NHSN Platelets/Apheresis/Riboflavin-Treated and In Platelet Additive Solution (49) urn:oid:2.16.840.1.114222.4.11.7507 NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type. The ISBT blood product codes for NHSN Platelets/Apheresis/Riboflavin-Treated and In Platelet Additive Solution reporting, at the time of publication, are contained in this value set. A full listing of codes in this value set can be sourced from NHSN.			
Code	Code System	Code System OID	Print Name
E6641	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS PAS- E/XX/20- 24C ResLeu:<1E6 Ribof lavin-treated
E7039	ISBT-128	urn:oid:2.16.840.1.113883.6.18	Apheresis PLATELETS PAS- E/XX/20- 24C ResLeu:<1E6 Supe rnat reduced 1st container Riboflavin- treated
...			

Figure 110: ISBT Product Code Summary Observation Example

<pre><observation classCode="OBS" moodCode="EVN"> <!-- ISBT Product Code Summary Observation --> <templateId root="2.16.840.1.113883.10.20.5.6.238" extension="2015-10-01" /> <code codeSystem="2.16.840.1.113883.6.18" codeSystemName="ISBT-128" code="E0009" displayName="WHOLE BLOOD CPD/450mL/refg" /> <statusCode code="completed" /> <value xsi:type="INT" value="2" /> </observation></pre>
--

3.65 Isolate Susceptibility Tests Organizer (V4)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.201:2020-04-01 (closed)]

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Table 325: Isolate Susceptibility Tests Organizer (V4) Contexts

Contained By:	Contains:
Specimen Collection Procedure (ARO) (V4) (required)	ARO Staph Aureus Specific Tests Organizer (optional) Antimicrobial Susceptibility Tests Organizer (V3) (required) Antimicrobial Susceptibility Isolate Participant (V2) (required)

This organizer records a laboratory-identified microorganism isolate and details of the antimicrobial susceptibility tests performed on that isolate. Additionally, it records the unique isolate identifier for purposes of laboratory tracking. Special tests done on isolates of *Staphylococcus aureus* are also recorded here. The ARO Staph Aureus Specific Tests Organizer is omitted from this clinical statement if *Staph. aureus* is NOT the identified pathogen (i.e., the participant subject).

Table 326: Isolate Susceptibility Tests Organizer (V4) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.201:2020-04-01)					
@classCode	1..1	SHALL		4459-27120	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		4459-27121	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		4459-27122	
@root	1..1	SHALL		4459-27123	2.16.840.1.113883.10.20.5.6.201
@extension	1..1	SHALL		4459-30470	2020-04-01
id	1..*	SHALL		4459-27124	
@nullFlavor	1..1	SHALL		4459-27125	NA
code	1..1	SHALL		4459-27126	
@code	1..1	SHALL		4459-27127	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 18725-2
statusCode	1..1	SHALL		4459-27128	
@code	1..1	SHALL		4459-27129	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
participant	1..1	SHALL		4459-27130	Antimicrobial Susceptibility Isolate Participant (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.202:2020-04-01)
component	0..1	MAY		4459-27156	
organizer	1..1	SHALL		4459-27157	ARO Staph Aureus Specific Tests Organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.190)
component	1..*	SHALL		4459-27158	
organizer	1..1	SHALL		4459-30469	Antimicrobial Susceptibility Tests Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.177:2016-08-01)

1. **SHALL** contain exactly one [1..1] @classCode="CLUSTER" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4459-27120).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4459-27121).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4459-27122) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.201" (CONF:4459-27123).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2020-04-01" (CONF:4459-30470).
4. **SHALL** contain at least one [1..*] **id** (CONF:4459-27124).
 - a. Such ids **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:4459-27125).
5. **SHALL** contain exactly one [1..1] **code** (CONF:4459-27126).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="18725-2" Microbiology studies (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4459-27127).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4459-27128).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4459-27129).
7. **SHALL** contain exactly one [1..1] Antimicrobial Susceptibility Isolate Participant (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.202:2020-04-01) (CONF:4459-27130).

This component is included only if the isolate is Staphylococcus aureus.

8. **MAY** contain zero or one [0..1] **component** (CONF:4459-27156) such that it
 - a. **SHALL** contain exactly one [1..1] ARO Staph Aureus Specific Tests Organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.190) (CONF:4459-27157).
9. **SHALL** contain at least one [1..*] **component** (CONF:4459-27158) such that it
 - a. **SHALL** contain exactly one [1..1] Antimicrobial Susceptibility Tests Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.177:2016-08-01) (CONF:4459-30469).

Figure 111: Isolate Susceptibility Tests Organizer (V4) Example

```
<organizer classCode="CLUSTER" moodCode="EVN">

  <!-- [HAI R3D1.1] Isolate Susceptibility Tests Organizer (V4) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.201" extension="2020-04-01" />
  <id nullFlavor="NA" />
  <code code="18725-2"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC"
    displayName="Microbiology Studies" />
  <statusCode code="completed" />
  <participant typeCode="SBJ">

    <!-- [HAI R3 N1] Antimicrobial Susceptibility Isolate Participant (V2) -->
    <templateId root="2.16.840.1.113883.10.20.5.6.202" extension="2020-04-01" />
    ...
  </participant>

  <!-- This component is included only if the pathogen identified is Staph. aureus -->
  <component>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <!-- [C-CDA R1.1] Result Organizer -->
      <templateId root="2.16.840.1.113883.10.20.22.4.1" />

      <!-- [HAI R1] ARO Staph Aureus Specific Tests Organizer -->
      <templateId root="2.16.840.1.113883.10.20.5.6.190" />
      ...
    </organizer>
  </component>

  <!-- Clarithromycin Susceptibility Testing -->
  <component>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <!-- [C-CDA R1.1] Result Organizer -->
      <templateId root="2.16.840.1.113883.10.20.22.4.1" />

      <!-- [HAI R3D1.1] Antimicrobial Susceptibility Tests Organizer (V3) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.177" extension="2016-08-01" />
      ...
    </organizer>
  </component>

  <!-- Vancomycin susceptibility testing -->
  <component>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <!-- [C-CDA R1.1] Result Organizer -->
      <templateId root="2.16.840.1.113883.10.20.22.4.1" />

      <!-- [HAI R3D1.1] Antimicrobial Susceptibility Tests Organizer (V3) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.177" extension="2016-08-01" />
      ...
    </organizer>
  </component>
</organizer>
```


3.66 IV Antibiotic Start Clinical Statement (V4)

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.5.6.140:2019-04-01 (closed)]

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Table 327: IV Antibiotic Start Clinical Statement (V4) Contexts

Contained By:	Contains:
Infection Indicator Organizer (V5) (required)	Type of Antimicrobial Start Observation (optional) Blood Sample Collected for Culture Observation (optional)

This clinical statement records whether an IV antibiotic was started and if an IV antibiotic was started, the date of the event. It also contains entries detailing the type of antimicrobial start (new or a continuation) and, if the type was new, whether a blood sample was collected for culture. It is used in an Evidence of Infection (Dialysis) Report.

When the IV antibiotic was started, set the value of @negationInd to false and record the event date in effectiveTime/low/@value. When the IV antibiotic was not started, set the value of @negationInd to true and set effectiveTime/low/@nullFlavor='NA'.

Table 328: IV Antibiotic Start Clinical Statement (V4) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.140:2019-04-01)					
@classCode	1..1	SHALL		4395-21171	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		4395-21172	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		4395-21173	
templateId	1..1	SHALL		4395-28253	
@root	1..1	SHALL		4395-28254	2.16.840.1.113883.10.20.22.4.16
templateId	1..1	SHALL		4395-21426	
@root	1..1	SHALL		4395-21427	2.16.840.1.113883.10.20.5.6.140
@extension	1..1	SHALL		4395-30671	2019-04-01
id	1..1	SHALL		4395-21428	
@nullFlavor	1..1	SHALL		4395-22766	NA
code	1..1	SHALL		4395-21174	
@code	1..1	SHALL		4395-21175	281790008
@codeSystem	1..1	SHALL		4395-28187	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		4395-21429	
@code	1..1	SHALL		4395-28109	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL	IVL_TS	4395-21496	
low	1..1	SHALL		4395-21497	
@nullFlavor	0..1	MAY		4395-22767	NA
@value	0..1	MAY		4395-30673	
high	1..1	SHALL		4395-21498	
@nullFlavor	1..1	SHALL		4395-22768	NA

XPath	Card.	Verb	Data Type	CONF#	Value
consumable	1..1	SHALL		4395-21176	
manufacturedProduct	1..1	SHALL		4395-21177	
@classCode	1..1	SHALL		4395-28348	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
templateId	1..1	SHALL		4395-28338	
@root	1..1	SHALL		4395-28339	2.16.840.1.113883.10.20.22.4.23
manufacturedMaterial	1..1	SHALL		4395-21178	
code	1..1	SHALL		4395-21179	
entryRelationship	0..1	SHOULD		4395-30667	
@typeCode	1..1	SHALL		4395-30670	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		4395-30668	Type of Antimicrobial Start Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.230:2015-10-01)
entryRelationship	0..1	SHOULD		4395-30669	
@typeCode	1..1	SHALL		4395-30672	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		4395-30567	Blood Sample Collected for Culture Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.239:2016-08-01)

1. Conforms to Medication Activity template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.16).
2. **SHALL** contain exactly one [1..1] @classCode="SBADM" Substance Administration (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4395-21171).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4395-21172).

When the IV antibiotic was started, set the value of @negationInd to false. When the IV antibiotic was not started, set the value of @negationInd to true.

4. **SHALL** contain exactly one [1..1] @negationInd (CONF:4395-21173).
5. **SHALL** contain exactly one [1..1] templateId (CONF:4395-28253) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.16" (CONF:4395-28254).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-21426) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.140" (CONF:4395-21427).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30671).
7. **SHALL** contain exactly one [1..1] **id** (CONF:4395-21428).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:4395-22766).
8. **SHALL** contain exactly one [1..1] **code** (CONF:4395-21174).
 - a. This **code** **SHALL** contain exactly one [1..1] **@code**="281790008" Intravenous antibiotic therapy (CONF:4395-21175).
 - b. This **code** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:4395-28187).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4395-21429).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4395-28109).
10. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4395-21496).

When the IV antibiotic was started, record the event date in **effectiveTime/low/@value**. When the IV antibiotic was not started, set **effectiveTime/low/@nullFlavor**='NA'.

- a. This **effectiveTime** **SHALL** contain exactly one [1..1] **low** (CONF:4395-21497).
 - i. This **low** **MAY** contain zero or one [0..1] **@nullFlavor**="NA" (CONF:4395-22767).
 - ii. This **low** **MAY** contain zero or one [0..1] **@value** (CONF:4395-30673).
 - b. This **effectiveTime** **SHALL** contain exactly one [1..1] **high** (CONF:4395-21498).
 - i. This **high** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:4395-22768).
11. **SHALL** contain exactly one [1..1] **consumable** (CONF:4395-21176).
 - a. This **consumable** **SHALL** contain exactly one [1..1] **manufacturedProduct** (CONF:4395-21177).
 - i. This **manufacturedProduct** **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:4395-28348).
 - ii. This **manufacturedProduct** **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-28338) such that it
 1. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.23" (CONF:4395-28339).
 - iii. This **manufacturedProduct** **SHALL** contain exactly one [1..1] **manufacturedMaterial** (CONF:4395-21178).
 1. This **manufacturedMaterial** **SHALL** contain exactly one [1..1] **code** (CONF:4395-21179).
 - a. In an Evidence of Infection (Dialysis) Report, if the antimicrobial started was Vancomycin, the value of **@code**

SHALL be '11124' Vancomycin [[[CodeSystem:
2.16.840.1.113883.6.88 RxNorm]. Otherwise, the value of
@nullFlavor **SHALL** be 'NI' (CONF:4395-21180).

12. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:4395-30667) such that it
- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem:
HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4395-30670).
 - SHALL** contain exactly one [1..1] **Type of Antimicrobial Start Observation**
(identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.230:2015-10-01)
(CONF:4395-30668).

If the type of antimicrobial start in the Type of Antimicrobial Start Observation was "New antimicrobial start" (2336-6) then the following template *SHALL* be present.

13. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:4395-30669) such that it
- SHALL** contain exactly one [1..1] **@typeCode="REFR"** Refers to (CodeSystem:
HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4395-30672).
 - SHALL** contain exactly one [1..1] **Blood Sample Collected for Culture Observation** (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.5.6.239:2016-08-01) (CONF:4395-30567).

Figure 112: IV Antibiotic Start Clinical Statement (V4) Example

```

<!-- When the IV antibiotic was started, set the value of @negationInd to false and record
the event date in effectiveTime/low/@value. When the IV antibiotic was not started, set the
value of @negationInd to true and set effectiveTime/low/@nullFlavor='NA'. -->
<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">
  <!-- [C-CDA R1.1] Medication Activity -->
  <templateId root="2.16.840.1.113883.10.20.22.4.16" />
  <!-- [HAI R3D1.1] Antibiotic Start Clinical Statement (V3) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.140" extension="2019-04-01" />
  <id nullFlavor="NA" />
  <code codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    code="281790008"
    displayName="Intravenous antibiotic therapy" />
  <statusCode code="completed" />
  <effectiveTime xsi:type="IVL_TS">
    <low value="20181201" />
    <high nullFlavor="NA" />
  </effectiveTime>

  <!-- The antibiotic started was IV Vancomycin -->
  <consumable>
    <manufacturedProduct classCode="MANU">
      <templateId root="2.16.840.1.113883.10.20.22.4.23" />
      <manufacturedMaterial>
        <code codeSystem="2.16.840.1.113883.6.88"
          codeSystemName="RxNorm"
          code="11124"
          displayName="Vancomycin" />
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
  <entryRelationship typeCode="REFR">

    <!-- Type of Antimicrobial Start Observation -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- [HAI R3D1] Type of Antimicrobial Start Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.230" extension="2015-10-01" />
      ...
    </observation>
  </entryRelationship>

  <!-- If type of antimicrobial start is "new antimicrobial start" 2336-6 then specify
  whether or not blood sample collected for culture -->
  <!-- Blood Sample Collected for Culture Observation -->
  <entryRelationship typeCode="REFR">
    <!-- Blood sample was collected so @negationInd="false" -->
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [HAI R3D1.1] Blood Sample Collected for Culture Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.239" extension="2016-08-01" />
      ...
    </observation>
  </entryRelationship>
</substanceAdministration>

```

3.67 IV Antifungal Start Clinical Statement

[substanceAdministration: identifier urn:oid:2.16.840.1.113883.10.20.5.6.141 (closed)]

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Table 329: IV Antifungal Start Clinical Statement Contexts

Contained By:	Contains:
Infection Indicator Organizer (V5) (required)	

This clinical statement records whether an IV antifungal was started. It is used in an Evidence of Infection (Dialysis) Report.

When the IV antifungal was started, set the value of @negationInd to false. When the IV antifungal was not started, set the value of @negationInd to true.

Table 330: IV Antifungal Start Clinical Statement Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
substanceAdministration (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.141)					
@classCode	1..1	SHALL		86-21166	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		86-21167	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21168	
templateId	1..1	SHALL		86-28255	
@root	1..1	SHALL		86-28256	2.16.840.1.113883.10.20.22.4.16
templateId	1..1	SHALL		86-21501	
@root	1..1	SHALL		86-21502	2.16.840.1.113883.10.20.5.6.141
id	1..1	SHALL		86-21503	
@nullFlavor	1..1	SHALL		86-22763	NA
code	1..1	SHALL		86-21169	
@code	1..1	SHALL		86-21170	2306-9
@codeSystem	0..1	MAY		86-28188	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
statusCode	1..1	SHALL		86-21504	
@code	1..1	SHALL		86-28110	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL	IVL_TS	86-21505	
low	1..1	SHALL		86-21506	
@nullFlavor	0..1	SHOULD		86-22764	NA
high	1..1	SHALL		86-21507	
@nullFlavor	0..1	SHOULD		86-22765	NA
consumable	1..1	SHALL		86-28340	
manufacturedProduct	1..1	SHALL		86-28341	
@classCode	1..1	SHALL		86-28347	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
templateId	1..1	SHALL		86-28342	
@root	1..1	SHALL		86-28345	2.16.840.1.113883.10.20.22.4.23
manufacturedMaterial	1..1	SHALL		86-28343	
code	1..1	SHALL		86-28344	
@nullFlavor	1..1	SHALL		86-28346	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI

1. Conforms to Medication Activity template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.16).
2. **SHALL** contain exactly one [1..1] **@classCode**="SBADM" Substance Administration (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21166).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21167).

When the IV antifungal was started, set the value of **@negationInd** to false. When the IV antifungal was not started, set the value of **@negationInd** to true.

4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-21168).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28255) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.16" (CONF:86-28256).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21501) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.141" (CONF:86-21502).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-21503).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22763).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-21169).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="2306-9" Intravenous injection of antifungal substance (CONF:86-21170).
 - b. This code **MAY** contain zero or one [0..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:86-28188).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21504).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28110).
10. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-21505).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:86-21506).
 - i. This low **SHOULD** contain zero or one [0..1] **@nullFlavor**="NA" (CONF:86-22764).
 - b. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:86-21507).
 - i. This high **SHOULD** contain zero or one [0..1] **@nullFlavor**="NA" (CONF:86-22765).

C-CDA (and CDA) require the consumable element, however NHSN does not collect further information about the antifungal.

11. **SHALL** contain exactly one [1..1] **consumable** (CONF:86-28340).
 - a. This consumable **SHALL** contain exactly one [1..1] **manufacturedProduct** (CONF:86-28341).
 - i. This manufacturedProduct **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:86-28347).

- ii. This manufacturedProduct **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28342) such that it
 1. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.23" (CONF:86-28345).
- iii. This manufacturedProduct **SHALL** contain exactly one [1..1] **manufacturedMaterial** (CONF:86-28343).
 1. This manufacturedMaterial **SHALL** contain exactly one [1..1] **code** (CONF:86-28344).
 - a. This code **SHALL** contain exactly one [1..1] **@nullFlavor**="NI" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:86-28346).

Figure 113: IV Antifungal Start Clinical Statement Example

```
<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">
  <!-- C-CDA Medication Activity templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
  <!-- HAI IV antifungal start clinical statement templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.141"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="2306-9"
        displayName="Intravenous injection of antifungal substance"/>
  <statusCode code="completed"/>
  <effectiveTime xsi:type="IVL_TS">
    <low nullFlavor="NA" />
    <high nullFlavor="NA" />
  </effectiveTime>
  <!-- CDA requires the consumable element, however NHSN does not
        collect further information the antifungal -->
  <consumable>
    <manufacturedProduct classCode="MANU">
      <templateId root="2.16.840.1.113883.10.20.22.4.23" />
      <manufacturedMaterial>
        <code nullFlavor="NI"/>
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
</substanceAdministration>
```

3.68 Known or Suspected Munchhausen's By Proxy Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.250:2018-04-01 (closed)]

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Table 331: Known or Suspected Munchhausen's By Proxy Observation Contexts

Contained By:	Contains:
Infection Risk Factors Section in a BSI Report (V3) (required)	

This observation records whether the person had known or suspected Munchhausen's By Proxy. If the person did have known or suspected Munchhausen's by proxy, set the value of @negationInd to false. If the person did not have known or suspected Munchhausen's by proxy, set the value of @negationInd to true.

Table 332: Known or Suspected Munchhausen's By Proxy Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.250:2018-04-01)					
@classCode	1..1	SHALL		3357-30620	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3357-30621	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		3357-30622	
templateId	1..1	SHALL		3357-30614	
@root	1..1	SHALL		3357-30623	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		3357-30619	
@root	1..1	SHALL		3357-30630	2.16.840.1.113883.10.20.5.6.250
@extension	1..1	SHALL		3357-30631	2018-04-01
id	1..1	SHALL		3357-30615	
@nullFlavor	1..1	SHALL		3357-30624	NA
code	1..1	SHALL		3357-30616	
@code	1..1	SHALL		3357-30625	ASSERTION
@codeSystem	1..1	SHALL		3357-30626	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		3357-30617	
@code	1..1	SHALL		3357-30627	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	3357-30618	
@code	1..1	SHALL	CS	3357-30628	3055-1
@codeSystem	1..1	SHALL		3357-30629	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).

2. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3357-30620).
3. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3357-30621).

If the person did have known or suspected Munchhausen's by proxy, set the value of **@negationInd** to false. If the person did not have known or suspected Munchhausen's by proxy, set the value of **@negationInd** to true.

4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:3357-30622).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-30614) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.4"** (CONF:3357-30623).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-30619) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.6.250"** (CONF:3357-30630).
 - b. **SHALL** contain exactly one [1..1] **@extension="2018-04-01"** (CONF:3357-30631).
7. **SHALL** contain exactly one [1..1] **id** (CONF:3357-30615).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CONF:3357-30624).
8. **SHALL** contain exactly one [1..1] **code** (CONF:3357-30616).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** Assertion (CONF:3357-30625).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3357-30626).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3357-30617).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:3357-30627).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:3357-30618).
 - a. This value **SHALL** contain exactly one [1..1] **@code="3055-1"** Known or suspected Munchhausen Syndrome by Proxy during current admission (CONF:3357-30628).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.277"** (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-30629).

Figure 114: Known or Suspected Munchhausen's by Proxy Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- [C-CDA R1.1] Problem Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- [HAI R3D3] Known or Suspected Munchhausen's By Proxy Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.250" extension="2018-04-01"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    code="3055-1"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    displayName="Known or suspected Munchhausen Syndrome by Proxy during current
admission "/>
</observation>
```

3.69 Last Physical Overnight Location Act

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.227:2014-12-01
(closed)]

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Release 2, DSTU 2.1 - US Realm

Table 333: Last Physical Overnight Location Act Contexts

Contained By:	Contains:
Encounters Section in a LIO Report (V2) (required)	Last Physical Overnight Location Encounter (optional)

This act template is a wrapper around the Last Physical Overnight Location Encounter template. The act identifies that the contained encounter represents the last physical overnight location of the patient, while the encounter template records the type of encounter and the type of location.

Table 334: Last Physical Overnight Location Act Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.227:2014-12-01)					
@nullFlavor	0..1	MAY		1129-30558	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA
@classCode	1..1	SHALL		1129-30564	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1129-30565	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1129-30560	
@root	1..1	SHALL		1129-30567	2.16.840.1.113883.10.20.5.6.227
@extension	1..1	SHALL		1129-30570	2014-12-01
code	1..1	SHALL		1129-30562	
@code	1..1	SHALL		1129-30569	3002-3
@codeSystem	1..1	SHALL		1129-30571	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
entryRelationship	0..1	SHOULD		1129-30572	
@typeCode	1..1	SHALL		1129-30573	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
encounter	1..1	SHALL		1129-30574	Last Physical Overnight Location Encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.220:2014-12-01)

Use nullFlavor="NA" where the last physical overnight location is not applicable.

1. **MAY** contain zero or one [0..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008 **STATIC**) (CONF:1129-30558).
2. **SHALL** contain exactly one [1..1] @classCode="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-30564).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-30565).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1129-30560) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.227" (CONF:1129-30567).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30570).
5. **SHALL** contain exactly one [1..1] code (CONF:1129-30562).

- a. This code **SHALL** contain exactly one [1..1] @code="3002-3" Last physical overnight location of patient immediately prior to arrival into facility (CONF:1129-30569).
- b. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN
urn:oid:2.16.840.1.113883.6.277) (CONF:1129-30571).

Where the last physical overnight location is not applicable, this entryRelationship will not be present.

6. **SHOULD** contain zero or one [0..1] entryRelationship (CONF:1129-30572).
 - a. The entryRelationship, if present, **SHALL** contain exactly one [1..1]
@typeCode="COMP" Component (CodeSystem: HL7ActRelationshipType
urn:oid:2.16.840.1.113883.5.1002) (CONF:1129-30573).
 - b. The entryRelationship, if present, **SHALL** contain exactly one [1..1] Last Physical Overnight Location Encounter (identifier:
urn:hl7ii:2.16.840.1.113883.10.20.5.6.220:2014-12-01) (CONF:1129-30574).

Figure 115: Last Physical Overnight Location Act Example

```
<act classCode="ACT" moodCode="EVN">
  <!-- Last Physical Overnight Location Act templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.227"
    extension="2014-12-01" />
  <code code="3002-3"
    displayName="Last physical overnight location of patient immediately prior to
      arrival into facility"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN" />
  <entryRelationship typeCode="COMP">
    <!-- Last Physical Overnight Location Encounter -->
    <encounter classCode="ENC" moodCode="EVN">
      <!-- CCD Encounter activity templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" />
      <!-- Last Physical Overnight Location Encounter templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.220"
        extension="2014-12-01" />
      ...
    </encounter>
  </entryRelationship>
</act>
```


Figure 116: Last Physical Overnight Location Act - Not Applicable Example

```
<act classCode="ACT" moodCode="EVN" nullFlavor="NA">
  <!-- Last Physical Overnight Location Act templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.227"
    extension="2014-12-01" />
  <code code="3002-3"
    displayName="Last physical overnight location of patient immediately prior to
      arrival into facility"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN" />
</act>
```

3.70 Last Physical Overnight Location Encounter

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.220:2014-12-01
(closed)]

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Table 335: Last Physical Overnight Location Encounter Contexts

Contained By:	Contains:
Last Physical Overnight Location Act (optional)	

This template represents an encounter at the last physical overnight location of the patient immediately prior to his or her arrival into the facility. The type of encounter can be either "IMP" (inpatient encounter) or "HH" (home health) depending on the last location; the location participant records the type of the last overnight location. If the last physical overnight location is unknown code will be nullFlavor="UNK".

Table 336: Last Physical Overnight Location Encounter Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.220:2014-12-01)					
@classCode	1..1	SHALL		1129-30271	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1129-30272	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1129-30493	
@root	1..1	SHALL		1129-30494	2.16.840.1.113883.10.20.22.4.49
templateId	1..1	SHALL		1129-30495	
@root	1..1	SHALL		1129-30496	2.16.840.1.113883.10.20.5.6.220
@extension	1..1	SHALL		1129-30497	2014-12-01
id	1..*	SHALL		1129-30256	
@nullFlavor	1..1	SHALL		1129-30263	NA
code	1..1	SHALL		1129-30257	urn:oid:2.16.840.1.113883.10.20.5.9.3 (NHSNLastLocationEncounterTypeCode)
@nullFlavor	0..1	MAY		1129-30593	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = UNK
effectiveTime	1..1	SHALL		1129-30258	
@nullFlavor	1..1	SHALL		1129-30265	NA
participant	0..1	SHOULD		1129-30260	
@typeCode	1..1	SHALL		1129-30270	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		1129-30261	
@classCode	1..1	SHALL		1129-30269	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC
code	1..1	SHALL		1129-30262	
@code	1..1	SHALL		1129-30482	urn:oid:2.16.840.1.114222.4.11.7233 (NHSNPreviousPatientLocation)

1. Conforms to Encounter Activities template (identifier:
urn:oid:2.16.840.1.113883.10.20.22.4.49).
2. **SHALL** contain exactly one [1..1] **@classCode**="ENC" Encounter (CodeSystem: HL7ActClass
urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-30271).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood
urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-30272).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30493) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.49"
(CONF:1129-30494).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30495) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.220"
(CONF:1129-30496).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30497).
6. **SHALL** contain at least one [1..*] **id** (CONF:1129-30256).
 - a. Such ids **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:1129-30263).

If the last physical overnight location was a nursing home/skilled nursing facility or other inpatient healthcare setting, the encounter code will be "IMP". If the last physical overnight location is a personal residence/residential care, then the encounter code will be "HH". If the last physical overnight location is unknown use nullFlavor="UNK".

7. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet
[NHSNLastLocationEncounterTypeCode](#) urn:oid:2.16.840.1.113883.10.20.5.9.3
DYNAMIC (CONF:1129-30257).
 - a. This code **MAY** contain zero or one [0..1] **@nullFlavor**="UNK" Unknown
(CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008)
(CONF:1129-30593).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1129-30258).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:1129-30265).

If the last physical overnight location is unknown, this participant will not be present.

9. **SHOULD** contain zero or one [0..1] **participant** (CONF:1129-30260).
 - a. The participant, if present, **SHALL** contain exactly one [1..1] **@typeCode**="LOC"
Location (CodeSystem: HL7ParticipationType
urn:oid:2.16.840.1.113883.5.90) (CONF:1129-30270).
 - b. The participant, if present, **SHALL** contain exactly one [1..1] **participantRole**
(CONF:1129-30261).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="SDLOC"
Service Delivery Location (CodeSystem: HL7EntityClass
urn:oid:2.16.840.1.113883.5.41) (CONF:1129-30269).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **code** (CONF:1129-30262).
 1. This code **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be
selected from ValueSet [NHSNPreviousPatientLocation](#)

urn:oid:2.16.840.1.114222.4.11.7233 **DYNAMIC** (CONF:1129-30482).

Table 337: NHSNLastLocationEncounterTypeCode

Value Set: NHSNLastLocationEncounterTypeCode urn:oid:2.16.840.1.113883.10.20.5.9.3 (Clinical Focus: Last physical overnight location of patient immediately prior to arrival into facility for NHSN reporting purposes),(Data Element Scope: A code identifying the type of encounter of the last physical oversight location for the patient.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.3/expansion			
Code	Code System	Code System OID	Print Name
HH	HL7ActCode	urn:oid:2.16.840.1.113883.5.4	home health
IMP	HL7ActCode	urn:oid:2.16.840.1.113883.5.4	inpatient encounter

Table 338: NHSNPreviousPatientLocation

Value Set: NHSNPreviousPatientLocation urn:oid:2.16.840.1.114222.4.11.7233 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the previous location of patient immediately prior to arrival at the facility.),(Data Element Scope: A code identifying the type of location the was previously located prior to arrival at the current facility.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7233/expansion			
Code	Code System	Code System OID	Print Name
3005-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Nursing Home/Skilled Nursing Facility
3006-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Other inpatient healthcare setting (e.g., Acute Care Hospital, LTAC, Rehabilitation, etc.)
3007-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Personal residence/residential care

Figure 117: Last Physical Overnight Location Encounter Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!-- CCD Encounter activity templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.49" />
  <!-- Last Physical Overnight Location Encounter templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.220"
    extension="2014-12-01" />

  <id nullFlavor="NA" />
  <!-- If the last physical overnight location was a nursing home/skilled nursing
    facility or other inpatient healthcare setting, the encounter code will be
    "IMP". If the last physical overnight location is a personal
    residence/residential care then the encounter code will be "HH". -->
  <code code="HH"
    displayName="home health"
    codeSystem="2.16.840.1.113883.5.4"
    codeSystemName="ActCode" />

  <effectiveTime nullFlavor="NA" />

  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <code code="3007-2"
        displayName="Personal Residence/Residential Care"
        codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN" />
    </participantRole>
  </participant>
</encounter>
```

Figure 118: Last Physical Overnight Location Encounter - Unknown Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!-- C-CDA Encounter Activity templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.49" />
  <!-- Last Physical Overnight Location Encounter templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.220"
    extension="2014-12-01" />
  <id nullFlavor="NA" />
  <!-- The last physical overnight location is unknown -->
  <code nullFlavor="UNK" />
  <effectiveTime nullFlavor="NA" />
</encounter>
```

3.71 Location Within Facility Encounter

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.262:2019-04-01
(closed)]

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Table 339: Location Within Facility Encounter Contexts

Contained By:	Contains:
Encounters Section in a LOS/Men Denominator (required)	

This template represents an encounter at a location within the facility. The participation/participantRole/code contains the patient's location within the facility, the date admitted or transferred to that location is recorded in effectiveTime/low, the disposition of the infant is contained in sdct:dischargeDispositionCode and, if the infant was discharged, transferred, or expired, the date on which this occurred is recorded in effectiveTime/high. If the infant had no location change, no date is recorded.

Table 340: Location Within Facility Encounter Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.262:2019-04-01)					
@classCode	1..1	SHALL		4395-30839	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		4395-30840	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		4395-30826	
@root	1..1	SHALL		4395-30835	2.16.840.1.113883.10.20.22.4.49
templateId	1..1	SHALL		4395-30830	
@root	1..1	SHALL		4395-30841	2.16.840.1.113883.10.20.5.6.262
@extension	1..1	SHALL		4395-30842	2019-04-01
id	1..*	SHALL		4395-30823	
@nullFlavor	1..1	SHALL		4395-30831	NA
code	1..1	SHALL		4395-30824	
@code	1..1	SHALL		4395-30832	IMP
@codeSystem	1..1	SHALL		4395-30833	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
effectiveTime	1..1	SHALL		4395-30825	
low	1..1	SHALL		4395-30843	
high	0..1	MAY		4395-30844	
sdct:dischargeDispositionCode	1..1	SHALL		4395-30845	urn:oid:2.16.840.1.113883.10.20.5.9.30 (NHSNLOS/MENDischargeDisposition)
participant	1..1	SHALL		4395-30827	
@typeCode	1..1	SHALL		4395-30838	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		4395-30828	
@classCode	1..1	SHALL		4395-	urn:oid:2.16.840.1.113883.5.4

XPath	Card.	Verb	Data Type	CONF#	Value
				30837	1 (HL7EntityClass) = SDLOC
id	1..1	SHALL		4395-30947	
@root	1..1	SHALL		4395-30948	
@extension	1..1	SHALL		4395-30949	
code	1..1	SHALL		4395-30829	urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode)

1. Conforms to Encounter Activities template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.49).
2. **SHALL** contain exactly one [1..1] **@classCode**="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4395-30839).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4395-30840).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30826) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.49" (CONF:4395-30835).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30830) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.262" (CONF:4395-30841).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30842).
6. **SHALL** contain at least one [1..*] **id** (CONF:4395-30823).
 - a. Such ids **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:4395-30831).
7. **SHALL** contain exactly one [1..1] **code** (CONF:4395-30824).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="IMP" inpatient encounter (CONF:4395-30832).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4395-30833).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4395-30825).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4395-30843).
Note: Date Admitted or Transferred to Location

If the infant was discharged, transferred, or expired, the date on which this occurred is recorded in effectiveTime/high. If the infant had no location change, no date is recorded in effectiveTime/high.

- b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:4395-30844).
Note: Date of discharge, transfer, or death

9. **SHALL** contain exactly one [1..1] **sdtc:dischargeDispositionCode**, which **SHALL** be selected from ValueSet [NHSNLOS/MENDischargeDisposition](#) urn:oid:2.16.840.1.113883.10.20.5.9.30 **DYNAMIC** (CONF:4395-30845).
Note: Disposition of infant
10. **SHALL** contain exactly one [1..1] **participant** (CONF:4395-30827).
- This participant **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:4395-30838).
 - This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:4395-30828).
 - This participantRole **SHALL** contain exactly one [1..1] **@classCode="SDLOC"** Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:4395-30837).
 - This participantRole **SHALL** contain exactly one [1..1] **id** (CONF:4395-30947).
Note: Location within facility

The value of @root must be the NHSN assigned Facility OID.

- This id **SHALL** contain exactly one [1..1] **@root** (CONF:4395-30948).

The value of @extension must be a value registered with NHSN.

- This id **SHALL** contain exactly one [1..1] **@extension** (CONF:4395-30949).
- This participantRole **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNHealthcareServiceLocationCode](#) urn:oid:2.16.840.1.113883.13.19 **DYNAMIC** (CONF:4395-30829).
Note: Location type

Table 341: NHSNLOS/MENDischargeDisposition

Value Set: NHSNLOS/MENDischargeDisposition urn:oid:2.16.840.1.113883.10.20.5.9.30 (Clinical Focus: NHSN surveillance reporting: discharge disposition of infant),(Data Element Scope: A code identifying the discharge disposition for the infant.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.30/expansion			
Code	Code System	Code System OID	Print Name
1311-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	No location change
183665006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Discharged from hospital (finding)
266751003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Transferred from department (finding)
371828006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Patient deceased during stay (discharge status = dead) (finding)

Figure 119: Location Within Facility Encounter Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!-- [C-CDA R1.1] Encounter activity -->
  <templateId root="2.16.840.1.113883.10.20.22.4.49" />
  <!-- [HAI R3D4] Location Within Facility Encounter -->
  <templateId root="2.16.840.1.113883.10.20.5.6.262" extension="2019-04-01" />
  <id nullFlavor="NA" />
  <code code="IMP"
    displayName="inpatient encounter"
    codeSystem="2.16.840.1.113883.5.4"
    codeSystemName="HL7 ActCode" />
  <effectiveTime>
    <!-- Date admitted or transferred to this location -->
    <low value="20190101" />
    <!-- Date discharged or transferred from this location
         (this is the date that that patient was transferred from this location)
         If the infant had no location change, no date is recorded in effectiveTime/high -->
    <high value="20190102" />
  </effectiveTime>
  <sdct:dischargeDispositionCode code="266751003"
    displayName="Transferred from department (finding)"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT" />
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <!-- Location within facility -->
      <id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="NICU" />
      <!-- Location type -->
      <code codeSystem="2.16.840.1.113883.6.259"
        codeSystemName="HL7 HealthCareServiceLocation"
        code="1039-7"
        displayName="Neonatal Critical care (Level II/III)" />
    </participantRole>
  </participant>
</encounter>
```

3.72 Loss of Vascular Access Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.203 (closed)]

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Release 2, DSTU 1 - US Realm

Table 342: Loss of Vascular Access Observation Contexts

Contained By:	Contains:
Details Section in an Evidence of Infection (Dialysis) Report (V6) (required)	

This template records whether or not a patient on dialysis lost vascular access as a result of the infection (dialysis event). It is based on the C-CDA Problem Observation template.

When the patient had loss of vascular access, set the value of @negationInd to false. When the patient did not have loss of vascular access, set the value of @negationInd to true. When it is not known if the patient had loss of vascular access, set the value of @nullFlavor to "UNK".

Table 343: Loss of Vascular Access Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.203)					
@nullFlavor	0..1	MAY		1101-30214	UNK
@classCode	1..1	SHALL		1101-30205	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1101-30206	EVN
@negationInd	0..1	SHOULD		1101-30216	
templateId	1..1	SHALL		1101-30301	
@root	1..1	SHALL		1101-30302	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		1101-30207	
@root	1..1	SHALL		1101-30208	2.16.840.1.113883.10.20.5.6.203
id	1..1	SHALL		1101-30209	
@nullFlavor	1..1	SHALL		1101-30224	NA
code	1..1	SHALL		1101-30210	
@code	1..1	SHALL		1101-30218	ASSERTION
@codeSystem	1..1	SHALL		1101-30219	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1101-30211	
@code	1..1	SHALL		1101-30212	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	1101-30213	
@code	1..1	SHALL		1101-30220	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2325-9
@codeSystem	1..1	SHALL		1101-30221	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. Conforms to Problem Observation template (identifier:
urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **MAY** contain zero or one [0..1] @nullFlavor="UNK" (CONF:1101-30214).
 - a. If it is not known whether the patient had loss of vascular access, the value of @nullFlavor **SHALL** be UNK. If the value of @nullFlavor is set to UNK then the value of @negationInd **SHALL NOT** be set (CONF:1101-30215).
3. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass
urn:oid:2.16.840.1.113883.5.6) (CONF:1101-30205).
4. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CONF:1101-30206).
5. **SHOULD** contain zero or one [0..1] @negationInd (CONF:1101-30216).
 - a. If the patient had loss of vascular access, the value of @negationInd **SHALL** be false. If the patient did not have loss of vascular access, the value of @negationInd **SHALL** be true. If the value of @negationInd is set then the value of @nullFlavor **SHALL NOT** be set (CONF:1101-30217).
6. **SHALL** contain exactly one [1..1] templateId (CONF:1101-30301) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:1101-30302).
7. **SHALL** contain exactly one [1..1] templateId (CONF:1101-30207) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.203" (CONF:1101-30208).
8. **SHALL** contain exactly one [1..1] id (CONF:1101-30209).
 - a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:1101-30224).
9. **SHALL** contain exactly one [1..1] code (CONF:1101-30210).
 - a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1101-30218).
 - b. This code **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode
urn:oid:2.16.840.1.113883.5.4) (CONF:1101-30219).
10. **SHALL** contain exactly one [1..1] statusCode (CONF:1101-30211).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" (CodeSystem:
HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1101-30212).
11. **SHALL** contain exactly one [1..1] value with @xsi:type="CD" (CONF:1101-30213).
 - a. This value **SHALL** contain exactly one [1..1] @code="2325-9" Loss of vascular access (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1101-30220).
 - b. This value **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN
urn:oid:2.16.840.1.113883.6.277) (CONF:1101-30221).

Figure 120: Loss of Vascular Access Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!--
    If the patient had loss of vascular access,
    the value of @negationInd SHALL be false.
    If the patient did not have loss of vascular access,
    the value of @negationInd SHALL be true.
    If the value of @negationInd is set then the value of
    @nullFlavor SHALL NOT be set.

    If it is not known whether the patient had loss of vascular access,
    the value of @nullFlavor SHALL be "UNK" as follows:
    <observation classCode="OBS" moodCode="EVN" nullFlavor="UNK">

    If the value of @nullFlavor is set to "UNK" then the value of
    @negationInd SHALL NOT be set.
  -->
  <!-- C-CDA Problem Observation Type -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" />
  <!-- Loss of Vascular Access Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.203" />
  <id nullFlavor="NA" />
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION" />
  <statusCode code="completed" />
  <value xsi:type="CD"
    code="2325-9"
    displayName="Loss of vascular access"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN" />
</observation>
```

3.73 MDRO/CDI Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.142 (closed)]

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Release 1 - US Realm

Table 344: MDRO/CDI Observation Contexts

Contained By:	Contains:
Findings Section in an Infection-Type Report (optional)	

This observation records whether the primary infection being reported was caused by a multi-drug-resistant organism (MDRO). It is a general or summary observation not associated with any individual pathogen in the Findings Section.

If the infection organism was multi-drug resistant, set the value of @negationInd to false. If the infection organism was not multi-drug resistant, set the value of @negationInd to true.

Table 345: MDRO/CDI Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.142)					
@classCode	1..1	SHALL		86-21157	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21158	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21159	
templateId	1..1	SHALL		86-28257	
@root	1..1	SHALL		86-28258	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-21234	
@root	1..1	SHALL		86-21235	2.16.840.1.113883.10.20.5.6.142
id	1..1	SHALL		86-21236	
@nullFlavor	1..1	SHALL		86-22769	NA
code	1..1	SHALL		86-21160	
@code	1..1	SHALL		86-21161	ASSERTION
@codeSystem	1..1	SHALL		86-28382	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-21162	
@code	1..1	SHALL		86-21163	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-21164	
@code	1..1	SHALL		86-21165	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2318-4

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21157).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21158).
4. **SHALL** contain exactly one [1..1] @negationInd (CONF:86-21159).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-28257) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28258).
6. **SHALL** contain exactly one [1..1] templateId (CONF:86-21234) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.142" (CONF:86-21235).
7. **SHALL** contain exactly one [1..1] id (CONF:86-21236).
 - a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22769).

8. **SHALL** contain exactly one [1..1] **code** (CONF:86-21160).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-21161).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28382).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21162).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21163).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:86-21164).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="2318-4" MDRO Infection or C.difficile infection (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:86-21165).

Figure 121: MDRO Observation Example

```
<!-- The observation is not negated, i.e. the infection was MDRO or CDI -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI MDRO/CDI Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.142"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="2318-4"
    displayName="MDRO Infection or C.difficile infection"/>
</observation>
```

3.74 Mechanical Ventilation Initiation Act

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.244:2017-04-01
(closed)]

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Release 3, STU 2 – US Realm

Table 346: Mechanical Ventilation Initiation Act Contexts

Contained By:	Contains:
Risk Factors Section in a VAE Report (required)	

This clinical statement records the location of the patient and the date when mechanical ventilation was initiated.

Table 347: Mechanical Ventilation Initiation Act Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.244:2017-04-01)					
@classCode	1..1	SHALL		3311-28378	ACT
@moodCode	1..1	SHALL		3311-28379	EVN
templateId	1..1	SHALL		3311-28375	
@root	1..1	SHALL		3311-28390	2.16.840.1.113883.10.20.22.4.12
templateId	1..1	SHALL		3311-28377	
@root	1..1	SHALL		3311-28392	2.16.840.1.113883.10.20.5.6.244
@extension	1..1	SHALL		3311-28393	2017-04-01
id	1..1	SHALL		3311-28376	
@nullFlavor	1..1	SHALL		3311-28391	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA
code	1..1	SHALL		3311-28367	
@code	1..1	SHALL		3311-28380	2341-2
@codeSystem	1..1	SHALL		3311-28381	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
statusCode	1..1	SHALL		3311-28368	
@code	1..1	SHALL		3311-28382	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		3311-28369	
low	1..1	SHALL		3311-28383	
participant	1..1	SHALL		3311-28370	
@typeCode	1..1	SHALL		3311-28384	LOC
participantRole	1..1	SHALL		3311-28371	
@classCode	1..1	SHALL		3311-28385	SDLOC
id	1..1	SHALL		3311-28372	

XPath	Card.	Verb	Data Type	CONF#	Value
@root	1..1	SHALL		3311-28373	
@extension	1..1	SHALL		3311-28387	
playingEntity	1..1	SHALL		3311-28374	
@classCode	1..1	SHALL		3311-28388	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PLC
code	1..1	SHALL		3311-28389	urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode)

1. Conforms to Procedure Activity Act template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.12).
2. **SHALL** contain exactly one [1..1] @classCode="ACT" (CONF:3311-28378).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CONF:3311-28379).
4. **SHALL** contain exactly one [1..1] templateId (CONF:3311-28375) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.12" (CONF:3311-28390).
5. **SHALL** contain exactly one [1..1] templateId (CONF:3311-28377) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.244" (CONF:3311-28392).
 - b. **SHALL** contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-28393).
6. **SHALL** contain exactly one [1..1] id (CONF:3311-28376).
 - a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:3311-28391).
7. **SHALL** contain exactly one [1..1] code (CONF:3311-28367).
 - a. This code **SHALL** contain exactly one [1..1] @code="2341-2" Mechanical ventilation initiation (CONF:3311-28380).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3311-28381).
8. **SHALL** contain exactly one [1..1] statusCode (CONF:3311-28368).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3311-28382).
9. **SHALL** contain exactly one [1..1] effectiveTime (CONF:3311-28369).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] low (CONF:3311-28383).
10. **SHALL** contain exactly one [1..1] participant (CONF:3311-28370).
 - a. This participant **SHALL** contain exactly one [1..1] @typeCode="LOC" (CONF:3311-28384).

- b. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:3311-28371).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode="SDLOC"** (CONF:3311-28385).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **id** (CONF:3311-28372).
 1. This id **SHALL** contain exactly one [1..1] **@root** (CONF:3311-28373).
 - a. This id/**@root** **SHALL** contain the facility identifier (CONF:3311-28386).
 2. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:3311-28387).
 - iii. This participantRole **SHALL** contain exactly one [1..1] **playingEntity** (CONF:3311-28374).
 1. This playingEntity **SHALL** contain exactly one [1..1] **@classCode="PLC"** (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:3311-28388).
 2. This playingEntity **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNHealthcareServiceLocationCode](#) urn:oid:2.16.840.1.113883.13.19 **DYNAMIC** (CONF:3311-28389).

Figure 122: Mechanical Ventilation Initiation Example

```

<act classCode="ACT" moodCode="EVN">
  <!-- [C-CDA R1.1] Procedure Activity Act -->
  <templateId root="2.16.840.1.113883.10.20.22.4.12" />
  <!-- [HAI] Mechanical Ventilation Initiation Act -->
  <templateId root="2.16.840.1.113883.10.20.5.6.244" extension="2017-04-01" />
  <id nullFlavor="NA" />
  <code code="2341-2"
    displayName="Mechanical ventilation initiation"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20170112" />
  </effectiveTime>
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <!-- root = facility assigned OID;
      extension = NHSN location ("your code") -->
      <id root="2.16.840.1.114222.4.3.2.11" extension="123456" />
      <playingEntity classCode="PLC">
        <code code="1029-8"
          displayName="Medical/Surgical Critical Care"
          codeSystem="2.16.840.1.113883.6.259"
          codeSystemName="HL7 HealthCareServiceLocation" />
      </playingEntity>
    </participantRole>
  </participant>
</act>

```

3.75 NHSN Comment

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01 (closed)]

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Table 348: NHSN Comment Contexts

Contained By:	Contains:
NHSN Comment Section (required)	

A comment is free text information of less than 2000 characters. A comment can contain information that is relevant to the whole report (it is not specific to any section of a report).

Table 349: NHSN Comment Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01)					
@classCode	1..1	SHALL		3311-87	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		3311-88	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3311-79	
@root	1..1	SHALL		3311-89	2.16.840.1.113883.10.20.5.6.243
@extension	1..1	SHALL		3311-92	2017-04-01
code	1..1	SHALL		3311-80	
@code	1..1	SHALL		3311-90	86467-8
@codeSystem	1..1	SHALL		3311-91	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
text	1..1	SHALL		3311-81	

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3311-87).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3311-88).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3311-79) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.243" (CONF:3311-89).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-04-01" (CONF:3311-92).
4. **SHALL** contain exactly one [1..1] **code** (CONF:3311-80).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="86467-8" Report comment Narrative (CONF:3311-90).

- b. This code **SHALL** contain exactly one [1..1]
`@codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC
urn:oid:2.16.840.1.113883.6.1) (CONF:3311-91).`
5. **SHALL** contain exactly one [1..1] **text** (CONF:3311-81).
 - a. The length of the free text comment **SHALL** be less than 2000 characters (CONF:3311-93).

Figure 123: NHSN Comment Example

```
<act classCode="ACT" moodCode="EVN">
  <!-- [HAI R3D2] NHSN Comment -->
  <templateId root="2.16.840.1.113883.10.20.5.6.243" extension="2017-04-01" />
  <code code="86467-8"
    displayName="Report comment Narrative"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" />
  <!-- Less than 2000 characters -->
  <text>NHSN text comment that is less than 2000 characters.</text>
</act>
```

3.76 NHSN COVID-19 Condition Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.270:2021-01-01 (closed)]

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Table 350: NHSN COVID-19 Condition Observation (V2) Contexts

Contained By:	Contains:
COVID-19 Section (V2) (required)	

NOTE:** This template represents a clinician's observation of whether a patient has or does not have a condition of COVID-19. It is not intended to replace lab results. This template is **ONLY** for use in NHSN HAI reporting.**

This observation records whether the person had COVID-19 or did not have COVID-19.

If the person:

- **Did not have COVID-19:** set value to 1240591000000102 | Severe acute respiratory syndrome coronavirus 2 not detected (finding)
- **Had COVID-19:** set value to 840539006 | Disease caused by severe acute respiratory syndrome coronavirus 2 (disorder)

Table 351: NHSN COVID-19 Condition Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.270:2021-01-01)					
@classCode	1..1	SHALL		4475-16	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		4475-17	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		4475-18	false
templateId	1..1	SHALL		4475-1	
@root	1..1	SHALL		4475-7	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		4475-6	
@root	1..1	SHALL		4475-14	2.16.840.1.113883.10.20.5.6.270
@extension	1..1	SHALL		4475-15	2021-01-01
id	1..1	SHALL		4475-2	
@nullFlavor	1..1	SHALL		4475-8	NA
code	1..1	SHALL		4475-3	
@code	1..1	SHALL		4475-9	55607006
@codeSystem	1..1	SHALL		4475-10	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
statusCode	1..1	SHALL		4475-4	
@code	1..1	SHALL		4475-11	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	4475-5	urn:oid:2.16.840.1.113883.10.20.5.9.40 (NHSN COVID19 Case Classification)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4475-16).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4475-17).
4. **SHALL** contain exactly one [1..1] @negationInd="false" (CONF:4475-18).
5. **SHALL** contain exactly one [1..1] templateId (CONF:4475-1) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:4475-7).
6. **SHALL** contain exactly one [1..1] templateId (CONF:4475-6) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.270" (CONF:4475-14).
 - b. **SHALL** contain exactly one [1..1] @extension="2021-01-01" (CONF:4475-15).

7. **SHALL** contain exactly one [1..1] **id** (CONF:4475-2).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CONF:4475-8).
8. **SHALL** contain exactly one [1..1] **code** (CONF:4475-3).
 - a. This code **SHALL** contain exactly one [1..1] **@code="55607006"** Problem (CONF:4475-9).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.96"** (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:4475-10).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4475-4).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:4475-11).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"**, where the code **SHALL** be selected from ValueSet [NHSN COVID19 Case Classification](#) urn:oid:2.16.840.1.113883.10.20.5.9.40 **DYNAMIC** (CONF:4475-5).

Table 352: NHSN COVID19 Case Classification

Value Set: NHSN COVID19 Case Classification urn:oid:2.16.840.1.113883.10.20.5.9.40 (Clinical Focus: COVID-19 conditions associated with confirmed case status.),(Data Element Scope: Problem Observation code (CDA) or Condition code (FHIR). Used to identify patients with confirmed COVID-19.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 6/1/2021 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.40/expansion			
Code	Code System	Code System OID	Print Name
1240591000000102	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Severe acute respiratory syndrome coronavirus 2 not detected (finding)
840539006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Disease caused by Severe acute respiratory syndrome coronavirus 2 (disorder)

Figure 124: NHSN COVID-19 Condition Observation (V2) Example - Had COVID-19

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- [C-CDA R1.1] Problem Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- [HAI R4D1] NHSN COVID-19 Condition Observation (V2) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.270" extension="2021-01-01"/>
  <id nullFlavor="NA"/>
  <code code="55607006"
    displayName="Problem"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="840539006"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    displayName="Disease caused by severe acute respiratory syndrome coronavirus 2"/>
</observation>
```

Figure 125: NHSN COVID-19 Condition Observation (V2) Example - Did not have COVID-19

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- [C-CDA R1.1] Problem Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- [HAI R4D1] NHSN COVID-19 Condition Observation Example (V2) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.270" extension="2021-01-01"/>
  <id nullFlavor="NA"/>
  <code code="55607006"
    displayName="Problem"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="1240591000000102"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    displayName="Severe acute respiratory syndrome coronavirus 2 not detected
(finding)"/>
</observation>
```

3.77 No Hemovigilance Adverse Reactions Reported This Month Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.232:2015-10-01 (closed)]

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Table 353: No Hemovigilance Adverse Reactions Reported This Month Observation Contexts

Contained By:	Contains:
Summary Data Section (HV) (V2) (required)	

This clinical statement represents whether or not there were no hemovigilance adverse reactions reported this month.

If there were no hemovigilance adverse reactions reported this month, set the value of @negationInd to false, otherwise, set the value of @negationInd to true.

On the form from which this template is modeled, this datum is reported as a check box stating that there were no hemovigilance adverse reactions reported this month. Thus, this template reports a "negative" finding. To report that this check box was not checked is to say that it is not the case that no hemovigilance adverse reactions were reported this month, which is subtly different from stating that there were hemovigilance adverse reactions reported this month. Because we are reporting a "negative" finding, negating the statement necessitates some seemingly counter-intuitive logic as follows:

- No hemovigilance adverse reactions reported this month = ASSERTION + negationInd="false" (the assertion that there were no HV adverse reactions is not negated)
- Otherwise = ASSERTION + negationInd="true" (the assertion that there were no HV adverse reactions is negated).

Table 354: No Hemovigilance Adverse Reactions Reported This Month Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.232:2015-10-01)					
@classCode	1..1	SHALL		1202-30632	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1202-30633	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		1202-30634	
templateId	1..1	SHALL		1202-30627	
@root	1..1	SHALL		1202-30635	2.16.840.1.113883.10.20.5.6.232
@extension	1..1	SHALL		1202-30636	2015-10-01
code	1..1	SHALL		1202-30624	
@code	1..1	SHALL	CS	1202-30628	ASSERTION
@codeSystem	1..1	SHALL		1202-30629	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1202-30625	
@code	1..1	SHALL		1202-30630	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	1202-30626	
@code	1..1	SHALL		1202-30631	3540-2
@codeSystem	1..1	SHALL		1202-30651	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1202-30632).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1202-30633).

If there were no hemovigilance adverse reactions reported this month, set the value of **@negationInd** to false. If there were hemovigilance adverse reactions reported this month, set the value of **@negationInd** to true.

3. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:1202-30634).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1202-30627) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.232" (CONF:1202-30635).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-10-01" (CONF:1202-30636).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1202-30624).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:1202-30628).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1202-30629).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1202-30625).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1202-30630).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1202-30626).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="3540-2" No hemovigilance adverse reactions reported this month (CONF:1202-30631).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1202-30651).

Figure 126: No Hemovigilance Adverse Reactions Reported This Month Observation Example

```

<!-- If there were no hemovigilance adverse reactions reported this month,
set the value of @negationInd to false.
If there were hemovigilance adverse reactions reported this month,
set the value of @negationInd to true. -->
<!-- There were no hemovigilance adverse reactions reported this month so
negationInd='false' -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- No Hemovigilance Adverse Reactions Reported This Month Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.232"
    extension="2015-10-01" />
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="3540-2"
    displayName="No hemovigilance adverse reactions reported this month" />
</observation>

```

3.78 No Hemovigilance Incidents Reported This Month Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.233:2015-10-01 (closed)]

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Table 355: No Hemovigilance Incidents Reported This Month Observation Contexts

Contained By:	Contains:
Summary Data Section (HV) (V2) (required)	

This clinical statement represents whether or not there were no hemovigilance incidents reported this month.

If there were no hemovigilance incidents reported this month, set the value of @negationInd to false, otherwise, set the value of @negationInd to true.

On the form from which this template is modeled, this datum is reported as a check box stating that there were no incidents reported this month. Thus, this template reports a "negative" finding. To report that this check box was not checked is to say that it is not the case that no hemovigilance incidents were reported this month, which is subtly different from stating that there were hemovigilance incidents reported this month. Because we are reporting a "negative" finding, negating the statement necessitates some seemingly counter-intuitive logic as follows:

- No hemovigilance incidents reported this month = ASSERTION + negationInd="false" (the assertion that there were no HV incidents is not negated)
- Otherwise = ASSERTION + negationInd="true" (the assertion that there were no HV incidents is negated).

Table 356: No Hemovigilance Incidents Reported This Month Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.233:2015-10-01)					
@classCode	1..1	SHALL		1202-30647	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1202-30648	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		1202-30649	
templateId	1..1	SHALL		1202-30640	
@root	1..1	SHALL		1202-30645	2.16.840.1.113883.10.20.5.6.233
@extension	1..1	SHALL		1202-30646	2015-10-01
code	1..1	SHALL		1202-30637	
@code	1..1	SHALL	CS	1202-30641	ASSERTION
@codeSystem	1..1	SHALL		1202-30642	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1202-30638	
@code	1..1	SHALL		1202-30643	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	1202-30639	
@code	1..1	SHALL		1202-30644	3541-0
@codeSystem	1..1	SHALL		1202-30650	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1202-30647).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1202-30648).

If there were no hemovigilance incidents reported this month, set the value of **@negationInd** to false. If there were hemovigilance incidents reported this month, set the value of **@negationInd** to true.

3. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:1202-30649).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1202-30640) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.233" (CONF:1202-30645).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-10-01" (CONF:1202-30646).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1202-30637).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:1202-30641).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1202-30642).
6. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1202-30638).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1202-30643).
7. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1202-30639).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="3541-0" No hemovigilance incidents reported this month (CONF:1202-30644).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1202-30650).

Figure 127: No Hemovigilance Incidents Reported This Month Observation

```

<!-- No Hemovigilance Incidents Reported This Month Observation -->
<!-- If there were no hemovigilance incidents reported this month,
      set the value of @negationInd to false.
      If there were hemovigilance incidents reported this month,
      set the value of @negationInd to true. -->
<!-- There were hemovigilance incidents reported this month so negationInd='true' -->
<observation classCode="OBS" moodCode="EVN" negationInd="true">
  <!-- No Hemovigilance Incidents Reported This Month Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.233"
    extension="2015-10-01" />
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN" code="3541-0"
    displayName="No hemovigilance incidents reported this month" />
</observation>

```

3.79 Observed or Suspected Patient Injection into Vascular Line Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.251:2018-04-01 (closed)]

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Table 357: Observed or Suspected Patient Injection into Vascular Line Observation Contexts

Contained By:	Contains:
Infection Risk Factors Section in a BSI Report (V3) (required)	

This observation records whether there was observed or suspected patient injection into vascular line(s) within the BSI infection window period.

If there was observed or suspected patient injection into vascular line(s) within the BSI infection window period, set the value of @negationInd to false. If there was not observed or suspected patient injection into vascular line(s) within the BSI infection window period, set the value of @negationInd to true.

Table 358: Observed or Suspected Patient Injection into Vascular Line Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.251:2018-04-01)					
@classCode	1..1	SHALL		3357-30647	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3357-30648	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		3357-30649	
templateId	1..1	SHALL		3357-30632	
@root	1..1	SHALL		3357-30638	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		3357-30637	
@root	1..1	SHALL		3357-30645	2.16.840.1.113883.10.20.5.6.251
@extension	1..1	SHALL		3357-30646	2018-04-01
id	1..1	SHALL		3357-30633	
@nullFlavor	1..1	SHALL		3357-30639	NA
code	1..1	SHALL		3357-30634	
@code	1..1	SHALL		3357-30640	ASSERTION
@codeSystem	1..1	SHALL		3357-30641	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		3357-30635	
@code	1..1	SHALL		3357-30642	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	3357-30636	
@code	1..1	SHALL	CS	3357-30643	3056-9
@codeSystem	1..1	SHALL		3357-30644	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).

2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3357-30647).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3357-30648).

If there was observed or suspected patient injection into vascular line(s) within the BSI infection window period, set the value of **@negationInd** to false. If there was not observed or suspected patient injection into vascular line(s) within the BSI infection window period, set the value of **@negationInd** to true.

4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:3357-30649).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-30632) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:3357-30638).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-30637) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.251" (CONF:3357-30645).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2018-04-01" (CONF:3357-30646).
7. **SHALL** contain exactly one [1..1] **id** (CONF:3357-30633).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:3357-30639).
8. **SHALL** contain exactly one [1..1] **code** (CONF:3357-30634).
 - a. This **code** **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:3357-30640).
 - b. This **code** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3357-30641).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3357-30635).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:3357-30642).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:3357-30636).
 - a. This **value** **SHALL** contain exactly one [1..1] **@code**="3056-9" Observed or suspected patient injection into vascular line(s) within the BSI infection window (CONF:3357-30643).
 - b. This **value** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-30644).

Figure 128: Observed or Suspected Patient Injection into Vascular Line Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- [C-CDA R1.1] Problem Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- [HAI R3D3] Observed or Suspected Patient Injection into Vascular Line Observation --
>
  <templateId root="2.16.840.1.113883.10.20.5.6.251" extension="2018-04-01"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    code="3056-9"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    displayName="Observed or suspected patient injection into vascular line(s)
      within the BSI infection window period"/>
</observation>
```

3.80 Occasion of HAI Detection Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.144 (closed)]

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Table 359: Occasion of HAI Detection Observation Contexts

Contained By:	Contains:
Infection-Type Observation (optional)	

This observation records when, in relation to an admission (a surgery stay), an HAI was detected.

Table 360: Occasion of HAI Detection Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.144)					
@classCode	1..1	SHALL		86-21716	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21717	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21718	false
templateId	1..1	SHALL		86-28259	
@root	1..1	SHALL		86-28260	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-21721	
@root	1..1	SHALL		86-21722	2.16.840.1.113883.10.20.5.6.144
id	1..1	SHALL		86-21723	
@nullFlavor	1..1	SHALL		86-22773	NA
code	1..1	SHALL		86-21724	
@code	1..1	SHALL		86-21725	ASSERTION
@codeSystem	1..1	SHALL		86-28383	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-21726	
@code	1..1	SHALL		86-21727	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-21728	urn:oid:2.16.840.1.113883.13.12 (NHSNOccasionOfDetectionCode)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21716).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21717).
4. **SHALL** contain exactly one [1..1] **@negationInd**="false" (CONF:86-21718).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28259) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28260).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21721) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.144" (CONF:86-21722).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-21723).

- a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22773).
8. **SHALL** contain exactly one [1..1] code (CONF:86-21724).
 - a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21725).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28383).
9. **SHALL** contain exactly one [1..1] statusCode (CONF:86-21726).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21727).
10. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHALL** be selected from ValueSet [NHSNOccasionOfDetectionCode](#) urn:oid:2.16.840.1.113883.13.12 **DYNAMIC** (CONF:86-21728).

Table 361: NHSNOccasionOfDetectionCode

Value Set: NHSNOccasionOfDetectionCode urn:oid:2.16.840.1.113883.13.12 (Clinical Focus: NHSN surveillance reporting;),(Data Element Scope:),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.12/expansion			
Code	Code System	Code System OID	Print Name
1505-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.27 7	Post-discharge surveillance
1510-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.27 7	Admission (during the stay in which the surgery was performed)
1516-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.27 7	Readmission to facility where procedure was performed
1517-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.27 7	Readmission to facility other than where procedure was performed

Figure 129: Occasion of HAI Detection Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Occasion of HAI Detection Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.144"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>

  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="1510-7"
    displayName="Admission (during the stay in which the surgery was performed)"/>
</observation>
```

3.81 Other Facility Discharge Act

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.228:2014-12-01
(closed)]

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Table 362: Other Facility Discharge Act Contexts

Contained By:	Contains:
Encounters Section in a LIO Report (V2) (required)	Other Facility Discharge Encounter (optional)

This act template is a wrapper around the Other Facility Discharge Encounter template. The act identifies that the contained encounter represents an encounter at a facility from which the patient has been discharged in the past four weeks, while the encounter template records the type of encounter and the type of facility. Multiple discharge encounters can be recorded. Use nullFlavor="NA" where the other facility discharge is not applicable (i.e., the patient has not been discharged from another facility in the past four weeks). Use nullFlavor="UNK" when it is unknown whether or not the patient has been discharged from another facility in the past four weeks.

Table 363: Other Facility Discharge Act Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.228:2014-12-01)					
@nullFlavor	0..1	MAY		1129-30580	urn:oid:2.16.840.1.113883.10.20.5.9.2 (NullValues_UNK_NA)
@classCode	1..1	SHALL		1129-30585	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		1129-30586	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1129-30577	
@root	1..1	SHALL		1129-30581	2.16.840.1.113883.10.20.5.6.228
@extension	1..1	SHALL		1129-30582	2014-12-01
code	1..1	SHALL		1129-30578	
@code	1..1	SHALL		1129-30583	3004-9
@codeSystem	1..1	SHALL		1129-30584	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
entryRelationship	0..*	SHOULD		1129-30576	
@typeCode	1..1	SHALL		1129-30587	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
encounter	1..1	SHALL		1129-30579	Other Facility Discharge Encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.218:2014-12-01)

Use nullFlavor="NA" where the other facility discharge is not applicable (i.e. the patient has not been discharged from another facility in the past four weeks). Use nullFlavor="UNK" when it is unknown whether or not the patient has been discharged from another facility in the past four weeks.

1. **MAY** contain zero or one [0..1] **@nullFlavor**, which **SHALL** be selected from ValueSet [NullValues UNK NA](#) urn:oid:2.16.840.1.113883.10.20.5.9.2 **STATIC** 2014-11-01 (CONF:1129-30580).
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-30585).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-30586).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30577) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.228" (CONF:1129-30581).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30582).
5. **SHALL** contain exactly one [1..1] **code** (CONF:1129-30578).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="3004-9" Patient discharged from another facility in the past four weeks (CONF:1129-30583).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1129-30584).

Where the other facility discharge is not applicable or unknown, this entryRelationship will not be present.

Multiple discharges from different facilities in the past four weeks can be recorded.

6. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:1129-30576).
 - a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1129-30587).
 - b. The entryRelationship, if present, **SHALL** contain exactly one [1..1] [Other Facility Discharge Encounter](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.218:2014-12-01) (CONF:1129-30579).

Table 364: NullValues_UNK_NA

Value Set: NullValues_UNK_NA urn:oid:2.16.840.1.113883.10.20.5.9.2 Null values of unknown and not applicable. Value Set Source: https://trifolia.lantanagroup.com/TerminologyManagement/ValueSet/View/2863			
Code	Code System	Code System OID	Print Name
UNK	HL7NullFlavor	urn:oid:2.16.840.1.113883.5.1008	Unknown
NA	HL7NullFlavor	urn:oid:2.16.840.1.113883.5.1008	Not applicable

Figure 130: Other Facility Discharge Act Example

```
<act classCode="ACT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.5.6.228"
    extension="2014-12-01" />
  <code code="3004-9"
    displayName="Patient discharged from another facility in the past four weeks"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN" />
  <!-- Can have more than one discharge from different facilities in the past four weeks
    each represented by a different encounter -->
  <!-- First encounter -->
  <entryRelationship typeCode="COMP">
    <!-- Other Facility Discharge Encounter -->
    <encounter classCode="ENC" moodCode="EVN">
      <!-- CCD Encounter activity templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" />
      <!-- Other Facility Discharge Encounter templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.218"
        extension="2014-12-01" />

      ...
    </encounter>
  </entryRelationship>

  <!-- Second encounter -->
  <entryRelationship typeCode="COMP">
    <!-- Other Facility Discharge Encounter -->
    <encounter classCode="ENC" moodCode="EVN">
      <!-- CCD Encounter activity templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" />
      <!-- Other Facility Discharge Encounter templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.218"
        extension="2014-12-01" />

      ...
    </encounter>
  </entryRelationship>
</act>
```

Figure 131: Other Facility Discharge Act - Not Applicable Example

```
<act classCode="ACT" moodCode="EVN" nullFlavor="NA">
  <templateId root="2.16.840.1.113883.10.20.5.6.228"
    extension="2014-12-01" />
  <code code="3004-9"
    displayName="Patient discharged from another facility in the past four weeks"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN" />
</act>
```

Figure 132: Other Facility Discharge Act - Unknown Example

```
<act classCode="ACT" moodCode="EVN" nullFlavor="UNK">
  <templateId root="2.16.840.1.113883.10.20.5.6.228"
    extension="2014-12-01" />
  <code code="3004-9"
    displayName="Patient discharged from another facility in the past four weeks"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN" />
</act>
```

3.82 Other Facility Discharge Encounter

```
[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.218:2014-12-01
(closed)]
```

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Table 365: Other Facility Discharge Encounter Contexts

Contained By:	Contains:
Other Facility Discharge Act (optional)	

This encounter template represents an encounter at another facility from which the patient was discharged in the past four weeks. The type of encounter is set to "IMP" (inpatient encounter) and the location participant records the type of facility.

Table 366: Other Facility Discharge Encounter Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.218:2014-12-01)					
@classCode	1..1	SHALL		1129-28234	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1129-28235	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1129-30491	
@root	1..1	SHALL		1129-30492	2.16.840.1.113883.10.20.22.4.49
templateId	1..1	SHALL		1129-28226	
@root	1..1	SHALL		1129-28233	2.16.840.1.113883.10.20.5.6.218
@extension	1..1	SHALL		1129-30290	2014-12-01
id	1..*	SHALL		1129-28222	
@nullFlavor	1..1	SHALL		1129-28230	NA
code	1..1	SHALL		1129-28223	
@code	1..1	SHALL		1129-28231	IMP
@codeSystem	1..1	SHALL		1129-30464	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
effectiveTime	1..1	SHALL		1129-28224	
@nullFlavor	1..1	SHALL		1129-30255	NA
participant	1..1	SHALL		1129-28227	
@typeCode	1..1	SHALL		1129-28239	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		1129-28228	
@classCode	1..1	SHALL		1129-28236	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC
code	1..1	SHALL		1129-28229	
@code	1..1	SHALL		1129-28238	urn:oid:2.16.840.1.114222.4.11.7238 (NHSNPreviousFacility)

1. Conforms to Encounter Activities template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.49).
2. **SHALL** contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-28234).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-28235).
4. **SHALL** contain exactly one [1..1] templateId (CONF:1129-30491) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.49" (CONF:1129-30492).
5. **SHALL** contain exactly one [1..1] templateId (CONF:1129-28226) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.218" (CONF:1129-28233).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30290).
6. **SHALL** contain at least one [1..*] id (CONF:1129-28222).
 - a. Such ids **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-28230).
7. **SHALL** contain exactly one [1..1] code (CONF:1129-28223).
 - a. This code **SHALL** contain exactly one [1..1] @code="IMP" inpatient encounter (CONF:1129-28231).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1129-30464).
8. **SHALL** contain exactly one [1..1] effectiveTime (CONF:1129-28224).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-30255).
9. **SHALL** contain exactly one [1..1] participant (CONF:1129-28227).
 - a. This participant **SHALL** contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1129-28239).
 - b. This participant **SHALL** contain exactly one [1..1] participantRole (CONF:1129-28228).
 - i. This participantRole **SHALL** contain exactly one [1..1] @classCode="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:1129-28236).
 - ii. This participantRole **SHALL** contain exactly one [1..1] code (CONF:1129-28229).
 1. This code **SHALL** contain exactly one [1..1] @code, which **SHALL** be selected from ValueSet [NHSNPreviousFacility](#) urn:oid:2.16.840.1.114222.4.11.7238 **DYNAMIC** (CONF:1129-28238).

Table 367: NHSNPreviousFacility

Value Set: NHSNPreviousFacility urn:oid:2.16.840.1.114222.4.11.7238 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the previous facility from which the patient has been discharged.),(Data Element Scope: A code identifying the type of facility the patient was previously discharged.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7238/expansion			
Code	Code System	Code System OID	Print Name
3005-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Nursing Home/Skilled Nursing Facility
3006-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Other inpatient healthcare setting (e.g., Acute Care Hospital, LTAC, Rehabilitation, etc.)

Figure 133: Other Facility Discharge Encounter Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!-- C-CDA Encounter activity templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.49" />
  <!-- Other Facility Discharge Encounter templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.218"
    extension="2014-12-01" />
  <id nullFlavor="NA" />
  <code code="IMP"
    displayName="inpatient encounter"
    codeSystem="2.16.840.1.113883.5.4"
    codeSystemName="ActCode" />
  <effectiveTime nullFlavor="NA" />
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <code code="3005-6"
        displayName="Nursing Home/Skilled Nursing Facility"
        codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN" />
    </participantRole>
  </participant>
</encounter>
```

3.83 Pathogen Identified Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.145 (closed)]

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Table 368: Pathogen Identified Observation Contexts

Contained By:	Contains:
Findings Organizer (required) Findings Section in an Infection-Type Report (optional) Findings Section in an OPC SSI Report (optional)	

This template either represents a pathogen identified or, using a code from the NHSN Pathogens Code value set, records that no pathogens were identified.

The value set table provides codes for several unspecified species—for example "Acidaminococcus species" (SNOMED CT 131202007, NHSN ACISP)—for use when a more precise code is not available. The code for an unspecified species is preferred to a genus-level code.

Table 369: Pathogen Identified Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.145)					
@classCode	1..1	SHALL		86-20909	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-20910	urn:oid:2.16.840.1.113883.5.1 001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-28261	
@root	1..1	SHALL		86-28262	2.16.840.1.113883.10.20.22.4 .2
templateId	1..1	SHALL		86-20913	
@root	1..1	SHALL		86-20914	2.16.840.1.113883.10.20.5.6. 145
id	1..1	SHALL		86-20915	
@nullFlavor	1..1	SHALL		86-22777	NA
code	1..1	SHALL		86-20916	
@code	1..1	SHALL		86-20917	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 41852-5
statusCode	1..1	SHALL		86-20918	
@code	1..1	SHALL		86-20919	urn:oid:2.16.840.1.113883.5.1 4 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		86-22716	
@nullFlavor	1..1	SHALL		86-22778	NA
value	1..1	SHALL	CD	86-20920	urn:oid:2.16.840.1.113883.13. 16 (NHSNPathogenCode)

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-20909).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-20910).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28261) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.2" (CONF:86-28262).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-20913) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.145" (CONF:86-20914).
6. **SHALL** contain exactly one [1..1] **id** (CONF:86-20915).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22777).
7. **SHALL** contain exactly one [1..1] **code** (CONF:86-20916).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="41852-5" Microorganism identified (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 **STATIC**) (CONF:86-20917).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-20918).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-20919).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-22716).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22778).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [NHSNPathogenCode](#) urn:oid:2.16.840.1.113883.13.16 **DYNAMIC** (CONF:86-20920).

Table 370: NHSNPathogenCode

Value Set: NHSNPathogenCode urn:oid:2.16.840.1.113883.13.16 (Clinical Focus: NHSN surveillance: Pathogens reported for healthcare-associated infections and antimicrobial resistance.),(Data Element Scope: A code describing an entity organism as a pathogen.),(Inclusion Criteria:),(Exclusion Criteria:) Note: Steward Expansion Version 20210514 corresponds to Pathogen Codes 2021 from idm-vendors-9.5.xlsx Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.16/expansion/20210514			
Code	Code System	Code System OID	Print Name
10021006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Rahnella aquatilis (organism)
10049004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Streptococcus ferus (organism)
10091000087105	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Bacteroides nordii (organism)
10151000087104	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Cyberlindnera fabianii (organism)
1017006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Lactobacillus casei (organism)
10171000087105	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Malassezia restricta (organism)
10210008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Chaetomium (organism)
10262005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Enterococcus malodoratus (organism)
10276006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Kandleria vitulina (organism)
10334001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Yersinia intermedia (organism)
...			

Figure 134: Pathogen Identified Observation Example - Pathogen Identified

```
<observation classCode="OBS" moodCode="EVN">
  <!-- C-CDA Result Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
  <!-- HAI Pathogen Identified Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.145"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="41852-5"
        displayName="Microorganism identified"/>
  <statusCode code="completed"/>
  <effectiveTime nullFlavor="NA"/>
  <value xsi:type="CD"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED"
        code="116197008"
        displayName="Staphylococcus, coagulase negative (organism)"/>
</observation>
```

Figure 135: Pathogen Identified Observation Example - No Pathogen Identified

```
<observation classCode="OBS" moodCode="EVN">
  <!-- [C-CDA R1.1] Result Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2" />
  <!-- [HAI R1] Pathogen Identified Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.145" />
  <id nullFlavor="NA" />
  <code code="41852-5"
        displayName="Microorganism identified"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC" />
  <statusCode code="completed" />
  <effectiveTime nullFlavor="NA" />
  <value xsi:type="CD" code="3119-7"
        displayName="No pathogen identified"
        codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN" />
</observation>
```

3.84 Pathogen Identified Observation (LIO) (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.146:2014-12-01 (closed)]

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Table 371: Pathogen Identified Observation (LIO) (V2) Contexts

Contained By:	Contains:
Findings Section in a LIO Report (V2) (required)	Specimen Collection Procedure (LIO) (required) Bacterial Isolate Tested for Carbapenemase Observation (optional)

This template records a laboratory-identified microorganism and details of the specimen collection. The microorganism is recorded in the same way as in the Findings Organizer in infection reports. If the bacterial isolate was one of CRE-Klebsiella (CREKLEB), CRE-Ecoli (CREECOLI), or CRE-Enterobacter (CREENTERO) any tests for carbapenemase are recorded, along with any carbapenemases identified.

Table 372: Pathogen Identified Observation (LIO) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.146:2014-12-01)					
@classCode	1..1	SHALL		1129-19867	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1129-19868	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1129-30525	
@root	1..1	SHALL		1129-30526	2.16.840.1.113883.10.20.22.4.2
templateId	1..1	SHALL		1129-19879	
@root	1..1	SHALL		1129-19880	2.16.840.1.113883.10.20.5.6.146
@extension	1..1	SHALL		1129-30527	2014-12-01
id	1..1	SHALL		1129-19881	
@nullFlavor	1..1	SHALL		1129-22774	NA
code	1..1	SHALL		1129-19869	
@code	1..1	SHALL		1129-19870	41852-5
@codeSystem	1..1	SHALL		1129-30436	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
statusCode	1..1	SHALL		1129-19871	
@code	1..1	SHALL		1129-19872	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		1129-22732	
value	1..1	SHALL	CD	1129-19873	urn:oid:2.16.840.1.114222.4.11.3194 (NHSNSignificantPathogenCode)
entryRelationship	1..1	SHALL		1129-19875	
@typeCode	1..1	SHALL		1129-30434	COMP
procedure	1..1	SHALL		1129-19876	Specimen Collection Procedure (LIO) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.165)

XPath	Card.	Verb	Data Type	CONF#	Value
entryRelationship	0..1	MAY		1129-30416	
@typeCode	1..1	SHALL		1129-30435	COMP
observation	1..1	SHALL		1129-30417	Bacterial Isolate Tested for Carbapenemase Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.222:2014-12-01)

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-19867).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-19868).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30525) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.2" (CONF:1129-30526).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-19879) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.146" (CONF:1129-19880).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30527).
6. **SHALL** contain exactly one [1..1] **id** (CONF:1129-19881).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:1129-22774).
7. **SHALL** contain exactly one [1..1] **code** (CONF:1129-19869).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="41852-5" Microorganism identified (CONF:1129-19870).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1129-30436).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1129-19871).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1129-19872).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1129-22732).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the code **SHALL** be selected from ValueSet [NHSNSignificantPathogenCode](#) urn:oid:2.16.840.1.114222.4.11.3194 **DYNAMIC** (CONF:1129-19873).
11. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1129-19875) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" (CONF:1129-30434).

- b. **SHALL** contain exactly one [1..1] [Specimen Collection Procedure \(LIO\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.165) (CONF:1129-19876).

If value is CRE-Klebsiella (CREKLEB), CRE-Ecoli (CREECOLI), or CRE-Enterobacter (CREENTERO), then this entryRelationship is required.

12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1129-30416) such that it
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** (CONF:1129-30435).
 - SHALL** contain exactly one [1..1] [Bacterial Isolate Tested for Carbapenemase Observation](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.222:2014-12-01) (CONF:1129-30417).

Table 373: NHSNSignificantPathogenCode

Value Set: NHSNSignificantPathogenCode urn:oid:2.16.840.1.114222.4.11.3194 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the significant pathogen identified.),(Data Element Scope: A coded observation value representing the type of significant pathogen.),(Inclusion Criteria:),(Exclusion Criteria:)			
This value set was imported on 9/16/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3194/expansion			
Code	Code System	Code System OID	Print Name
113727004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Vancomycin resistant enterococcus (organism)
115329001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Methicillin resistant Staphylococcus aureus (organism)
2010-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	MDR-Acinetobacter
2016-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	CephR-Klebsiella
2017-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	CRE-Klebsiella
2018-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	CRE-E. coli
2019-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	CRE-Enterobacter
417943000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Methicillin susceptible Staphylococcus aureus (organism)
5933001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Clostridioides difficile (organism)

Figure 136: Pathogen Identified Observation (LIO) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- C-CDA Result Observation templateID -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
  <!-- HAI Pathogen Identified Observation (LIO) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.146"
    extension="2014-12-01"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
    code="41852-5" displayName="Microorganism Identified"/>
  <statusCode code="completed"/>
  <effectiveTime nullFlavor="NA"/>
  <value xsi:type="CD" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    code="5933001"
    displayName="Clostridium difficile (organism)"/>

  <!-- Specimen collection procedure contains specimen collection encounter -->
  <entryRelationship typeCode="COMP">
    <procedure classCode="PROC" moodCode="EVN">
      <!-- Specimen Collection Procedure (LIO) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.165" />
      ...
    </procedure>
  </entryRelationship>
  <!-- If value is CRE-Klebsiella (CREKLEB), CRE-Ecoli (CREECOLI), or CRE-Enterobacter
    (CREENTERO), then this entryRelationship is required -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Bacterial Isolate Tested for Carbapenemase Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.222"
        extension="2014-12-01"/>
      ...
    </observation>
  </entryRelationship>
</observation>
```

3.85 Pathogen Ranking Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.147 (closed)]

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Table 374: Pathogen Ranking Observation Contexts

Contained By:	Contains:
Findings Organizer (required)	

The NHSN pathogen findings record up to three pathogens. This observation records the relative importance of a pathogen in that set with respect to its role in the infection.

The value is a coded ordinal, where the value of @code is the number 1 or 2 or 3; where 1 represents the highest-ranked pathogen of up to three pathogens recorded.

Table 375: Pathogen Ranking Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.147)					
@classCode	1..1	SHALL		86-19787	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-19788	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-28263	
@root	1..1	SHALL		86-28264	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-19797	
@root	1..1	SHALL		86-19798	2.16.840.1.113883.10.20.5.6.147
id	1..1	SHALL		86-19799	
@nullFlavor	1..1	SHALL		86-22780	NA
code	1..1	SHALL		86-19789	
@code	1..1	SHALL		86-19790	ASSERTION
@codeSystem	1..1	SHALL		86-28384	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-19791	
@code	1..1	SHALL		86-19792	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CO	86-19793	
@code	1..1	SHALL		86-28409	
@codeSystem	1..1	SHALL		86-28411	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-19787).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-19788).
4. **SHALL** contain exactly one [1..1] templateId (CONF:86-28263) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28264).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-19797) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.147" (CONF:86-19798).

6. **SHALL** contain exactly one [1..1] **id** (CONF:86-19799).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CONF:86-22780).
7. **SHALL** contain exactly one [1..1] **code** (CONF:86-19789).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** Assertion (CONF:86-19790).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28384).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-19791).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-19792).
9. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CO"** (CONF:86-19793).
 - a. This value **SHALL** contain exactly one [1..1] **@code** (CONF:86-28409).
 - i. **SHALL** be the number 1 or 2 or 3, where 1 represents the highest-ranked pathogen of up to three pathogens recorded (CONF:86-28410).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.277"** (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:86-28411).

Figure 137: Pathogen Ranking Observation Example

```

<observation classCode="OBS" moodCode="EVN">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Pathogen Ranking Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.147"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4"
        codeSystemName="HL7"
        code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CO"
        codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="1"
        displayName="Pathogen ranking 1"/>
</observation>

```

3.86 Pathogen Reduced Apheresis Platelet Usage Summary Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.240:2016-08-01 (closed)]

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Table 376: Pathogen Reduced Apheresis Platelet Usage Summary Observation Contexts

Contained By:	Contains:
Summary Encounter (HV) (V2) (optional)	ISBT Product Code Summary Observation (V2) (optional)

This template represents the number of units transfused, aliquots transfused, or total discards for pathogen reduced apheresis platelets.

If the value = 0, there *SHALL NOT* be a contained observation. If the value is > 0 then each specific subcategory product that is > 0 *SHALL* be listed in a separate contained ISBT Product Code Summary Observation.

Table 377: Pathogen Reduced Apheresis Platelet Usage Summary Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.240:2016-08-01)					
@classCode	1..1	SHALL		3247-30789	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3247-30790	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3247-30780	
@root	1..1	SHALL		3247-30784	2.16.840.1.113883.10.20.5.6.240
@extension	1..1	SHALL		3247-30785	2016-08-01
code	1..1	SHALL		3247-30781	
@code	1..1	SHALL		3247-30786	urn:oid:2.16.840.1.113883.10.20.5.9.5 (NHSN Pathogen Reduced Apheresis Platelet Usage)
statusCode	1..1	SHALL		3247-30782	
@code	1..1	SHALL		3247-30787	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	INT	3247-30788	
entryRelationship	0..*	SHOULD		3247-30779	
observation	1..1	SHALL		3247-30783	ISBT Product Code Summary Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-30789).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-30790).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3247-30780) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.240" (CONF:3247-30784).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2016-08-01" (CONF:3247-30785).
4. **SHALL** contain exactly one [1..1] **code** (CONF:3247-30781).
 - a. This code **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [NHSN Pathogen Reduced Apheresis Platelet Usage](#) urn:oid:2.16.840.1.113883.10.20.5.9.5 **DYNAMIC** (CONF:3247-30786).

5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3247-30782).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3247-30787).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="INT"** (CONF:3247-30788).
7. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:3247-30779).
 - a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **ISBT Product Code Summary Observation (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01) (CONF:3247-30783).
8. If the value = 0 there **SHALL NOT** be a contained observation. If the value is > 0 then each specific subcategory product that is > 0 **SHALL** be listed in a separate contained ISBT Product Code Summary Observation (CONF:3247-30791).

Table 378: NHSN Pathogen Reduced Apheresis Platelet Usage

Value Set: NHSN Pathogen Reduced Apheresis Platelet Usage urn:oid:2.16.840.1.113883.10.20.5.9.5 (Clinical Focus: NHSN surveillance reporting: monthly reporting denominators for hemovigilance),(Data Element Scope: Code identifying the type of observation.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.5/expansion			
Code	Code System	Code System OID	Print Name
3568-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of units transfused: Platelets: Apheresis: Psoralen-treated and in plasma
3569-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of aliquots transfused: Platelets: Apheresis: Psoralen-treated and in plasma
...			

Figure 138: Pathogen Reduced Apheresis Platelet Usage Summary Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- [HAI R3D1.1] Pathogen Reduced Apheresis Platelet Usage Summary Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.240" extension="2016-08-01" />
  <code codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="3571-7"
    displayName="Number of units transfused - Platelets/Apheresis/Psoralein-Treated and in
Platelet Additive Solution" />
  <statusCode code="completed" />
  <value xsi:type="INT" value="75" />
  <!--
    If the value = 0, there SHALL NOT be a contained observation.
    If the value is > 0 then each specific subcategory product that is > 0
    SHALL be listed in a separate contained ISBT Product Code Summary Observation.
  -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- ISBT Product Code Summary Observation (V2) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.238" extension="2016-08-01" />
      ...
    </observation>
  </entryRelationship>
  ...
</observation>
```

3.87 Patient Admitted This Encounter Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.266:2020-04-01 (open)]

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Table 379: Patient Admitted This Encounter Observation Contexts

Contained By:	Contains:
Specimen Collection Encounter (ARO) (V2) (required)	

This observation represents whether or not the patient was admitted to an inpatient location during this encounter. If the patient was admitted to an inpatient location during this encounter, set the value to true. If the patient was not admitted to an inpatient location during this encounter, set the value to false.

Table 380: Patient Admitted This Encounter Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.266:2020-04-01)					
@classCode	1..1	SHALL		4459-5	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		4459-6	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		4459-4	
@root	1..1	SHALL		4459-12	2.16.840.1.113883.10.20.5.6.266
@extension	1..1	SHALL		4459-13	2020-04-01
code	1..1	SHALL		4459-1	
@code	1..1	SHALL		4459-7	95415-6
@codeSystem	1..1	SHALL		4459-8	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL	BL	4459-3	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4459-5).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4459-6).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4459-4).
 - a. This templateId **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.266" (CONF:4459-12).
 - b. This templateId **SHALL** contain exactly one [1..1] **@extension**="2020-04-01" (CONF:4459-13).
4. **SHALL** contain exactly one [1..1] **code** (CONF:4459-1).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="95415-6" Patient admitted as an inpatient (CONF:4459-7).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:4459-8).

If the patient was admitted to an inpatient location during this encounter, set the value to true. If the patient was not admitted to an inpatient location during this encounter, set the value to false.

5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="BL" (CONF:4459-3).

Figure 139: Patient Admitted This Encounter Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- [HAI R3N1] Patient Admitted This Encounter Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.266" extension="2020-04-01" />
  <code code="95415-6"
    displayName="Patient admitted as an inpatient"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" />
  <!-- If the patient was admitted to an inpatient location during this
    encounter, set the value to true.
    If the patient was not admitted to an inpatient location during this
    encounter, set the value to false. -->
  <value xsi:type="BL" value="true" />
</observation>
```

3.88 PICC/IV Team

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.148 (closed)]

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Table 381: PICC/IV Team Contexts

Contained By:	Contains:
Procedure Details Clinical Statement in a CLIP Report (required)	

This observation records whether the person who performed the central line insertion was a member of the PICC/IV team. It is used in the Central-Line Insertion Practice Report.

If the performer was a member of the PICC/IV team, set the value of @negationInd to false. If the performer was not a member of the PICC/IV team, set the value of @negationInd to true.

Table 382: PICC/IV Team Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.148)					
@classCode	1..1	SHALL		86-21214	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21215	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21216	
templateId	1..1	SHALL		86-22002	
@root	1..1	SHALL		86-22003	2.16.840.1.113883.10.20.5.6.148
id	1..1	SHALL		86-22004	
@nullFlavor	1..1	SHALL		86-22779	NA
code	1..1	SHALL		86-21217	
@code	1..1	SHALL		86-21218	ASSERTION
@codeSystem	1..1	SHALL		86-28385	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-21219	
@code	1..1	SHALL		86-21220	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = completed
value	1..1	SHALL	CD	86-21221	
@code	1..1	SHALL		86-21222	2213-7
@codeSystem	1..1	SHALL		86-28404	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21214).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21215).
3. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-21216).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22002) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.148" (CONF:86-22003).
5. **SHALL** contain exactly one [1..1] **id** (CONF:86-22004).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22779).
6. **SHALL** contain exactly one [1..1] **code** (CONF:86-21217).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-21218).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28385).

7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21219).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" COMPLETED (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4 **STATIC**) (CONF:86-21220).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:86-21221).
 - a. This **value** **SHALL** contain exactly one [1..1] **@code**="2213-7" Performer was a member of PICC/IV Team (CONF:86-21222).
 - b. This **value** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:86-28404).

Figure 140: PICC/IV Team Example

```
<observation moodCode="EVN" classCode="OBS" negationInd="false">
  <templateId root="2.16.840.1.113883.10.20.5.6.148"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="2213-7"
    displayName="Performer was a member of PICC/IV Team"/>
</observation>
```

3.89 Positive Blood Culture Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.149:2019-04-01 (closed)]

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Table 383: Positive Blood Culture Observation (V3) Contexts

Contained By:	Contains:
Infection Indicator Organizer (V5) (required)	Suspected Source Observation (optional) Blood Collection Location (optional)

This clinical statement is an infection indicator. It is used in an Evidence of Infection (Dialysis) Report. When the positive blood culture was present, set the value of **@negationInd** to false and record the event date in **effectiveTime/@low**. When the positive blood culture was not present, set the value of **@negationInd** to true set **effectiveTime/low/@nullFlavor**='NA'.

Table 384: Positive Blood Culture Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.149:2019-04-01)					
@classCode	1..1	SHALL		4395-19818	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		4395-19819	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		4395-19820	
templateId	1..1	SHALL		4395-30528	
@root	1..1	SHALL		4395-30529	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		4395-19837	
@root	1..1	SHALL		4395-19838	2.16.840.1.113883.10.20.5.6.149
@extension	1..1	SHALL		4395-30530	2019-04-01
id	1..1	SHALL		4395-19839	
@nullFlavor	1..1	SHALL		4395-22781	NA
code	1..1	SHALL		4395-19821	
@code	1..1	SHALL		4395-19822	ASSERTION
@codeSystem	1..1	SHALL		4395-30605	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		4395-19823	
@code	1..1	SHALL		4395-19824	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		4395-30676	
low	1..1	SHALL		4395-30677	
@nullFlavor	0..1	MAY		4395-30678	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA
@value	0..1	MAY		4395-30679	
value	1..1	SHALL	CD	4395-19825	
@code	1..1	SHALL		4395-19826	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 1955-4

XPath	Card.	Verb	Data Type	CONF#	Value
entryRelationship	1..1	SHOULD		4395-30308	
@typeCode	1..1	SHALL		4395-30309	CAUS
@inversionInd	1..1	SHALL		4395-30310	true
observation	1..1	SHALL		4395-30311	Suspected Source Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.168)
entryRelationship	1..1	SHOULD		4395-30312	
@typeCode	1..1	SHALL		4395-30313	COMP
observation	1..1	SHALL		4395-30314	Blood Collection Location (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.219:2014-12-01)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4395-19818).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4395-19819).

When the positive blood culture was present, set the value of @negationInd to false. When the positive blood culture was not present, set the value of @negationInd to true.

4. **SHALL** contain exactly one [1..1] @negationInd (CONF:4395-19820).
5. **SHALL** contain exactly one [1..1] templateId (CONF:4395-30528) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:4395-30529).
6. **SHALL** contain exactly one [1..1] templateId (CONF:4395-19837) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.149" (CONF:4395-19838).
 - b. **SHALL** contain exactly one [1..1] @extension="2019-04-01" (CONF:4395-30530).
7. **SHALL** contain exactly one [1..1] id (CONF:4395-19839).
 - a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:4395-22781).
8. **SHALL** contain exactly one [1..1] code (CONF:4395-19821).
 - a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:4395-19822).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4395-30605).

9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4395-19823).
- a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:4395-19824).

10. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4395-30676).

When the positive blood culture was present, record the event date in **effectiveTime/@low**.
When the positive blood culture was not present, set **effectiveTime/low/@nullFlavor='NA'**.

- a. This **effectiveTime** **SHALL** contain exactly one [1..1] **low** (CONF:4395-30677).
 - i. This **low** **MAY** contain zero or one [0..1] **@nullFlavor="NA"** (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:4395-30678).
 - ii. This **low** **MAY** contain zero or one [0..1] **@value** (CONF:4395-30679).
11. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:4395-19825).
- a. This **value** **SHALL** contain exactly one [1..1] **@code="1955-4"** Positive blood culture (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:4395-19826).

If the value of **@negationInd** is "false" this observation is required to contain the following **entryRelationship**

12. **SHOULD** contain exactly one [1..1] **entryRelationship** (CONF:4395-30308) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="CAUS"** (CONF:4395-30309).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:4395-30310).
 - c. **SHALL** contain exactly one [1..1] **Suspected Source Observation** (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.168) (CONF:4395-30311).

If the value of **@negationInd** is "false" this observation is required to contain the following **entryRelationship**

13. **SHOULD** contain exactly one [1..1] **entryRelationship** (CONF:4395-30312) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** (CONF:4395-30313).
 - b. **SHALL** contain exactly one [1..1] **Blood Collection Location** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.219:2014-12-01) (CONF:4395-30314).

14. If the value of **@negationInd** is 'false' (CONF:4395-19827).

- a. The report **SHALL** contain a Findings Section (CONF:4395-19832).

15. If the value of **@negationInd** is 'true' (CONF:4395-19833).

- a. The report **SHALL NOT** contain a Findings Section (CONF:4395-19834).

Figure 141: Positive Blood Culture Observation (V3) Example

```
<!-- When the positive blood culture was present, set the value of @negationInd to false
      and record the event date in effectiveTime/@low. When the positive blood culture was
      not present, set the value of @negationInd to true and set
effectiveTime/low/@nullFlavor='NA'. -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Positive Blood Culture Observation (V3) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.149"
    extension="2019-01-01"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <effectiveTime xsi:type="IVL_TS">
    <low value="20180405" />
  </effectiveTime>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="1955-4"
    displayName="Positive blood culture"/>

  <!-- Suspected Source of Pathogen -->
  <entryRelationship typeCode="CAUS" inversionInd="true">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- HAI Suspected Source of Pathogen templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.168"/>
      ...
    </observation>
  </entryRelationship>
  <!-- Blood Collection Location -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.5.6.219"
        extension="2014-12-01"/>
      ...
    </observation>
  </entryRelationship>
</observation>
```

3.90 Positive Test for Carbapenemase Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.225:2014-12-01 (closed)]

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Table 385: Positive Test for Carbapenemase Observation Contexts

Contained By:	Contains:
Bacterial Isolate Tested for Carbapenemase Observation (optional)	Carbapenemase Type Identified Observation (optional)

This template represents whether or not the bacterial isolate tested positive for carbapenemase. When the bacterial isolate tested positive, set the value of @negationInd to false. When the bacterial isolate did not test positive, set the value of @negationInd to true. When it is unknown whether or not the bacterial isolate tested positive, set the value of @nullFlavor to "UNK".

Table 386: Positive Test for Carbapenemase Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.225:2014-12-01)					
@nullFlavor	0..1	MAY		1129-30413	UNK
@classCode	1..1	SHALL		1129-30410	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1129-30411	urn:oid:2.16.840.1.113883.5.1 001 (HL7ActMood) = EVN
@negationInd	0..1	SHOULD		1129-30412	
templateId	1..1	SHALL		1129-30396	
@root	1..1	SHALL		1129-30405	2.16.840.1.113883.10.20.22.4 .2
templateId	1..1	SHALL		1129-30531	
@root	1..1	SHALL		1129-30532	2.16.840.1.113883.10.20.5.6. 225
@extension	1..1	SHALL		1129-30533	2014-12-01
id	1..1	SHALL		1129-30397	
@nullFlavor	1..1	SHALL		1129-30407	NA
code	1..1	SHALL		1129-30393	
@code	1..1	SHALL		1129-30402	ASSERTION
@codeSystem	1..1	SHALL		1129-30606	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1129-30394	
@code	1..1	SHALL		1129-30403	urn:oid:2.16.840.1.113883.5.1 4 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		1129-30589	
@nullFlavor	1..1	SHALL		1129-30590	urn:oid:2.16.840.1.113883.5.1 008 (HL7NullFlavor) = NA
value	1..1	SHALL	CD	1129-30395	
@code	1..1	SHALL		1129-30404	2048-7
@codeSystem	1..1	SHALL		1129-30441	urn:oid:2.16.840.1.113883.6.2 77 (cdcNHSN) =

XPath	Card.	Verb	Data Type	CONF#	Value
					2.16.840.1.113883.6.277
entryRelationship	0..*	SHOULD		1129-30392	
@typeCode	1..1	SHALL		1129-30400	COMP
observation	1..1	SHALL		1129-30462	Carbapenemase Type Identified Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.226:2014-12-01)

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).

When it is unknown whether or not the bacterial isolate tested positive, set the value of @nullFlavor to "UNK".

2. **MAY** contain zero or one [0..1] @nullFlavor="UNK" (CONF:1129-30413).
3. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-30410).
4. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-30411).

When the bacterial isolate tested positive, set the value of @negationInd to false. When the bacterial isolate did not test positive, set the value of @negationInd to true.

5. **SHOULD** contain zero or one [0..1] @negationInd (CONF:1129-30412).
6. **SHALL** contain exactly one [1..1] templateId (CONF:1129-30396) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.2" (CONF:1129-30405).
7. **SHALL** contain exactly one [1..1] templateId (CONF:1129-30531) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.225" (CONF:1129-30532).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30533).
8. **SHALL** contain exactly one [1..1] id (CONF:1129-30397).
 - a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-30407).
9. **SHALL** contain exactly one [1..1] code (CONF:1129-30393).
 - a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1129-30402).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1129-30606).
10. **SHALL** contain exactly one [1..1] statusCode (CONF:1129-30394).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1129-30403).

11. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1129-30589).
 - a. This **effectiveTime** **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1129-30590).
12. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:1129-30395).
 - a. This value **SHALL** contain exactly one [1..1] **@code="2048-7"** Isolate tested positive for carbapenemase (CONF:1129-30404).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.277"** (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1129-30441).

If the value of **@negationInd** is "false" this observation is required to contain at least one of the following **entryRelationships**.

13. **SHOULD** contain zero or more [0..*] **entryRelationship** (CONF:1129-30392) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** (CONF:1129-30400).
 - b. **SHALL** contain exactly one [1..1] Carbapenemase Type Identified Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.226:2014-12-01) (CONF:1129-30462).

Figure 142: Positive Test for Carbapenemase Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Result Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.2" />
  <!-- Positive Test for Carbapenemase Observation templateId-->
  <templateId root="2.16.840.1.113883.10.20.5.6.225"
    extension="2014-12-01"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
    codeSystemName="ActionCode"/>
  <statusCode code="completed"/>
  <effectiveTime nullFlavor="NA"/>
  <value xsi:type="CD" code="2048-7"
    displayName="Isolate tested positive for carbapenemase"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"/>
  <entryRelationship typeCode="COMP">
    <!-- Carbapenemase Type Identified Observation -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- C-CDA Result Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
      <!-- Carbapenemase Type Identified Observation templateId-->
      <templateId root="2.16.840.1.113883.10.20.5.6.226"
        extension="2014-12-01"/>
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <!-- Carbapenemase Type Identified Observation -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- C-CDA Result Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.2"/>
      <!-- Carbapenemase Type Identified Observation templateId-->
      <templateId root="2.16.840.1.113883.10.20.5.6.226"
        extension="2014-12-01"/>
      ...
    </observation>
  </entryRelationship>
</observation>
```

3.91 Post-Procedure Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.150 (closed)]

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Table 387: Post-Procedure Observation Contexts

Contained By:	Contains:
Infection Details Section in a BSI Report (optional) Infection Details Section in a UTI Report (optional) Infection Details Section in a VAE Report (optional)	Procedure Details Clinical Statement in an Infection-Type Report (optional)

This clinical statement represents a post procedure. In the context in which it is used in the HAI IG, this observation records whether the reported infection occurred during a post-procedure period. If the infection was post-procedure, then a date of the procedure and a procedure code are required.

If the infection was post-procedure, set the value of @negationInd to false. If the infection was not post-procedure, set the value of @negationInd to true.

Table 388: Post-Procedure Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.150)					
@classCode	1..1	SHALL		86-19715	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-19716	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-19717	
templateId	1..1	SHALL		86-28265	
@root	1..1	SHALL		86-28266	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-19742	
@root	1..1	SHALL		86-19743	2.16.840.1.113883.10.20.5.6.150
id	1..1	SHALL		86-19882	
@nullFlavor	1..1	SHALL		86-22782	NA
code	1..1	SHALL		86-19719	
@code	1..1	SHALL		86-19720	ASSERTION
@codeSystem	1..1	SHALL		86-28397	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-19721	
@code	1..1	SHALL		86-19722	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-19784	
@code	1..1	SHALL		86-19785	3188-0
@codeSystem	1..1	SHALL		86-19786	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
entryRelationship	0..1	SHOULD		86-19725	
@typeCode	1..1	SHALL		86-19726	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
procedure	1..1	SHALL		86-19727	Procedure Details Clinical Statement in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.154)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-19715).

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-19716).
4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-19717).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28265) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28266).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-19742) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.150" (CONF:86-19743).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-19882).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22782).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-19719).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-19720).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28397).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-19721).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-19722).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:86-19784).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="3188-0" Infection occurred post-procedure (CONF:86-19785).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:86-19786).
11. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:86-19725).
 - a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **@typeCode**="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-19726).
 - b. The entryRelationship, if present, **SHALL** contain exactly one [1..1] [Procedure Details Clinical Statement in an Infection-Type Report](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.154) (CONF:86-19727).
 - c. If the value of **@negationInd** is false this entryRelationship **SHALL** be present (CONF:86-19728).

Figure 143: Post-Procedure Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Post-procedure Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.150"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4"
    code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="3188-0"
    displayName="Infection occurred post-procedure"/>
  ...
  <entryRelationship typeCode="REFR">
    <procedure classCode="PROC" moodCode="EVN">
      <!-- C-CDA Procedure Activity Procedure template -->
      <templateId root="2.16.840.1.113883.10.20.22.4.14" />
      <!-- HAI Procedure Details CS in an infection-type report template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.154" />
      ...
    </procedure>
  </entryRelationship>
</observation>
```

3.92 Primary C. Difficile Testing Method This Quarter

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.221:2014-12-01
(closed)]

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Table 389: Primary C. Difficile Testing Method This Quarter Contexts

Contained By:	Contains:
Summary Data Section (POM) [V3] (optional)	

This template represents the primary testing method for C. difficile that is used most often for this quarter by the facility's laboratory or by the outside laboratory where the facility's testing is performed. If the testing method is other than one specified in NHSNCdiffTestMethod value set, use value/@nullFlavor="OTH" and enter the testing method in value/originalText.

Table 390: Primary C. Difficile Testing Method This Quarter Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.221:2014-12-01)					
@classCode	1..1	SHALL		1129-30327	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1129-30328	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1129-30534	
@root	1..1	SHALL		1129-30535	2.16.840.1.113883.10.20.5.6.221
@extension	1..1	SHALL		1129-30536	2014-12-01
code	1..1	SHALL		1129-30318	
@code	1..1	SHALL		1129-30323	2029-7
@codeSystem	1..1	SHALL		1129-30324	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
statusCode	1..1	SHALL		1129-30320	
@code	1..1	SHALL		1129-30326	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	1129-30329	urn:oid:2.16.840.1.114222.4.117242 (NHSNCdiffTestMethod)
@nullFlavor	0..1	MAY		1129-30331	OTH
originalText	0..1	MAY		1129-30332	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-30327).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-30328).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30534) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.221" (CONF:1129-30535).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30536).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1129-30318).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="2029-7" C. difficile primary testing method used most often for this quarter (CONF:1129-30323).

- b. This code **SHALL** contain exactly one [1..1]
`@codeSystem="2.16.840.1.113883.6.277"` (CodeSystem: cdcNHSN
urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:1129-30324).
- 5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1129-30320).
 - a. This statusCode **SHALL** contain exactly one [1..1] `@code="completed"` Completed
(CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**)
(CONF:1129-30326).
- 6. **SHALL** contain exactly one [1..1] **value** with `@xsi:type="CD"`, where the code **SHOULD** be
selected from ValueSet [NHSNCdiffTestMethod](#) urn:oid:2.16.840.1.114222.4.11.7242
DYNAMIC (CONF:1129-30329).

If the testing method is other than one specified in NHSN, use nullFlavor="OTH" and enter testing method in originalText.

- a. This value **MAY** contain zero or one [0..1] `@nullFlavor="OTH"` (CONF:1129-30331).
- If nullFlavor="OTH" then the testing method is to be entered in originalText.
- b. This value **MAY** contain zero or one [0..1] **originalText** (CONF:1129-30332).

Table 391: NHSNCdiffTestMethod

Value Set: NHSNCdiffTestMethod urn:oid:2.16.840.1.114222.4.11.7242

(Clinical Focus: NHSN surveillance reporting: Testing details for C. difficile),(Data Element Scope: An observation value that represents the primary testing method for C. difficile that is used most often for this quarter by the facility's laboratory or by the outside laboratory where the facility's testing is performed.),(Inclusion Criteria:),(Exclusion Criteria:)

This value set was imported on 12/8/2020 with a version of Latest.

Value Set Source:

<https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7242/expansion>

Code	Code System	Code System OID	Print Name
2030-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Enzyme immunoassay (EIA) for toxin
2031-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Cell cytotoxicity neutralization assay
2032-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Nucleic acid amplification test (NAAT)
2033-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Glutamate dehydrogenase (GDH) antigen plus enzyme immunoassay (EIA) for toxin
2034-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Glutamate dehydrogenase (GDH) plus nucleic acid amplification test (NAAT)
2035-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Glutamate dehydrogenase (GDH) plus enzyme immunoassay (EIA) for toxin, followed by nucleic acid amplification test (NAAT) for discrepant results
2036-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Toxigenic culture
2057-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Nucleic acid amplification test (NAAT) plus enzyme immunoassay (EIA), if NAAT positive (2-step algorithm)

Figure 144: Primary C. Difficile Testing Method This Quarter Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Primary C. Difficile Testing Method This Quarter templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.221"
    extension="2014-12-01"/>
  <code codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="2029-7"
    displayName="C. difficile primary testing method used most often for this
      quarter"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="2034-7"
    displayName="GDHNAAT - GDH plus NAAT"/>
</observation>
```

Figure 145: Primary C. Difficile Testing Method This Quarter - Other Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Primary C. Difficile Testing Method This Quarter templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.221"
    extension="2014-12-01" />
  <code codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="2029-7"
    displayName="C. difficile primary testing method used most often for this quarter" />
  <statusCode code="completed" />
  <value xsi:type="CD" nullFlavor="OTH">
    <originalText>
      Testing method other than one specified in NHSN value set
    </originalText>
  </value>
</observation>
```

3.93 Prior Discharge Encounter (V2)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.151:2014-12-01
(closed)]

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Table 392: Prior Discharge Encounter (V2) Contexts

Contained By:	Contains:
Encounters Section in a LIO Report (V2) (required)	

This template records the date of a prior discharge from the facility. It is used in a LIO Report to record a past discharge within the past four weeks. If the Prior Discharge Encounter is not applicable, use nullFlavor="NA".

Table 393: Prior Discharge Encounter (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.151:2014-12-01)					
@nullFlavor	0..1	MAY		1129-30478	NA
@classCode	1..1	SHALL		1129-21703	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1129-21704	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1129-30488	
@root	1..1	SHALL		1129-30489	2.16.840.1.113883.10.20.22.4.49
templateId	1..1	SHALL		1129-21714	
@root	1..1	SHALL		1129-21715	2.16.840.1.113883.10.20.5.6.151
@extension	1..1	SHALL		1129-30275	2014-12-01
id	1..*	SHALL		1129-21705	
@nullFlavor	1..1	SHALL		1129-21706	NA
code	1..1	SHALL		1129-21707	
@code	1..1	SHALL		1129-21708	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = IMP
effectiveTime	1..1	SHALL		1129-21709	
@nullFlavor	0..1	MAY		1129-30490	NA
high	0..1	SHOULD		1129-30423	
@value	1..1	SHALL		1129-21711	

1. Conforms to Encounter Activities template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.49).

Use nullFlavor="NA" where the prior discharge encounter is not applicable.

2. **MAY** contain zero or one [0..1] @nullFlavor="NA" (CONF:1129-30478).
3. **SHALL** contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-21703).
4. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-21704).

5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30488) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.49" (CONF:1129-30489).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-21714) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.151" (CONF:1129-21715).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2014-12-01" (CONF:1129-30275).
7. **SHALL** contain at least one [1..*] **id** (CONF:1129-21705).
 - a. Such ids **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:1129-21706).
8. **SHALL** contain exactly one [1..1] **code** (CONF:1129-21707).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="IMP" Inpatient encounter (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4 **STATIC**) (CONF:1129-21708).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1129-21709).

Use nullFlavor="NA" where the prior discharge encounter is not applicable.

- a. This effectiveTime **MAY** contain zero or one [0..1] **@nullFlavor**="NA" (CONF:1129-30490).
- b. This effectiveTime **SHOULD** contain zero or one [0..1] **high** (CONF:1129-30423).

This date must be within the past four weeks.

- i. The high, if present, **SHALL** contain exactly one [1..1] **@value** (CONF:1129-21711).

Figure 146: Prior Discharge Encounter (V2) Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!-- C-CDA Encounter activity template -->
  <templateId root="2.16.840.1.113883.10.20.22.4.49" />
  <!-- HAI Prior Discharge Encounter (V2) template -->
  <templateId root="2.16.840.1.113883.10.20.5.6.151"
    extension="2014-12-01"/>
  <id nullFlavor="NA" />
  <code codeSystem="2.16.840.1.113883.5.4"
    code="IMP"
    displayName="Inpatient encounter" />
  <effectiveTime>
    <high value="20081205"/>
  </effectiveTime>
</encounter>
```

Figure 147: Prior Discharge Encounter (V2) - Not Applicable Example

```
<encounter classCode="ENC" moodCode="EVN" nullFlavor="NA">
  <!-- CCD Encounter activity templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.49" />
  <!-- HAI Prior Discharge Encounter (V2) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.151"
    extension="2014-12-01" />
  <id nullFlavor="NA" />
  <code codeSystem="2.16.840.1.113883.5.4"
    code="IMP"
    displayName="Inpatient encounter" />
  <effectiveTime nullFlavor="NA" />
</encounter>
```

3.94 Procedure Details Clinical Statement in a CLIP Report

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.155 (closed)]

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Table 394: Procedure Details Clinical Statement in a CLIP Report Contexts

Contained By:	Contains:
Procedure Details Section in a CLIP Report (required)	PICC/IV Team (required) Recorder Observation (required) Reason for Procedure Observation (required)

This clinical statement records the detail required in a CLIP Report about the central-line insertion procedure.

If the procedure resulted in a successful central-line insertion, set the value of statusCode/@code to "completed". If the procedure did not result in a successful central-line insertion, set the value of statusCode/@code to "aborted".

The performer element records the identifier and role of the person who performed the procedure. The participant element identifies the catheter type.

Table 395: Procedure Details Clinical Statement in a CLIP Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.155)					
@classCode	1..1	SHALL		86-21605	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		86-21606	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-28267	
@root	1..1	SHALL		86-28268	2.16.840.1.113883.10.20.22.4.14
templateId	1..1	SHALL		86-21637	
@root	1..1	SHALL		86-21638	2.16.840.1.113883.10.20.5.6.155
id	1..1	SHALL		86-21639	
@nullFlavor	1..1	SHALL		86-22784	NA
code	1..1	SHALL		86-21607	
@code	1..1	SHALL		86-21608	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 233527006
statusCode	1..1	SHALL		86-21609	urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode)
effectiveTime	1..1	SHALL		86-21610	
targetSiteCode	1..1	SHALL		86-21611	urn:oid:2.16.840.1.114222.4.11.3180 (NHSNInsertionSiteCode)
performer	1..1	SHALL		86-21613	
assignedEntity	1..1	SHALL		86-21614	
id	1..1	SHALL		86-21615	
code	1..1	SHALL		86-21617	
participant	1..1	SHALL		86-21619	
@typeCode	1..1	SHALL		86-21620	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV
participantRole	1..1	SHALL		86-21621	
@classCode	1..1	SHALL		86-21622	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
playingDevice	1..1	SHALL		86-21623	
code	1..1	SHALL		86-21624	
entryRelationship	1..1	SHALL		86-21626	
@typeCode	1..1	SHALL		86-21627	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		86-21628	Recorder Observation (identifier:

XPath	Card.	Verb	Data Type	CONF#	Value
					urn:oid:2.16.840.1.113883.10.20.5.6.159
entryRelationship	1..1	SHALL		86-21629	
@typeCode	1..1	SHALL		86-21630	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		86-21631	Reason for Procedure Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.158)
entryRelationship	1..1	SHALL		86-21632	
@typeCode	1..1	SHALL		86-21633	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		86-21634	PICC/IV Team (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.148)

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21605).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21606).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28267) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28268).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21637) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.155" (CONF:86-21638).
6. **SHALL** contain exactly one [1..1] **id** (CONF:86-21639).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22784).
7. **SHALL** contain exactly one [1..1] **code** (CONF:86-21607).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="233527006" Central-line insertion (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:86-21608).
8. **SHALL** contain exactly one [1..1] **statusCode**, which **SHALL** be selected from ValueSet [ProcedureAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.22 **DYNAMIC** (CONF:86-21609).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-21610).
10. **SHALL** contain exactly one [1..1] **targetSiteCode**, which **SHALL** be selected from ValueSet [NHSNInsertionSiteCode](#) urn:oid:2.16.840.1.114222.4.11.3180 **DYNAMIC** (CONF:86-21611).
11. **SHALL** contain exactly one [1..1] **performer** (CONF:86-21613).

- a. This performer **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:86-21614).
 - i. This assignedEntity **SHALL** contain exactly one [1..1] **id** (CONF:86-21615).
 - 1. If the performer ID is not known, the value of performer/assignedEntity/id/@nullFlavor **SHALL** be UNK (CONF:86-21616).
 - ii. This assignedEntity **SHALL** contain exactly one [1..1] **code** (CONF:86-21617).
 - 1. If the occupation is recorded as a code, the value of @code **SHALL** be selected from ValueSet 2.16.840.1.114222.4.11.3181 NHSNRoleOfPerformerCode **DYNAMIC**. If the occupation is recorded as text, the value of @nullFlavor **SHALL** be OTH and the code element **SHALL** contain an originalText element recording the occupation of the performer (CONF:86-21618).
- 12. **SHALL** contain exactly one [1..1] **participant** (CONF:86-21619).
 - a. This participant **SHALL** contain exactly one [1..1] @typeCode="DEV" Device (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:86-21620).
 - b. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:86-21621).
 - i. This participantRole **SHALL** contain exactly one [1..1] @classCode="MANU" Manufactured product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:86-21622).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **playingDevice** (CONF:86-21623).
 - 1. This playingDevice **SHALL** contain exactly one [1..1] **code** (CONF:86-21624).
 - a. To record the catheter type as a code, the value of @code **SHALL** be selected from ValueSet 2.16.840.1.114222.4.11.3185 NHSNCatheterTypeCode **DYNAMIC**. Or, to record the catheter type as text, the value of @nullFlavor **SHALL** be OTH and an originalText element **SHALL** be present (CONF:86-21625).
- 13. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:86-21626) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-21627).
 - b. **SHALL** contain exactly one [1..1] Recorder Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.159) (CONF:86-21628).
- 14. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:86-21629) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" Has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-21630).
 - b. **SHALL** contain exactly one [1..1] Reason for Procedure Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.158) (CONF:86-21631).
- 15. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:86-21632) such that it

- a. **SHALL** contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-21633).
- b. **SHALL** contain exactly one [1..1] [PICC/IV Team](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.148) (CONF:86-21634).

Table 396: ProcedureAct statusCode

Value Set: ProcedureAct statusCode urn:oid:2.16.840.1.113883.11.20.9.22 (Clinical Focus: Status of a procedure activity),(Data Element Scope:),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 4/24/2019 with a version of 20190103. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.22/expansion			
Code	Code System	Code System OID	Print Name
aborted	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	aborted
active	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	active
cancelled	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	cancelled
completed	HL7ActStatus	urn:oid:2.16.840.1.113883.5.14	completed

Table 397: NHSNInsertionSiteCode

Value Set: NHSNInsertionSiteCode urn:oid:2.16.840.1.114222.4.11.3180 (Clinical Focus: Catheter insertion site for NHSN surveillance reporting of Central Line Insertion Practices (CLIP) adherence),(Data Element Scope: A code identifying the insertion target site.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3180/expansion			
Code	Code System	Code System OID	Print Name
122774002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Structure of vein of lower extremity (body structure)
122775001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Structure of vein of upper extremity (body structure)
307054003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Structure of scalp vein (body structure)
408728001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Structure of umbilical blood vessel (body structure)
63190004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Structure of jugular vein (body structure)
83419000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Femoral vein structure (body structure)
9454009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Structure of subclavian vein (body structure)

Table 398: NHSNRoleOfPerformerCode

Value Set: NHSNRoleOfPerformerCode urn:oid:2.16.840.1.114222.4.11.3181 (Clinical Focus: NHSN surveillance reporting: procedure details about central-line insertion practices (CLIP) adherence. Care team member who inserted the central line.),(Data Element Scope: A code describing the role of the performer in a procedure.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3181/expansion			
Code	Code System	Code System OID	Print Name
163W00000X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Nursing Service Providers; Registered Nurse
2212-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	PICC team
363L00000X	Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101	Physician Assistants & Advanced Practice Nursing Providers; Nurse Practitioner
398130009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Medical student (occupation)
405277009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Resident physician (occupation)
405279007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Attending physician (occupation)
4100-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	IV team
4101-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Physician assistant
4102-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Medical staff not otherwise specified
4103-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Fellow
...			

Table 399: NHSNCatheterTypeCode

Value Set: NHSNCatheterTypeCode urn:oid:2.16.840.1.114222.4.11.3185 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the type of catheter.),(Data Element Scope: A device type code that identifies the catheter type used in a central-line insertion procedure.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3185/expansion			
Code	Code System	Code System OID	Print Name
1116-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Umbilical
1117-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Tunneled (dialysis)
1118-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Tunneled (other than dialysis)
1119-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Non-tunneled (dialysis)
1120-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Non-tunneled (other than dialysis)
3115-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Peripherally inserted central catheter (PICC)

Figure 148: Procedure Details Clinical Statement in a CLIP Report Example

```
<procedure moodCode="EVN" classCode="PROC">
  <!-- C-CDA Procedure Activity Procedure templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" />
  <!-- HAI Procedure Details Clinical Statement in a CLIP Report templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.155" />
  <id nullFlavor="NA" />
  <code code="233527006"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT"
        displayName="Central-line Insertion" />
  <statusCode code="completed" />
  <effectiveTime value="20080805" />
  <targetSiteCode code="83419000"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT"
        displayName="Femoral vein" />
  <performer>
    <assignedEntity>
      <id nullFlavor="UNK" />
      <code codeSystem="2.16.840.1.113883.6.277"
            codeSystemName="cdcNHSN"
            code="4101-2"
            displayName="Physician assistant" />
    </assignedEntity>
  </performer>
  <participant typeCode="DEV">
    <participantRole classCode="MANU">
      <playingDevice>
        <code codeSystem="2.16.840.1.113883.6.277"
              codeSystemName="cdcNHSN"
              code="1119-7"
              displayName="Non-tunneled central line, dialysis" />
      </playingDevice>
    </participantRole>
  </participant>
  <entryRelationship typeCode="COMP">
    <observation moodCode="EVN" classCode="OBS" negationInd="false">
      <!-- Recorder Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.159"/>
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="RSON">
    <observation moodCode="EVN" classCode="OBS" negationInd="false">
      <!-- C-CDA Indication templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
      <!-- Reason for Procedure Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.158"/>
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <observation moodCode="EVN" classCode="OBS" negationInd="false">
      <!-- PICC/IV Team templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.148"/>
```

```

...
</observation>
</entryRelationship>
</procedure>

```

3.95 Procedure Details Clinical Statement in a Procedure Report (V2)

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.153.2 (closed)]

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Table 400: Procedure Details Clinical Statement in a Procedure Report (V2) Contexts

Contained By:	Contains:
Procedure Details Section in a Procedure Report (V2) (required)	Anesthesia Administration Clinical Statement (required) Closure Technique Procedure (required) Spinal Fusion Level Observation (optional) Revision Associated with Prior Infection Observation (optional)

This clinical statement records the detail required in a Procedure Report about a procedure. NHSN uses the procedure id, along with other data, to establish a link between a Procedure Report and an SSI Report; the value of the procedure id must be the same in both the report of a procedure and the report of a surgical-site infection resulting from that procedure. In this template, the priority code represents the main or primary procedure for the patient in the context of this report.

Table 401: Procedure Details Clinical Statement in a Procedure Report (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.153.2)					
@classCode	1..1	SHALL		1101-21654	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		1101-21655	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1101-30303	
@root	1..1	SHALL		1101-30304	2.16.840.1.113883.10.20.22.4.14
templateId	1..1	SHALL		1101-21695	
@root	1..1	SHALL		1101-30250	2.16.840.1.113883.10.20.5.6.153.2
id	1..1	SHALL		1101-21656	
code	1..1	SHALL		1101-21657	urn:oid:2.16.840.1.113883.13.17 (NHSNProcedureCategoryCode)
translation	0..1	MAY		1101-21698	
statusCode	1..1	SHALL		1101-21700	urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode)
effectiveTime	1..1	SHALL		1101-21661	
low	1..1	SHALL		1101-21662	
width	1..1	SHALL		1101-21663	
priorityCode	0..1	MAY		1101-21664	
@nullFlavor	0..1	MAY		1101-21665	NA
@code	0..1	MAY		1101-21666	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 63161005
methodCode	0..1	MAY		1101-21667	
@code	1..1	SHALL		1101-21668	
approachSiteCode	0..1	MAY		1101-21671	
@nullFlavor	0..1	MAY		1101-21672	NI

XPath	Card.	Verb	Data Type	CONF#	Value
@code	0..1	MAY		1101-21673	urn:oid:2.16.840.1.113883.13.2 (NHSNSpinalFusionApproachCode)
performer	0..1	MAY		1101-21675	
@typeCode	1..1	SHALL		1101-21676	PRF
assignedEntity	1..1	SHALL		1101-21677	
id	1..*	SHALL		1101-21678	
@root	1..1	SHALL		1101-21679	
@extension	1..1	SHALL		1101-21681	
entryRelationship	1..1	SHALL		1101-21683	
@typeCode	1..1	SHALL		1101-21684	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
substanceAdministration	1..1	SHALL		1101-21685	Anesthesia Administration Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.112)
entryRelationship	0..1	MAY		1101-21686	
@typeCode	1..1	SHALL		1101-21687	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1101-21688	Spinal Fusion Level Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.166)
entryRelationship	0..1	SHALL		1101-21690	
@typeCode	1..1	SHALL		1101-21691	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
procedure	1..1	SHALL		1101-21692	Closure Technique Procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.117)
entryRelationship	0..1	MAY		1101-30241	
@typeCode	1..1	SHALL		1101-30242	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType)

XPath	Card.	Verb	Data Type	CONF#	Value
					= COMP
observation	1..1	SHALL		1101-30243	Revision Associated with Prior Infection Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.204

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1101-21654).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1101-21655).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1101-30303) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.14" (CONF:1101-30304).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1101-21695) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.153.2" (CONF:1101-30250).
6. **SHALL** contain exactly one [1..1] **id** (CONF:1101-21656).
7. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNProcedureCategoryCode](#) urn:oid:2.16.840.1.113883.13.17 **DYNAMIC** (CONF:1101-21657).
 - a. This code **MAY** contain zero or one [0..1] **translation** (CONF:1101-21698).
 - i. This code/translation **MAY** be used for sending an ICD-10 or CPT code (CONF:1101-21699).
8. **SHALL** contain exactly one [1..1] **statusCode**, which **SHALL** be selected from ValueSet [ProcedureAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.22 **DYNAMIC** (CONF:1101-21700).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1101-21661).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1101-21662).
 - b. This effectiveTime **SHALL** contain exactly one [1..1] **width** (CONF:1101-21663).
10. **MAY** contain zero or one [0..1] **priorityCode** (CONF:1101-21664).
 - a. The priorityCode, if present, **MAY** contain zero or one [0..1] **@nullFlavor**="NA" (CONF:1101-21665).
 - b. The priorityCode, if present, **MAY** contain zero or one [0..1] **@code**="63161005" Principal (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:1101-21666).
11. **MAY** contain zero or one [0..1] **methodCode** (CONF:1101-21667).
 - a. The methodCode, if present, **SHALL** contain exactly one [1..1] **@code** (CONF:1101-21668).

- b. If the procedure category code represents a hip replacement, a methodCode element **SHALL** be present where the value of @code is selected from ValueSet 2.16.840.1.113883.13.3 NHSNHipReplacementCode **DYNAMIC** (CONF:1101-21669).
 - c. If the procedure category code represents a knee replacement, a methodCode element **SHALL** be present where the value of @code is selected from ValueSet 2.16.840.1.113883.13.4 NHSNKneeReplacementCode **DYNAMIC** (CONF:1101-21670).
- 12. **MAY** contain zero or one [0..1] **approachSiteCode** (CONF:1101-21671).
 - a. The approachSiteCode, if present, **MAY** contain zero or one [0..1] @nullFlavor="NI" (CONF:1101-21672).
 - b. The approachSiteCode, if present, **MAY** contain zero or one [0..1] @code, which **SHALL** be selected from ValueSet [NHSNSpinalFusionApproachCode](#) urn:oid:2.16.840.1.113883.13.2 **DYNAMIC** (CONF:1101-21673).
 - c. If the procedure is a fusion or refusion (code/@code is either 2137-8 or 2135-2), an approachSiteCode element **SHALL** be present. If the approach site is known, the value of @code **SHALL** be selected from ValueSet 2.16.840.1.113883.13.2 NHSNSpinalFusionApproachCode **DYNAMIC**. If the approach site is not specified, the value of code@nullFlavor **SHALL** be NI (CONF:1101-21674).
- 13. **MAY** contain zero or one [0..1] **performer** (CONF:1101-21675).
 - a. The performer, if present, **SHALL** contain exactly one [1..1] @typeCode="PRF" (CONF:1101-21676).
 - b. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1101-21677).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:1101-21678).
 - 1. Such ids **SHALL** contain exactly one [1..1] @root (CONF:1101-21679).
 - a. This @root **SHALL** be the facility's identifier (CONF:1101-21680).
 - 2. Such ids **SHALL** contain exactly one [1..1] @extension (CONF:1101-21681).
 - a. This @extension **SHALL** be the surgeon's identifier (CONF:1101-21682).
- 14. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1101-21683) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1101-21684).
 - b. **SHALL** contain exactly one [1..1] [Anesthesia Administration Clinical Statement](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.112) (CONF:1101-21685).
- 15. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1101-21686) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1101-21687).
 - b. **SHALL** contain exactly one [1..1] [Spinal Fusion Level Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.166) (CONF:1101-21688).

- c. If the procedure is a fusion or refusion, this entryRelationship **SHALL** be present (CONF:1101-21689).
16. **SHALL** contain zero or one [0..1] entryRelationship (CONF:1101-21690) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1101-21691).
 - b. **SHALL** contain exactly one [1..1] Closure Technique Procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.117) (CONF:1101-21692).
17. **MAY** contain zero or one [0..1] entryRelationship (CONF:1101-30241) such that it
- a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1101-30242).
 - b. **SHALL** contain exactly one [1..1] Revision Associated with Prior Infection Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.204) (CONF:1101-30243).
 - c. If the procedure is a total revision or a partial revision of an HPRO or KPRO, this entryRelationship **SHALL** be present (CONF:1101-30251).

Table 402: NHSNProcedureCategoryCode

Value Set: NHSNProcedureCategoryCode urn:oid:2.16.840.1.113883.13.17 (Clinical Focus: Operative procedure categories used for reporting events such as surgical site infections to NHSN.), (Data Element Scope: A code identifying the type of procedure.), (Inclusion Criteria:), (Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.17/expansion			
Code	Code System	Code System OID	Print Name
2101-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Hip prosthesis
2102-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Shunt for dialysis
2103-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Not an NHSN operation
2104-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Other operations
2105-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Abdominal aortic aneurysm repair
2106-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Herniorrhaphy
2107-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Abdominal hysterectomy
2108-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Appendix surgery
2109-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Bile duct, liver or pancreatic surgery
2110-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Breast surgery
...			

Table 403: NHSNHipReplacementCode

Value Set: NHSNHipReplacementCode urn:oid:2.16.840.1.113883.13.3 (Clinical Focus: NHSN surveillance reporting: hip replacement procedures for surgical site infections),(Data Element Scope: A method code identifying the type of hip replacement.),(Inclusion Criteria:),(Exclusion Criteria:)			
This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.3/expansion			
Code	Code System	Code System OID	Print Name
1413-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	HPRO: Total: Total Primary
1414-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	HPRO: Total: Total Revision
1415-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	HPRO: Total: Partial Revision
1416-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	HPRO: Hemi: Partial Primary
1417-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	HPRO: Hemi: Total Revision
1418-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	HPRO: Hemi: Partial Revision
1419-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	HPRO: Resurfacing: Total Primary
1420-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	HPRO: Resurfacing: Total Revision
1421-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	HPRO: Resurfacing: Partial Primary
1422-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	HPRO: Resurfacing: Partial Revision

Table 404: NHSNKneeReplacementCode

Value Set: NHSNKneeReplacementCode urn:oid:2.16.840.1.113883.13.4 (Clinical Focus: NHSN surveillance reporting: knee replacement procedures for surgical site infections),(Data Element Scope: A code identifying the type of knee replacement.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.4/expansion			
Code	Code System	Code System OID	Print Name
1406-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	KPRO: Total: Total Primary
1407-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	KPRO: Total: Total Revision
1408-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	KPRO: Total: Partial Revision
1409-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	KPRO: Hemi: Partial Primary
1411-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	KPRO: Hemi: Total Revision
1412-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	KPRO: Hemi: Partial Revision

Table 405: NHSNSpinalFusionApproachCode

Value Set: NHSNSpinalFusionApproachCode urn:oid:2.16.840.1.113883.13.2 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the spinal fusion approach.),(Data Element Scope: A coded identifying the spinal fusion procedure approach site.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.2/expansion			
Code	Code System	Code System OID	Print Name
118438002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Transoral approach (qualifier value)
1205-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Anterior and posterior
255549009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Anterior (qualifier value)
255551008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Posterior (qualifier value)

Figure 149: Code Translation Example—Procedure Report

```
<code code="2105-5"
  displayName="Abdominal aortic aneurysm repair"
  codeSystem="2.16.840.1.113883.6.277"
  codeSystemName="cdcNHSN">
  <translation code="34800"
    codeSystem="2.16.840.1.113883.6.2"
    displayName="ENDOVASCULAR REPAIR OF ABDOMINAL AORTIC ANEURYSM"
    codeSystemName="ICD9CM"/>
</code>
```

Figure 150: Spinal Fusion Approach Example

```
<procedure classCode="PROC" moodCode="EVN">
  <!-- C-CDA Procedure Activity Procedure templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" />
  <!-- Procedure Details Clinical Statement in a Procedure Report (V2) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.153.2" />
  <id root="807007ba-c8f0-4842-9c3c-4a4e4c570849" />
  <code codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="2137-8"
        displayName="Spinal Fusion" />
  <statusCode code="completed" />
  <!-- The procedure date -->
  <effectiveTime>
    <low value="20061223" />
    <width value="3" unit="h" />
  </effectiveTime>
  <!-- MAY contain -->
  <priorityCode code="63161005"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT"
        displayName="Principal"/>
  <!-- Spinal fusion approach site -->
  <approachSiteCode codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="1205-4"
        displayName="anterior posterior" />
  <!-- Surgeon who performed the procedure -->
  <performer typeCode="PRF">
    <assignedEntity classCode="ASSIGNED">
      <id root="2.16.840.1.113883.3.117.1.1.5.1.1.1" extension="987654" />
    </assignedEntity>
  </performer>
  <entryRelationship typeCode="COMP">
    <!-- Anesthesia Administration Clinical Statement -->
    <substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">
      <!-- C-CDA Medication Activity templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.16" />
      <!-- HAI Anesthesia Administration Clinical Statement templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.112" />
      ...
    </substanceAdministration>
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <!-- Spinal Fusion Level Observation -->
    <observation classCode="OBS" moodCode="EVN">
      <!-- Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4" />
      <!-- HAI Spinal Fusion Level Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.166" />
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <!-- Closure Technique Procedure -->
    <procedure classCode="PROC" moodCode="EVN">
```

```

        <!-- C-CDA Procedure Activity Procedure templateId -->
        <templateId root="2.16.840.1.113883.10.20.22.4.14" />
        <!-- HAI Closure Technique Procedure templateId -->
        <templateId root="2.16.840.1.113883.10.20.5.6.117" />
        ...
    </procedure>
</entryRelationship>
</procedure>

```

Figure 151: Hip Replacement methodCode Example

```

<procedure>
    ...
    <methodCode codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="1413-4"
        displayName="Total: Total Primary Hip Replacement"/>
</procedure>

```

Figure 152: Knee Replacement methodCode Example

```

<procedure>
    ...
    <methodCode codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="1406-8"
        displayName="Total: Total Primary Knee Replacement"/>
</procedure>

```

3.96 Procedure Details Clinical Statement in an Infection-Type Report

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.154 (closed)]

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Table 406: Procedure Details Clinical Statement in an Infection-Type Report Contexts

Contained By:	Contains:
Post-Procedure Observation (optional) Infection Details Section in an SSI Report (V2) (required)	

This clinical statement records the detail required in an infection-type report about a procedure.

Table 407: Procedure Details Clinical Statement in an Infection-Type Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.154)					
@classCode	1..1	SHALL		86-21640	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		86-21641	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-28269	
@root	1..1	SHALL		86-28270	2.16.840.1.113883.10.20.22.4.14
templateId	1..1	SHALL		86-21651	
@root	1..1	SHALL		86-21652	2.16.840.1.113883.10.20.5.6.154
id	1..1	SHALL		86-21642	
code	1..1	SHALL		86-21643	urn:oid:2.16.840.1.113883.13.17 (NHSNProcedureCategoryCode)
translation	0..*	MAY		86-21645	
statusCode	1..1	SHALL		86-21653	urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode)
effectiveTime	1..1	SHALL		86-21647	
low	1..1	SHALL		86-21648	

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. **SHALL** contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21640).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21641).
4. **SHALL** contain exactly one [1..1] templateId (CONF:86-28269) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28270).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-21651) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.154" (CONF:86-21652).
6. **SHALL** contain exactly one [1..1] id (CONF:86-21642).
7. **SHALL** contain exactly one [1..1] code (ValueSet: [NHSNProcedureCategoryCode](#) urn:oid:2.16.840.1.113883.13.17 **DYNAMIC**) (CONF:86-21643).
 - a. This code **MAY** contain zero or more [0..*] translation (CONF:86-21645).
 - i. This code/translation **MAY** be used for sending an ICD-10 or CPT code (CONF:86-21646).

8. **SHALL** contain exactly one [1..1] **statusCode** (ValueSet: [ProcedureAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.22 **DYNAMIC**) (CONF:86-21653).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-21647).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:86-21648).

Figure 153: Code Translation Example—Infection-Type Report

```
<code code="2105-5"
  displayName="Abdominal aortic aneurysm repair"
  codeSystem="2.16.840.1.113883.6.277"
  codeSystemName="cdcNHSN">
  <translation code="34800"
    codeSystem="2.16.840.1.113883.6.2"
    displayName="ENDOVASCULAR REPAIR OF ABDOMINAL AORTIC ANEURYSM"
    codeSystemName="ICD9CM"/>
</code>
```

Figure 154: Procedure Details Clinical Statement in an Infection-Type Report

```
<procedure classCode="PROC" moodCode="EVN">
  <!-- C-CDA Procedure Activity Procedure template -->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" />
  <!-- HAI Procedure Details CS in an infection-type report template -->
  <templateId root="2.16.840.1.113883.10.20.5.6.154" />
  <id root="2.16.840.1.113883.3.117.1.1.5.2.1.1.5" extension="21987654321" />
  <code code="2108-9"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    displayName="Appendix surgery" />
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20080805"/>
  </effectiveTime>
</procedure>
```

3.97 Procedure Details in an OPC Denominator for Procedure

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.259:2019-04-01 (closed)]

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Table 408: Procedure Details in an OPC Denominator for Procedure Contexts

Contained By:	Contains:
Procedure Details Section in an OPC Denominator for Procedure (required)	Anesthesia Administration Clinical Statement (required)

This template represents details about a procedure in an OPC Denominator for Procedure.

NHSN uses the procedure id, along with other data, to establish a link between an OPC Denominator for Procedure and an OPC SSI Event; the value of the procedure id must be the same in both the report of a procedure and the report of a surgical-site infection resulting from that procedure.

Table 409: Procedure Details in an OPC Denominator for Procedure Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.259:2019-04-01)					
@classCode	1..1	SHALL		4395-30584	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		4395-30585	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		4395-30563	
@root	1..1	SHALL		4395-30586	2.16.840.1.113883.10.20.22.4.14
templateId	1..1	SHALL		4395-30583	
@root	1..1	SHALL		4395-30609	2.16.840.1.113883.10.20.5.6.259
@extension	1..1	SHALL		4395-30610	2019-04-01
id	1..1	SHALL		4395-30587	
@root	1..1	SHALL		4395-30950	
@extension	1..1	SHALL		4395-30951	
code	1..1	SHALL		4395-30564	urn:oid:2.16.840.1.113883.10.20.5.9.34 (NHSNOPCProcedureCategory Code)
translation	1..1	SHALL		4395-30565	urn:oid:2.16.840.1.113883.6.12 (CPT4)
statusCode	1..1	SHALL		4395-30589	urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode)
effectiveTime	1..1	SHALL		4395-30566	
low	1..1	SHALL		4395-30590	
width	1..1	SHALL		4395-30591	
performer	0..1	MAY		4395-30570	
@typeCode	1..1	SHALL		4395-30600	PRF
assignedEntity	1..1	SHALL		4395-30571	
id	1..*	SHALL		4395-30572	

XPath	Card.	Verb	Data Type	CONF#	Value
@root	1..1	SHALL		4395-30573	
@extension	1..1	SHALL		4395-30574	
entryRelationship	1..1	SHALL		4395-30575	
@typeCode	1..1	SHALL		4395-30603	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
substanceAdministration	1..1	SHALL		4395-30576	Anesthesia Administration Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.112)

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4395-30584).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4395-30585).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30563) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.14" (CONF:4395-30586).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30583) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.259" (CONF:4395-30609).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30610).
6. **SHALL** contain exactly one [1..1] **id** (CONF:4395-30587).
Note: Procedure id
 - a. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4395-30950).
 - b. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:4395-30951).
7. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNOPCProcedureCategoryCode](#) urn:oid:2.16.840.1.113883.10.20.5.9.34 **DYNAMIC** (CONF:4395-30564).
 - a. This code **SHALL** contain exactly one [1..1] **translation**, which **SHALL** be selected from CodeSystem CPT4 (urn:oid:2.16.840.1.113883.6.12) (CONF:4395-30565).
Note: CPT Procedure Code
8. **SHALL** contain exactly one [1..1] **statusCode**, which **SHALL** be selected from ValueSet [ProcedureAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.22 **DYNAMIC** (CONF:4395-30589).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4395-30566).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4395-30590).

- b. This effectiveTime **SHALL** contain exactly one [1..1] **width** (CONF:4395-30591).
- 10. **MAY** contain zero or one [0..1] **performer** (CONF:4395-30570).
 - a. The performer, if present, **SHALL** contain exactly one [1..1] **@typeCode="PRF"** (CONF:4395-30600).
 - b. The performer, if present, **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:4395-30571).
 - i. This assignedEntity **SHALL** contain at least one [1..*] **id** (CONF:4395-30572).
 - 1. Such ids **SHALL** contain exactly one [1..1] **@root** (CONF:4395-30573).
 - a. This @root **SHALL** be the facility's identifier - this code is assigned by NHSN (CONF:4395-30601).
 - 2. Such ids **SHALL** contain exactly one [1..1] **@extension** (CONF:4395-30574).
 - a. This @extension **SHALL** be the surgeon's identifier - this code is assigned by the facility (CONF:4395-30602).
- 11. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:4395-30575) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:4395-30603).
 - b. **SHALL** contain exactly one [1..1] [Anesthesia Administration Clinical Statement](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.112) (CONF:4395-30576).

Table 410: NHSNOPCProcedureCategoryCode

Value Set: NHSNOPCProcedureCategoryCode urn:oid:2.16.840.1.113883.10.20.5.9.34 (Clinical Focus: NHSN surveillance reporting: OPC (Outpatient Procedure Component) procedure categories used for reporting outpatient surgical site infection events to NHSN),(Data Element Scope: A procedure code for OPC procedure categories.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.34/expansion			
Code	Code System	Code System OID	Print Name
2101-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Hip prosthesis
2102-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Shunt for dialysis
2106-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Herniorrhaphy
2107-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Abdominal hysterectomy
2108-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Appendix surgery
2109-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Bile duct, liver or pancreatic surgery
2110-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Breast surgery
2114-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Carotid endarterectomy
2115-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Cesarean section
2116-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Colon surgery
...			

Figure 155: Procedure Details in an OPC Denominator for Procedure Example

```
<procedure classCode="PROC" moodCode="EVN">
  <!-- [C-CDA R1.1] Procedure Activity Procedure -->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" />
  <!-- Procedure Details in an OPC Denominator for Procedure -->
  <templateId root="2.16.840.1.113883.10.20.5.6.259" extension="2019-04-01" />
  <!-- NHSN uses the procedure id, along with other data, to establish a link between
        an OPC Denominator for Procedure and an OPC SSI Event; the value of the
        procedure id must be the same in both the report of a procedure and the report
        of a surgical-site infection resulting from that procedure. -->
  <id root="2.16.840.1.113883.3.117.1.1.5.2.1.1.5" extension="21987654321" />
  <code codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="2108-9"
        displayName="Appendix surgery">
    <translation code="44970"
        displayName="Laparoscopic Procedures on the Appendix"
        codeSystem="2.16.840.1.113883.6.12"
        codeSystemName="CPT4" />
  </code>
  <statusCode code="completed" />
  <!-- The procedure date and duration -->
  <effectiveTime>
    <low value="20181223" />
    <width value="90" unit="min" />
  </effectiveTime>
  <!-- Surgeon who performed the procedure -->
  <performer typeCode="PRF">
    <assignedEntity classCode="ASSIGNED">
      <id root="2.16.840.1.113883.3.117.1.1.5.1.1.1" extension="987654" />
    </assignedEntity>
  </performer>
  <!-- general anesthesia? not negated = was used -->
  <entryRelationship typeCode="COMP">
    <!-- [HAI] Anesthesia Administration Clinical Statement -->
    <substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">
      <!-- [C-CDA R1.1] Medication Activity templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.16" />
      <!-- [HAI R1] Anesthesia Administration Clinical Statement -->
      <templateId root="2.16.840.1.113883.10.20.5.6.112" />
      ...
    </substanceAdministration>
  </entryRelationship>
</procedure>
```

3.98 Procedure Details in an OPC SSI Event

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.265:2019-04-01
(closed)]

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Release 3, STU 4 - US Realm

Table 411: Procedure Details in an OPC SSI Event Contexts

Contained By:	Contains:
Infection Details Section in an OPC SSI Report (required)	

This clinical statement records the detail required in an OPC SSI Event report about a procedure. NHSN uses the procedure id, along with other data, to establish a link between an OPC Denominator for Procedure and an OPC SSI Event; the value of the procedure id must be the same in both the report of a procedure and the report of a surgical-site infection resulting from that procedure.

Table 412: Procedure Details in an OPC SSI Event Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.265:2019-04-01)					
@classCode	1..1	SHALL		4395-30926	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		4395-30927	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		4395-30924	
@root	1..1	SHALL		4395-30931	2.16.840.1.113883.10.20.22.4.14
templateId	1..1	SHALL		4395-30925	
@root	1..1	SHALL		4395-30933	2.16.840.1.113883.10.20.5.6.265
@extension	1..1	SHALL		4395-30934	2019-04-01
id	1..1	SHALL		4395-30928	
@root	1..1	SHALL		4395-30952	
@extension	1..1	SHALL		4395-30953	
code	1..1	SHALL		4395-30921	urn:oid:2.16.840.1.113883.10.20.5.9.34 (NHSNOPCProcedureCategory Code)
translation	1..1	SHALL		4395-30935	urn:oid:2.16.840.1.113883.6.12 (CPT4)
statusCode	1..1	SHALL		4395-30932	urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode)
effectiveTime	1..1	SHALL		4395-30923	
low	1..1	SHALL		4395-30930	

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4395-30926).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4395-30927).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30924) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.14" (CONF:4395-30931).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30925) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.265" (CONF:4395-30933).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30934).
6. **SHALL** contain exactly one [1..1] **id** (CONF:4395-30928).
 Note: Procedure id
 - a. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4395-30952).
 - b. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:4395-30953).
7. **SHALL** contain exactly one [1..1] **code** (ValueSet: [NHSNOPCProcedureCategoryCode](#) urn:oid:2.16.840.1.113883.10.20.5.9.34 **DYNAMIC**) (CONF:4395-30921).
 - a. This code **SHALL** contain exactly one [1..1] **translation**, which **SHALL** be selected from CodeSystem CPT4 (urn:oid:2.16.840.1.113883.6.12) (CONF:4395-30935).
 Note: Primary CPT Code
8. **SHALL** contain exactly one [1..1] **statusCode** (ValueSet: [ProcedureAct statusCode](#) urn:oid:2.16.840.1.113883.11.20.9.22 **DYNAMIC**) (CONF:4395-30932).
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4395-30923).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4395-30930).

Figure 156: Procedure Details in an OPC SSI Event

```
<procedure classCode="PROC" moodCode="EVN">
  <!-- [C-CDA R1.1] Procedure Activity Procedure -->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" />
  <!-- [HAI R3D4] Procedure Details in an OPC SSI Event -->
  <templateId root="2.16.840.1.113883.10.20.5.6.265" extension="2019-04-01" />
  <!-- NHSN uses the procedure id, along with other data, to establish a link between
        an OPC Denominator for Procedure and an OPC SSI Event; the value of the
        procedure id must be the same in both the report of a procedure and the report
        of a surgical-site infection resulting from that procedure. -->
  <id root="2.16.840.1.113883.3.117.1.1.5.2.1.1.5" extension="21987654321" />
  <code code="2108-9"
    displayName="Appendix surgery"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN">
    <translation code="44970"
      displayName="Laparoscopic Procedures on the Appendix"
      codeSystem="2.16.840.1.113883.6.12"
      codeSystemName="CPT4" />
    </code>
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20180805" />
  </effectiveTime>
</procedure>
```

3.99 Procedure Risk Factors Clinical Statement in a Procedure Report

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.156 (closed)]

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Table 413: Procedure Risk Factors Clinical Statement in a Procedure Report Contexts

Contained By:	Contains:
Infection Risk Factors Section in a Procedure Report (required) Infection Risk Factors Section in an OPC Denominator for Procedure (required)	Wound Class Observation (required) Endoscope Used Clinical Statement (required)

This clinical statement records the detail required in a Procedure Report about the circumstances in which a procedure was performed.

The value of the id element must be globally unique and in general need not be an identifier used outside the document. Its function is to identify this procedure as being the same as the one documented in the Details Section of the same report.

Table 414: Procedure Risk Factors Clinical Statement in a Procedure Report Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.156)					
@classCode	1..1	SHALL		86-21319	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		86-21320	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-21990	
@root	1..1	SHALL		86-21991	2.16.840.1.113883.10.20.5.6.156
id	1..1	SHALL		86-21321	
methodCode	0..1	MAY		86-28412	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 373110003
entryRelationship	1..1	SHALL		86-21323	
@typeCode	1..1	SHALL		86-21324	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		86-21325	Wound Class Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.174)
entryRelationship	1..1	SHALL		86-21327	
@typeCode	1..1	SHALL		86-21328	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
procedure	1..1	SHALL		86-21329	Endoscope Used Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.128)

1. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21319).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21320).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21990) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.156" (CONF:86-21991).
4. **SHALL** contain exactly one [1..1] **id** (CONF:86-21321).
 - a. The value of the id element **SHALL** be the same as the value of the corresponding procedure/id element in the Details Section of the report (CONF:86-21322).

If the procedure was an emergency, the procedure element SHALL contain a methodCode element with the following value:

5. **MAY** contain zero or one [0..1] **methodCode**="373110003" Emergency procedure (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28412).
6. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:86-21323) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-21324).
 - b. **SHALL** contain exactly one [1..1] Wound Class Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.174) (CONF:86-21325).
7. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:86-21327) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-21328).
 - b. **SHALL** contain exactly one [1..1] Endoscope Used Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.128) (CONF:86-21329).

Figure 157: Procedure Risk Factors Clinical Statement in a Procedure Report

```
<procedure classCode="PROC" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.5.6.156"/>
  <id root="2.16.840.1.113883.3.117.1.1.5.2.1.1.4" extension="92"/>

  <!-- Emergency procedure-->
  <methodCode codeSystem="2.16.840.1.113883.6.96"
    code="373110003" displayName="Emergency procedure"/>

  <!-- Wound Class Observation -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.5.6.174"/>
      ...
    </observation>
  </entryRelationship>

  <!-- Endoscope (not negated = was used) -->
  <entryRelationship typeCode="COMP">
    <!-- Endoscope Used Clinical Statement -->
    <procedure classCode="PROC" moodCode="EVN" negationInd="false">
      <templateId root="2.16.840.1.113883.10.20.5.6.128"/>
      ...
    </procedure>
  </entryRelationship>
</procedure>
```

3.100 Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.253:2018-04-01 (closed)]

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Release 3, STU 3 - US Realm

Table 415: Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation Contexts

Contained By:	Contains:
Infection Risk Factors Section in a BSI Report (V3) (required)	

This observation records whether a matching organism is identified both in blood and from a site-specific specimen, both collected within the infection window period, and pus is present at the vascular site from which the specimen was collected.

If there was pus present at vascular specimen collection site and matching organism identified in blood and from site specific specimen(s), set the value of @negationInd to false. If there was not pus present at vascular specimen collection site and matching organism identified in blood and from site specific specimen(s), set the value of @negationInd to true.

Table 416: Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.253:2018-04-01)					
@classCode	1..1	SHALL		3357-30689	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3357-30690	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		3357-30691	
templateId	1..1	SHALL		3357-30674	
@root	1..1	SHALL		3357-30680	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		3357-30679	
@root	1..1	SHALL		3357-30687	2.16.840.1.113883.10.20.5.6.253
@extension	1..1	SHALL		3357-30688	2018-04-01
id	1..1	SHALL		3357-30675	
@nullFlavor	1..1	SHALL		3357-30681	NA
code	1..1	SHALL		3357-30676	
@code	1..1	SHALL		3357-30682	ASSERTION
@codeSystem	1..1	SHALL		3357-30683	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		3357-30677	
@code	1..1	SHALL		3357-30684	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	3357-30678	
@code	1..1	SHALL	CS	3357-30685	3059-3
@codeSystem	1..1	SHALL		3357-30686	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
participant	0..1	MAY		3357-30695	
@typeCode	1..1	SHALL		3357-30698	DEV

XPath	Card.	Verb	Data Type	CONF#	Value
participantRole	1..1	SHALL		3357-30696	
@classCode	1..1	SHALL		3357-30871	MANU
playingDevice	1..1	SHALL		3357-30697	
code	1..1	SHALL		3357-30700	urn:oid:2.16.840.1.113883.10.20.5.9.24 (NHSNVascularSpecimenCollectionSite)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3357-30689).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3357-30690).

If there was pus present at vascular specimen collection site and matching organism identified in blood and from site specific specimen(s), set the value of @negationInd to false. If there was not pus present at vascular specimen collection site and matching organism identified in blood and from site specific specimen(s), set the value of @negationInd to true.

4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:3357-30691).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-30674) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:3357-30680).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-30679) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.253" (CONF:3357-30687).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2018-04-01" (CONF:3357-30688).
7. **SHALL** contain exactly one [1..1] **id** (CONF:3357-30675).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:3357-30681).
8. **SHALL** contain exactly one [1..1] **code** (CONF:3357-30676).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:3357-30682).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3357-30683).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:3357-30677).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:3357-30684).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:3357-30678).

- a. This value **SHALL** contain exactly one [1..1] **@code**="3059-3" Pus present at vascular specimen collection site and matching organism identified in blood and from site specific specimen(s) (CONF:3357-30685).
- b. This value **SHALL** contain exactly one [1..1]
@codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN
urn:oid:2.16.840.1.113883.6.277) (CONF:3357-30686).

If the value of **@negationInd** is 'false', this observation **SHALL** contain exactly one [[[1..1] participant element representing the vascular specimen collection site where pus was present.

11. **MAY** contain zero or one [0..1] **participant** (CONF:3357-30695).

- a. The participant, if present, **SHALL** contain exactly one [1..1] **@typeCode**="DEV" Device (CONF:3357-30698).
- b. The participant, if present, **SHALL** contain exactly one [1..1] **participantRole** (CONF:3357-30696).
 - i. This **participantRole** **SHALL** contain exactly one [1..1] **@classCode**="MANU" Manufactured device (CONF:3357-30871).
 - ii. This **participantRole** **SHALL** contain exactly one [1..1] **playingDevice** (CONF:3357-30697).
 1. This **playingDevice** **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet
[NHSNVascularSpecimenCollectionSite](#)
urn:oid:2.16.840.1.113883.10.20.5.9.24 **DYNAMIC** (CONF:3357-30700).

Table 417: NHSNVascularSpecimenCollectionSite

Value Set: NHSNVascularSpecimenCollectionSite urn:oid:2.16.840.1.113883.10.20.5.9.24
 (Clinical Focus: NHSN surveillance reporting: Site of vascular specimen collection.),(Data Element Scope: A code identifying the site of vascular specimen collection.),(Inclusion Criteria:),(Exclusion Criteria:)

This value set was imported on 10/14/2020 with a version of Latest.

Value Set Source:

<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.24/expansion>

Code	Code System	Code System OID	Print Name
303727009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Arterial catheter (physical object)
3060-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Peripheral intravenous or midline catheter
3061-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Atrial lines (right and left)
3062-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Hemodialysis reliable outflow (HERO) catheter
3063-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Intra-aortic balloon pump (IABP) device
3064-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Non-accessed central line (not accessed nor inserted during the hospitalization)
439218000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Surgically constructed arteriovenous graft (finding)
439784005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Surgically constructed arteriovenous fistula (finding)

Figure 158: Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- [C-CDA R1.1] Problem Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" />
  <!-- [HAI R3D3] Pus Present in Specimen Site and Matching Organism in Blood and Specimen -->
  <templateId root="2.16.840.1.113883.10.20.5.6.253" extension="2018-04-01" />
  <id nullFlavor="NA" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed" />
  <value xsi:type="CD"
    code="3059-3"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    displayName="Pus present at vascular specimen collection site and matching organism
identified in blood and from site specific specimen(s)" />
  <participant typeCode="DEV">
    <participantRole classCode="MANU">
      <playingDevice>
        <code code="3060-1"
          displayName="Peripheral IV or midline catheter"
          codeSystem="2.16.840.1.113883.6.277"
          codeSystemName="cdcNHSN"/>
      </playingDevice>
    </participantRole>
  </participant>
</observation>
```

3.101 Pus, Redness, or Increased Swelling Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.157:2019-04-01 (closed)]

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Table 418: Pus, Redness, or Increased Swelling Observation (V2) Contexts

Contained By:	Contains:
Infection Indicator Organizer (V5) (required)	

This observation records whether pus, redness, or increased swelling was observed. It is used in an Evidence of Infection (Dialysis) Report to record whether this was observed at a vascular access site. If the infection indicator was present, set the value of @negationInd to false and record the event date in effectiveTime/low/@value. If the infection indicator was not present, set the value of @negationInd to true and set effectiveTime/low/@nullFlavor='NA'.

Table 419: Pus, Redness, or Increased Swelling Observation (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.157:2019-04-01)					
@classCode	1..1	SHALL		4395-19900	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		4395-19901	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		4395-19902	
templateId	1..1	SHALL		4395-28271	
@root	1..1	SHALL		4395-28272	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		4395-19905	
@root	1..1	SHALL		4395-19906	2.16.840.1.113883.10.20.5.6.157
@extension	1..1	SHALL		4395-30682	2019-04-01
id	1..1	SHALL		4395-19907	
@nullFlavor	1..1	SHALL		4395-22788	NA
code	1..1	SHALL		4395-19908	
@code	1..1	SHALL		4395-19909	ASSERTION
@codeSystem	1..1	SHALL		4395-28396	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		4395-19910	
@code	1..1	SHALL		4395-19911	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		4395-30680	
low	1..1	SHALL		4395-30681	
@nullFlavor	0..1	MAY		4395-30683	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA
@value	0..1	MAY		4395-30684	
value	1..1	SHALL	CD	4395-19912	
@code	1..1	SHALL		4395-19913	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2305-1

XPath	Card.	Verb	Data Type	CONF#	Value
participant	0..*	MAY		4395-20937	
@typeCode	1..1	SHALL		4395-19915	DEV
participantRole	1..1	SHALL		4395-19916	
@classCode	1..1	SHALL		4395-19921	MANU
playingDevice	1..1	SHALL		4395-19917	
code	1..1	SHALL		4395-19918	

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4395-19900).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4395-19901).

If the infection indicator was present, set the value of @negationInd to false. If the infection indicator was not present, set the value of @negationInd to true.

4. **SHALL** contain exactly one [1..1] @negationInd (CONF:4395-19902).
5. **SHALL** contain exactly one [1..1] templateId (CONF:4395-28271) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:4395-28272).
6. **SHALL** contain exactly one [1..1] templateId (CONF:4395-19905) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.157" (CONF:4395-19906).
 - b. **SHALL** contain exactly one [1..1] @extension="2019-04-01" (CONF:4395-30682).
7. **SHALL** contain exactly one [1..1] id (CONF:4395-19907).
 - a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:4395-22788).
8. **SHALL** contain exactly one [1..1] code (CONF:4395-19908).
 - a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:4395-19909).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:4395-28396).
9. **SHALL** contain exactly one [1..1] statusCode (CONF:4395-19910).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:4395-19911).
10. **SHALL** contain exactly one [1..1] effectiveTime (CONF:4395-30680).

If the infection indicator was present, record the event date in effectiveTime/low/@value. If the infection indicator was not present, set effectiveTime/low/@nullFlavor='NA'.

- a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:4395-30681).
 - i. This low **MAY** contain zero or one [0..1] **@nullFlavor="NA"** (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:4395-30683).
 - ii. This low **MAY** contain zero or one [0..1] **@value** (CONF:4395-30684).
- 11. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:4395-19912).
 - a. This value **SHALL** contain exactly one [1..1] **@code="2305-1"** Pus, redness, or increased swelling (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:4395-19913).
- 12. **MAY** contain zero or more [0..*] **participant** (CONF:4395-20937).

In an Evidence of Infection (Dialysis) Report, when this infection indicator is present, the following participant element is required by NHSN protocol to record the vascular access site at which the infection indicator was observed.

- 13. If the value of @negationInd is 'false', this observation **SHALL** contain one or more [1..*] participant elements representing the access site which displayed this infection indicator (CONF:4395-19914).
 - a. **SHALL** contain exactly one [1..1] **@typeCode="DEV"** Device (CONF:4395-19915).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:4395-19916).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode="MANU"** (CONF:4395-19921).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **playingDevice** (CONF:4395-19917).
 - 1. This playingDevice **SHALL** contain exactly one [1..1] **code** (CONF:4395-19918).
 - a. To record a vascular access site as a code, the value of @code **SHALL** be selected from ValueSet 2.16.840.1.114222.4.11.6042 NHSNVascularAccessSiteCode **DYNAMIC** (CONF:4395-19919).
 - b. To represent a site of vascular access that is not listed in the NHSNVascularAccessSiteCode value set, set the value of @nullFlavor to OTH (other) (CONF:4395-19920).

Table 420: NHSNVascularAccessSiteCode

<p>Value Set: NHSNVascularAccessSiteCode urn:oid:2.16.840.1.114222.4.11.6042 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the vascular access site.),(Data Element Scope: A code describing the vascular access site.),(Inclusion Criteria:),(Exclusion Criteria:)</p> <p>This value set was imported on 10/14/2020 with a version of Latest.</p> <p>Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.6042/expansion</p>			
Code	Code System	Code System OID	Print Name
2321-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Site of non-tunneled central line, dialysis
2322-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Site of tunneled central line, dialysis
2323-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Vascular site fistula
2324-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Vascular site graft

Figure 159: Pus, Redness, or Increased Swelling Observation (V2) Example

```
<!-- If the infection indicator was present, set the value of @negationInd to false
and record the event date in effectiveTime/low/@value.
If the infection indicator was not present, set the value of
@negationInd to true and set effectiveTime/low/@nullFlavor='NA'. --><observation
classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Pus, Redness, or Increased Swelling Observation (V2) templateId-->
  <templateId root="2.16.840.1.113883.10.20.5.6.157" extension="2019-04-01" />
  <id nullFlavor="NA"/>
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <effectiveTime xsi:type="IVL_TS">
    <low value="20180405" />
  </effectiveTime>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="2305-1"
    displayName="Pus, redness, or increased swelling"/>
  <!-- If this infection indicator was observed, at which
  vascular access site(s)? -->
  <participant typeCode="DEV">
    <participantRole classCode="MANU">
      <playingDevice>
        <code code="2321-8"
          codeSystem="2.16.840.1.113883.6.277"
          displayName="Vascular site fistula"/>
      </playingDevice>
    </participantRole>
  </participant>
</observation>
```

3.102 Reason for Procedure Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.158 (closed)]

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Table 421: Reason for Procedure Observation Contexts

Contained By:	Contains:
Procedure Details Clinical Statement in a CLIP Report (required)	Guidewire Used Clinical Statement (optional)

This observation records the reason a procedure was performed. It is used in the CLIP Report to record the reason a central-line insertion procedure was performed.

Table 422: Reason for Procedure Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.158)					
@classCode	1..1	SHALL		86-21589	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21590	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21591	false
templateId	1..1	SHALL		86-28273	
@root	1..1	SHALL		86-28274	2.16.840.1.113883.10.20.22.4.19
templateId	1..1	SHALL		86-21593	
@root	1..1	SHALL		86-21603	2.16.840.1.113883.10.20.5.6.158
id	1..1	SHALL		86-21594	
@nullFlavor	1..1	SHALL		86-22789	NA
code	1..1	SHALL		86-21595	
@code	1..1	SHALL		86-21596	ASSERTION
@codeSystem	1..1	SHALL		86-28386	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-21597	
@code	1..1	SHALL		86-21598	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL		86-21599	
entryRelationship	0..1	MAY		86-23286	
@typeCode	1..1	SHALL		86-23287	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
@inversionInd	1..1	SHALL		86-23288	true
procedure	1..1	SHALL		86-23289	Guidewire Used Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.129)

1. Conforms to Indication template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.19).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21589).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21590).
4. **SHALL** contain exactly one [1..1] **@negationInd**="false" (CONF:86-21591).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28273) such that it

- a. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.22.4.19"` (CONF:86-28274).
6. **SHALL** contain exactly one [1..1] `templateId` (CONF:86-21593) such that it
 - a. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.5.6.158"` (CONF:86-21603).
7. **SHALL** contain exactly one [1..1] `id` (CONF:86-21594).
 - a. This `id` **SHALL** contain exactly one [1..1] `@nullFlavor="NA"` (CONF:86-22789).
8. **SHALL** contain exactly one [1..1] `code` (CONF:86-21595).
 - a. This `code` **SHALL** contain exactly one [1..1] `@code="ASSERTION"` Assertion (CONF:86-21596).
 - b. This `code` **SHALL** contain exactly one [1..1] `@codeSystem="2.16.840.1.113883.5.4"` (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28386).
9. **SHALL** contain exactly one [1..1] `statusCode` (CONF:86-21597).
 - a. This `statusCode` **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21598).
10. **SHALL** contain exactly one [1..1] `value` (CONF:86-21599).
 - a. In a CLIP Report, to record the reason as a code, the value of `@xsi:type` **SHALL** be CD and the value of `@code` **SHALL** be selected from ValueSet 2.16.840.1.114222.4.11.3182 NHSNReasonForInsertionCode **DYNAMIC**. Or, to record the reason as text, the value of `@xsi:type` **SHALL** be ST and a text value **SHALL** be present (CONF:86-21600).
11. **MAY** contain zero or one [0..1] `entryRelationship` (CONF:86-23286).
 - a. The `entryRelationship`, if present, **SHALL** contain exactly one [1..1] `@typeCode="RSON"` (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-23287).
 - b. The `entryRelationship`, if present, **SHALL** contain exactly one [1..1] `@inversionInd="true"` (CONF:86-23288).
 - c. The `entryRelationship`, if present, **SHALL** contain exactly one [1..1] [Guidewire Used Clinical Statement](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.129) (CONF:86-23289).
 - d. In a CLIP Report, if the coded reason is [To replace] An existing central line where infection was suspected (5107-8), an `entryRelationship` element **SHALL** be present containing Guidewire Used Clinical Statement (CONF:86-23290).

Table 423: NHSNReasonForInsertionCode

<p>Value Set: NHSNReasonForInsertionCode urn:oid:2.16.840.1.114222.4.11.3182 (Clinical Focus: NHSN surveillance reporting: reasons to insert a catheter for Central Line Insertion Practices (CLIP) adherence monitoring),(Data Element Scope: A coded observation value describing the reason for insertion of the central line.),(Inclusion Criteria:),(Exclusion Criteria:)</p> <p>This value set was imported on 10/14/2020 with a version of Latest.</p> <p>Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3182/expansion</p>			
Code	Code System	Code System OID	Print Name
5105-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	To address a new indication for a central line
5106-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	To replace an existing, malfunctioning central line
5107-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	To replace an existing central line where infection was suspected

Figure 160: Reason for Procedure Observation Example

```
<observation moodCode="EVN" classCode="OBS" negationInd="false">
  <!-- C-CDA Indication templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
  <!-- HAI Reason for Procedure Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.158"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION"
        codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed"/>
  <value xsi:type="CD" codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="5106-0"
        displayName="[To replace] An existing, malfunctioning central line"/>
</observation>
...
<!-- Or, if the reason is [To replace] An existing central line where infection
was suspected:
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Indication templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.19"/>
  <!-- HAI Reason for Procedure Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.158"/>
  <code codeSystem="2.16.840.1.113883.5.4"
        code="ASSERTION" />
  <statusCode code="completed"/>
  <value xsi:type="CD" code="5107-8"
        codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        displayName="[To replace] An existing central line where infection
was suspected."/>
  <entryRelationship typeCode="RSON" inversionInd="true">
    <procedure classCode="PROC" moodCode="EVN" negationInd="false">
      <!-- C-CDA Procedure Activity Procedure templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.14" />
      <!-- HAI Guidewire Used Clinical Statement templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.129" />
      ...
    </procedure>
  </entryRelationship>
</observation>
-->
```

3.103Recorder Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.159 (closed)]

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Table 424: Recorder Observation Contexts

Contained By:	Contains:
Procedure Details Clinical Statement in a CLIP Report (required)	

This observation records whether the person who recorded the sequence of steps in a practice was also the performer of those steps. It is used in the Central-Line Insertion Practice Report.

If the recorder was the performer, set the value of @negationInd to false. If the recorder was not the performer (i.e., was an observer), set the value of @negationInd to true.

Table 425: Recorder Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.159)					
@classCode	1..1	SHALL		86-21342	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21343	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21344	
templateId	1..1	SHALL		86-21987	
@root	1..1	SHALL		86-21988	2.16.840.1.113883.10.20.5.6.159
id	1..1	SHALL		86-21989	
@nullFlavor	1..1	SHALL		86-22790	NA
code	1..1	SHALL		86-21345	
@code	1..1	SHALL		86-21346	ASSERTION
@codeSystem	1..1	SHALL		86-28387	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-21347	
@code	1..1	SHALL		86-21348	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-21349	
@code	1..1	SHALL		86-21350	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 3104-7

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21342).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21343).
3. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-21344).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21987) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.159" (CONF:86-21988).
5. **SHALL** contain exactly one [1..1] **id** (CONF:86-21989).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22790).
6. **SHALL** contain exactly one [1..1] **code** (CONF:86-21345).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-21346).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28387).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21347).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21348).
8. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:86-21349).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="3104-7" Recorder was performer (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:86-21350).

Figure 161: Recorder Observation Example

```
<observation moodCode="EVN" classCode="OBS" negationInd="false">
  <!-- Recorder Observation template -->
  <templateId root="2.16.840.1.113883.10.20.5.6.159"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="3104-7"
    displayName="Recorder was performer"/>
</observation>
```

3.104Report No Events

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01 (closed)]

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Table 426: Report No Events Contexts

Contained By:	Contains:
Report No Events Section (required)	

This template represents the statement that there are no events to report for a particular type of event.

Table 427: Report No Events Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01)					
@classCode	1..1	SHALL		3357-30599	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT
@moodCode	1..1	SHALL		3357-30600	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3357-28468	
@root	1..1	SHALL		3357-28470	2.16.840.1.113883.10.20.5.6.249
@extension	1..1	SHALL		3357-28471	2018-04-01
code	1..1	SHALL		3357-28469	

1. **SHALL** contain exactly one [1..1] **@classCode**="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3357-30599).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3357-30600).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3357-28468) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.249" (CONF:3357-28470).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2018-04-01" (CONF:3357-28471).
4. **SHALL** contain exactly one [1..1] **code** (CONF:3357-28469).
 - a. If this is a Neonatal Intensive Care Unit (NICU) Summary Report then the code **SHALL** be selected from ValueSet NHSNReportNoEventsNICU urn:oid:2.16.840.1.113883.10.20.5.9.19 **DYNAMIC** (CONF:3357-30905).
 - b. If this is an Intensive Care Unit (ICU) Summary Report then the code **SHALL** be selected from ValueSet NHSNReportNoEventsICU urn:oid:2.16.840.1.113883.10.20.5.9.18 **DYNAMIC** (CONF:3357-30906).

- c. If this is a Vascular Access Type Report (VAT) Summary Report then the code **SHALL** be selected from ValueSet NHSNReportNoEventsDialysis
urn:oid:2.16.840.1.113883.10.20.5.9.22 **DYNAMIC** (CONF:3357-30907).
- d. If this is a Prevention Process and Outcome Measures (POM) Summary Report then the code **SHALL** be selected from ValueSet NHSNReportNoEventsMDRO
urn:oid:2.16.840.1.113883.10.20.5.9.21 **DYNAMIC** (CONF:3357-30908).
- e. If this is a Specialty Care Area (SCA) Summary Report then the code **SHALL** be selected from ValueSet NHSNReportNoEventsSCA
urn:oid:2.16.840.1.113883.10.20.5.9.20 **DYNAMIC** (CONF:3357-30909).
- f. If this is an Outpatient Procedure Component Denominator for Same Day Outcome Measures Report then the code **SHALL** be selected from ValueSet
NHSNReportNoEventsOPCSameDayOutcomeMeasures
urn:oid:2.16.840.1.113883.10.20.5.9.33 **DYNAMIC** (CONF:3357-30913).
- g. If this is an Antimicrobial Resistance Option (ARO) Summary Report then the code **SHALL** be selected from ValueSet NHSNReportNoEventsAR
urn:oid:2.16.840.1.113883.10.20.5.9.35 **DYNAMIC** (CONF:3357-30914).
- h. If this is an MDRO and CDI LabID Event Reporting Monthly Summary Data for LTCF then the code **SHALL** be selected from ValueSet
NHSNReportNoEventsMDROCDI (urn:oid:2.16.840.1.113883.10.20.5.1.9.1)
DYNAMIC (CONF:3357-30915).

Table 428: NHSNReportNoEventsNICU

Value Set: NHSNReportNoEventsNICU urn:oid:2.16.840.1.113883.10.20.5.9.19

(Clinical Focus: NHSN surveillance reporting: indicators for reporting no events with denominators for neonatal intensive care unit (NICU)),(Data Element Scope: Code identifying that no event of interest occurred.),(Inclusion Criteria:),(Exclusion Criteria:)

This value set was imported on 9/16/2020 with a version of Latest.

Value Set Source:

<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.19/expansion>

Code	Code System	Code System OID	Print Name
1313-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: NICU: PedVAE: birth weight under 750 grams
1314-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: NICU: PedVAE: birth weight 751-1000 grams
1316-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: NICU: PedVAE: birth weight 1001-1500 grams
1317-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: NICU: PedVAE: birth weight 1501-2500 grams
1318-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: NICU: PedVAE: birth weight over 2500 grams
1319-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: NICU: PedVAE: Extremely preterm (<28 weeks)
1330-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: NICU: PedVAE: Very preterm (28 to <32 weeks)
1331-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: NICU: PedVAE: Moderate to late preterm (32 to <37 weeks)
1332-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: NICU: PedVAE: Term (>=37 weeks)
3014-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: NICU: CLABSI: under 750 grams
...			

Table 429: NHSNReportNoEventsICU

Value Set: NHSNReportNoEventsICU urn:oid:2.16.840.1.113883.10.20.5.9.18 (Clinical Focus: NHSN surveillance reporting: indicators for reporting no events with denominators for intensive care unit),(Data Element Scope: Code identifying that no event of interest occurred.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 9/16/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.18/expansion			
Code	Code System	Code System OID	Print Name
1338-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: ICU: PedVAE
3010-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: ICU: CLABSI
3011-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: ICU: CAUTI
3012-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: ICU: VAE
3013-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: ICU: PedVAP

Table 430: NHSNReportNoEventsDialysis

Value Set: NHSNReportNoEventsDialysis urn:oid:2.16.840.1.113883.10.20.5.9.22 (Clinical Focus: NHSN surveillance reporting: indicators for reporting no events with denominators for dialysis),(Data Element Scope: Code identifying that no event of interest occurred.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 9/16/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.22/expansion			
Code	Code System	Code System OID	Print Name
3052-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: Dialysis: intravenous antimicrobial start
3053-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: Dialysis: positive blood culture
3054-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: Dialysis: pus, redness, or increased swelling at vascular access site

Table 431: NHSNReportNoEventsMDRO

Value Set: NHSNReportNoEventsMDRO urn:oid:2.16.840.1.113883.10.20.5.9.21 (Clinical Focus: NHSN surveillance reporting: indicators for reporting no events with denominators for LabID Event),(Data Element Scope: Code identifying that no event of interest occurred.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 9/16/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.21/expansion			
Code	Code System	Code System OID	Print Name
1306-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: Infection Surveillance: MSSA
1307-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (All specimens): MSSA
1308-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (Blood specimens only): MSSA
3029-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: Infection Surveillance: MRSA
3030-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (All specimens): MRSA
3031-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (Blood specimens only): MRSA
3032-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: Infection Surveillance: VRE
3033-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (All specimens): VRE
3034-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (Blood specimens only): VRE
3035-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: Infection Surveillance: CephR Klebsiella
...			

Table 432: NHSNReportNoEventsSCA

Value Set: NHSNReportNoEventsSCA urn:oid:2.16.840.1.113883.10.20.5.9.20 (Clinical Focus: NHSN surveillance reporting: indicators for reporting no events with denominators for specialty care area / oncology),(Data Element Scope: Code identifying that no event of interest occurred.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 9/16/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.20/expansion			
Code	Code System	Code System OID	Print Name
1339-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: SCA: PedVAE
3024-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: SCA: TCLAB
3025-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: SCA: PCLAB
3026-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: SCA: CAUTI
3027-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: SCA: VAE
3028-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: SCA: PedVAP

Table 433: NHSNReportNoEventsOPCSameDayOutcomeMeasures

Value Set: NHSNReportNoEventsOPCSameDayOutcomeMeasures urn:oid:2.16.840.1.113883.10.20.5.9.33 (Clinical Focus: NHSN surveillance reporting: indicators for reporting no events with denominators for Outpatient Procedure Component Same Day Outcome Measures),(Data Element Scope: Code identifying that no event of interest occurred.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 9/16/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.33/expansion			
Code	Code System	Code System OID	Print Name
1340-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	No same day outcome measures (events) reported this month

Table 434: NHSNReportNoEventsAR

<p>Value Set: NHSNReportNoEventsAR urn:oid:2.16.840.1.113883.10.20.5.9.35 (Clinical Focus: NHSN surveillance reporting: indicator for reporting no events with denominators for antimicrobial resistance),(Data Element Scope: Code identifying that no event of interest occurred.),(Inclusion Criteria:),(Exclusion Criteria:)</p> <p>This value set was imported on 9/16/2020 with a version of Latest.</p> <p>Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.35/expansion</p>			
Code	Code System	Code System OID	Print Name
1341-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.27 7	Report No Events: Antimicrobial Resistance (AR)

Table 435: NHSNReportNoEventsMDROLTCF

Value Set: NHSNReportNoEventsMDROLTCF urn:oid:2.16.840.1.113883.10.20.5.1.9.1 (Clinical Focus: NHSN surveillance reporting: indicators for reporting no events with denominators for LTCF),(Data Element Scope: Code identifying that no event of interest occurred.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 9/16/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.1.9.1/expansion			
Code	Code System	Code System OID	Print Name
1307-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (All specimens): MSSA
3030-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (All specimens): MRSA
3033-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (All specimens): VRE
3036-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (All specimens): CephR Klebsiella
3039-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (All specimens): CRE-E. coli
3042-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (All specimens): CRE-Enterobacter
3045-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (All specimens): CRE-Klebsiella
3048-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (All specimens): MDR-Acinetobacter
3051-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report No Events: LabID Event (All specimens): C. difficile

Figure 162: Report No Events Example

```
<act classCode="ACT" moodCode="EVN">
  <!-- [HAI R3D3] Report No Events -->
  <templateId root="2.16.840.1.113883.10.20.5.6.249" extension="2018-04-01" />
  <code code="3029-6"
    displayName="Report no infection surveillance events - Methicillin-resistant
Staphylococcus aureus"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN" />
</act>
```

3.105 Revision Associated with Prior Infection Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.204 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 2, DSTU 1 - US Realm

Table 436: Revision Associated with Prior Infection Observation Contexts

Contained By:	Contains:
Procedure Details Clinical Statement in a Procedure Report (V2) (optional)	

This template records whether or not a surgical procedure was performed as a result of a previous infection. In the NHSN context, this observation only applies to arthroplasty procedures. It is based on the C-CDA Problem Observation template.

When the revision was associated with prior infection at the index joint, set the value of @negationInd to false. When the revision was not associated with prior infection at the index joint, set the value of @negationInd to true.

Table 437: Revision Associated with Prior Infection Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.204)					
@classCode	1..1	SHALL		1101-30225	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1101-30226	EVN
@negationInd	1..1	SHALL		1101-30227	
templateId	1..1	SHALL		1101-30305	
@root	1..1	SHALL		1101-30306	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		1101-30229	
@root	1..1	SHALL		1101-30230	2.16.840.1.113883.10.20.5.6.204
id	1..1	SHALL		1101-30231	
@nullFlavor	1..1	SHALL		1101-30232	NA
code	1..1	SHALL		1101-30233	
@code	1..1	SHALL		1101-30234	ASSERTION
@codeSystem	1..1	SHALL		1101-30235	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1101-30236	
@code	1..1	SHALL		1101-30237	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	1101-30238	
@code	1..1	SHALL		1101-30239	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 1239-3
@codeSystem	1..1	SHALL		1101-30240	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1101-30225).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" (CONF:1101-30226).

4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:1101-30227).
 - a. If the revision was associated with prior infection at the index joint, the value of **@negationInd** **SHALL** be false. If the revision was not associated with prior infection at the index joint, the value of **@negationInd** **SHALL** be true (CONF:1101-30228).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1101-30305) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.4"** (CONF:1101-30306).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:1101-30229) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.6.204"** (CONF:1101-30230).
7. **SHALL** contain exactly one [1..1] **id** (CONF:1101-30231).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CONF:1101-30232).
8. **SHALL** contain exactly one [1..1] **code** (CONF:1101-30233).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** (CONF:1101-30234).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1101-30235).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1101-30236).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1101-30237).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:1101-30238).
 - a. This value **SHALL** contain exactly one [1..1] **@code="1239-3"** Revision associated with prior infection at index joint (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1101-30239).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.6.277"** (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1101-30240).

Figure 163: Revision Associated with Prior Infection Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!--
    If the revision was associated with prior infection at the index joint,
    the value of @negationInd SHALL be false.
    If the revision was not associated with prior infection at
    the index joint, the value of @negationInd SHALL be true.
  -->
  <!-- C-CDA Problem Observation -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" />
  <!-- Revision Associated with Prior Infection Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.204" />
  <id nullFlavor="NA" />
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION" />
  <statusCode code="completed" />
  <value xsi:type="CD" code="1239-3"
    displayName="Revision associated with prior infection at index joint"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN" />
</observation>
```

3.106 Same Day Outcome Measure Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.208:2019-04-01
(closed)]

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Release 3, STU 4 - US Realm

Table 438: Same Day Outcome Measure Observation (V3) Contexts

Contained By:	Contains:
Same Day Outcome Measures Organizer (V3) (required)	

This template reports a facility-level outcome measure that occurs on the same day as the outpatient procedure.

The measures include:

- Patient burn
- Patient fall
- Wrong site
- Wrong side
- Wrong patient
- Wrong procedure
- Wrong implant
- Hospital transfer/admission

If the outcome occurred, set the value of @negationInd to false. If the outcome did not occur, set the value of @negationInd to true.

Table 439: Same Day Outcome Measure Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.208:2019-04-01)					
@classCode	1..1	SHALL		4395-21655	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		4395-21656	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		4395-21779	
templateId	1..1	SHALL		4395-21866	
@root	1..1	SHALL		4395-21867	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		4395-21657	
@root	1..1	SHALL		4395-21658	2.16.840.1.113883.10.20.5.6.208
@extension	1..1	SHALL		4395-30559	2019-04-01
id	1..1	SHALL		4395-21663	
@nullFlavor	1..1	SHALL		4395-21664	NA
code	1..1	SHALL		4395-21659	
@code	1..1	SHALL		4395-21660	1655-0
@codeSystem	1..1	SHALL		4395-21661	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
statusCode	1..1	SHALL		4395-21665	
@code	1..1	SHALL		4395-21666	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	4395-21662	urn:oid:2.16.840.1.114222.4.11.7214 (NHSNSameDayOutcomeMeasure)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4395-21655).

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4395-21656).

If the outcome occurred, set the value of **@negationInd** to false. If the outcome did not occur, set the value of **@negationInd** to true.

4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:4395-21779).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-21866) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:4395-21867).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-21657) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.208" (CONF:4395-21658).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30559).
7. **SHALL** contain exactly one [1..1] **id** (CONF:4395-21663).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:4395-21664).
8. **SHALL** contain exactly one [1..1] **code** (CONF:4395-21659).
 - a. This **code** **SHALL** contain exactly one [1..1] **@code**="1655-0" Same day outcome measure (CONF:4395-21660).
 - b. This **code** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:4395-21661).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4395-21665).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:4395-21666).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", where the **code** **SHALL** be selected from ValueSet [NHSNSameDayOutcomeMeasure](#) urn:oid:2.16.840.1.114222.4.11.7214 **DYNAMIC** (CONF:4395-21662).

Table 440: NHSNSameDayOutcomeMeasure

Value Set: NHSNSameDayOutcomeMeasure urn:oid:2.16.840.1.114222.4.11.7214 (Clinical Focus: NHSN surveillance reporting;),(Data Element Scope: A coded observation value describing facility-level outcome measures that occur on the same day as the outpatient procedure.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7214/expansion			
Code	Code System	Code System OID	Print Name
125666000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Burn (disorder)
1645-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Hospital transfer/admission
1646-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Wrong site
1647-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Wrong side
1648-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Wrong patient
1649-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Wrong implant
217082002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Accidental fall (event)
370898007	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Wrong surgical procedure performed on a patient (event)

Figure 164: Same Day Outcome Measure Observation (V3) Example

```
<!-- If the outcome occurred, set the value of @negationInd to false. If the outcome did
not occur, set the value of @negationInd to true. -->
<!-- Outcome did not occur -->
<observation classCode="OBS" moodCode="EVN" negationInd="true">
  <!-- C-CDA R1.1 Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4" />
  <!-- Same Day Outcome Measure Observation (V3) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.208" extension="2019-04-01" />
  <id nullFlavor="NA" />
  <code code="1655-0"
    displayName="Same Day Outcome Measure"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"/>
  <statusCode code="completed" />
  <effectiveTime>
    <low value="20130805" />
  </effectiveTime>
  <value xsi:type="CD"
    code="370898007"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    displayName="Wrong surgical procedure performed on a patient" />
</observation>
```

3.107 Same Day Outcome Measures Organizer (V3)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.212:2019-04-01
(closed)]

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Table 441: Same Day Outcome Measures Organizer (V3) Contexts

Contained By:	Contains:
Same Day Outcome Measures Event Details Section (optional)	Same Day Outcome Measure Observation (V3) (required)

This organizer groups together the same-day outcome measures.

Table 442: Same Day Outcome Measures Organizer (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.212:2019-04-01)					
@classCode	1..1	SHALL		4395-21784	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		4395-21785	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		4395-21781	
@root	1..1	SHALL		4395-21786	2.16.840.1.113883.10.20.5.6.212
@extension	1..1	SHALL		4395-30560	2019-04-01
statusCode	1..1	SHALL		4395-21782	
@code	1..1	SHALL		4395-21787	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
component	1..*	SHALL		4395-21780	
observation	1..1	SHALL		4395-21783	Same Day Outcome Measure Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.208:2019-04-01)

1. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4395-21784).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4395-21785).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-21781) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.212" (CONF:4395-21786).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30560).
4. **SHALL** contain exactly one [1..1] **statusCode** (CONF:4395-21782).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4395-21787).
5. **SHALL** contain at least one [1..*] **component** (CONF:4395-21780).
 - a. Such components **SHALL** contain exactly one [1..1] [Same Day Outcome Measure Observation \(V3\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.208:2019-04-01) (CONF:4395-21783).

Figure 165: Same Day Outcome Measures Organizer (V3) Example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <!-- Same Day Outcome Measures Organizer templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.212" extension="2019-04-01" />
  <statusCode code="completed" />
  <component>
    <!-- Same Day Outcome Measure Observation (V3) -->
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- Same Day Outcome Measure templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.208" extension="2019-04-01" />
      ...
    </observation>
  </component>
  <component>
    <!-- Same Day Outcome Measure Observation (V3) -->
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- Same Day Outcome Measure templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.208" extension="2019-04-01" />
      ...
    </observation>
  </component>
  ...
</organizer>
```

3.108 Secondary Bloodstream Infection Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.160 (closed)]

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Table 443: Secondary Bloodstream Infection Observation Contexts

Contained By:	Contains:
Infection-Type Observation (optional)	

This observation records whether a secondary bloodstream infection was present.

If a secondary bloodstream infection was present, set the value of observation/@negationInd to false. If a secondary bloodstream infection was not present, set the value of observation/@negationInd to true.

Table 444: Secondary Bloodstream Infection Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.160)					
@classCode	1..1	SHALL		86-19840	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-19841	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-19842	
templateId	1..1	SHALL		86-28275	
@root	1..1	SHALL		86-28276	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-19851	
@root	1..1	SHALL		86-19852	2.16.840.1.113883.10.20.5.6.160
id	1..1	SHALL		86-23363	
@nullFlavor	1..1	SHALL		86-23364	NA
code	1..1	SHALL		86-19843	
@code	1..1	SHALL		86-19844	ASSERTION
@codeSystem	1..1	SHALL		86-28388	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-19845	
@code	1..1	SHALL		86-19846	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-19847	
@code	1..1	SHALL		86-19848	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 3111-2

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-19840).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-19841).
4. **SHALL** contain exactly one [1..1] @negationInd (CONF:86-19842).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-28275) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28276).
6. **SHALL** contain exactly one [1..1] templateId (CONF:86-19851) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.160" (CONF:86-19852).
7. **SHALL** contain exactly one [1..1] id (CONF:86-23363).
 - a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:86-23364).

8. **SHALL** contain exactly one [1..1] **code** (CONF:86-19843).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-19844).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28388).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-19845).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-19846).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:86-19847).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="3111-2" Secondary bloodstream infection (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:86-19848).

Figure 166: Secondary Bloodstream Infection Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Secondary Bloodstream Infection Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.160"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <value
    xsi:type="CD"
    code="3111-2"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    displayName="Secondary bloodstream infection"/>
</observation>
```

3.109 Skin Preparation Clinical Statement (V2)

[substanceAdministration: identifier
urn:hl7ii:2.16.840.1.113883.10.20.5.6.162:2014-12-01 (closed)]

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Table 445: Skin Preparation Clinical Statement (V2) Contexts

Contained By:	Contains:
Skin-Preparation Solutions Applied Organizer (V2) (required)	Contraindicated Observation (V2) (optional)

This observation records a skin-preparation solution. It is used in the Skin-Preparation Solutions Applied clinical statement in the Central-Line Insertion Practice Report.

If the preparation step included application of the solution specified, set the value of @negationInd to false. If the preparation step did not include application of the solution specified, set the value of @negationInd to true.

Table 446: Skin Preparation Clinical Statement (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.162:2014-12-01)					
@classCode	1..1	SHALL		1129-21359	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM
@moodCode	1..1	SHALL		1129-21360	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		1129-21361	
templateId	1..1	SHALL		1129-30537	
@root	1..1	SHALL		1129-30538	2.16.840.1.113883.10.20.22.4.16
templateId	1..1	SHALL		1129-22118	
@root	1..1	SHALL		1129-22124	2.16.840.1.113883.10.20.5.6.162
@extension	1..1	SHALL		1129-30539	2014-12-01
id	1..1	SHALL		1129-22119	
@nullFlavor	1..1	SHALL		1129-22785	NA
statusCode	1..1	SHALL		1129-22120	
@code	1..1	SHALL		1129-28105	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL	IVL_TS	1129-22121	
low	1..1	SHALL		1129-22122	
@nullFlavor	1..1	SHALL		1129-22786	NA
high	1..1	SHALL		1129-22123	
@nullFlavor	1..1	SHALL		1129-22787	NA
consumable	1..1	SHALL		1129-21362	
manufacturedProduct	1..1	SHALL		1129-21363	
@classCode	1..1	SHALL		1129-21364	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
templateId	1..1	SHALL		1129-30556	

XPath	Card.	Verb	Data Type	CONF#	Value
@root	1..1	SHALL		1129-30557	2.16.840.1.113883.10.20.22.4.23
manufacturedMaterial	1..1	SHALL		1129-21365	
@classCode	1..1	SHALL		1129-21366	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MMAT
code	1..1	SHALL		1129-21367	
entryRelationship	0..1	MAY		1129-23291	
@typeCode	1..1	SHALL		1129-23292	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON
observation	1..1	SHALL		1129-30431	Contraindicated Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.118:2014-12-01)

1. Conforms to Medication Activity template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.16).
2. **SHALL** contain exactly one [1..1] @classCode="SBADM" Substance administration (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-21359).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-21360).
4. **SHALL** contain exactly one [1..1] @negationInd (CONF:1129-21361).
5. **SHALL** contain exactly one [1..1] templateId (CONF:1129-30537) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.16" (CONF:1129-30538).
6. **SHALL** contain exactly one [1..1] templateId (CONF:1129-22118) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.162" (CONF:1129-22124).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30539).
7. **SHALL** contain exactly one [1..1] id (CONF:1129-22119).
 - a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-22785).
8. **SHALL** contain exactly one [1..1] statusCode (CONF:1129-22120).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1129-28105).
9. **SHALL** contain exactly one [1..1] effectiveTime (CONF:1129-22121).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] low (CONF:1129-22122).
 - i. This low **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-22786).

- b. This effectiveTime **SHALL** contain exactly one [1..1] **high** (CONF:1129-22123).
 - i. This high **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-22787).
- 10. **SHALL** contain exactly one [1..1] **consumable** (CONF:1129-21362).
 - a. This consumable **SHALL** contain exactly one [1..1] **manufacturedProduct** (CONF:1129-21363).
 - i. This manufacturedProduct **SHALL** contain exactly one [1..1] @classCode="MANU" Manufactured product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:1129-21364).
 - ii. This manufacturedProduct **SHALL** contain exactly one [1..1] **templateId** (CONF:1129-30556) such that it
 - 1. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.23" (CONF:1129-30557).
 - iii. This manufacturedProduct **SHALL** contain exactly one [1..1] **manufacturedMaterial** (CONF:1129-21365).
 - 1. This manufacturedMaterial **SHALL** contain exactly one [1..1] @classCode="MMAT" Manufactured material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:1129-21366).
 - 2. This manufacturedMaterial **SHALL** contain exactly one [1..1] **code** (CONF:1129-21367).
 - a. To record a skin-preparation solution as a code, the value of @code **SHALL** be selected from ValueSet 2.16.840.1.114222.4.11.3183 NHSNSkinPreparationCode **DYNAMIC**. Or, to record a skin-preparation solution as text, the value of @nullFlavor **SHALL** be OTH and an originalText element **SHALL** be present recording the skin-preparation solution (CONF:1129-21368).

When recording whether chlorhexidine gluconate was applied, if it was not applied, NHSN protocol requires that it be recorded whether there was a contraindication to it.

- 11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1129-23291) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1129-23292).
 - b. **SHALL** contain exactly one [1..1] Contraindicated Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.118:2014-12-01) (CONF:1129-30431).
 - i. When recording whether chlorhexidine gluconate was applied, if it was not applied, and was contraindicated, the value of @negationInd on the Contraindicated Observation **SHALL** be false. If it was not contraindicated, the value of @negationInd on the Contraindicated Observation **SHALL** be true. If it is not known whether it was contraindicated, the value of @nullFlavor on the Contraindicated Observation **SHALL** be UNK. For examples and further explanation, see the Contraindicated Observation template (CONF:1129-23294).

- c. If chlorhexidine gluconate was NOT applied, **SHALL** contain an entryRelationship containing a Contraindicated Observation (CONF:1129-23295).

Table 447: NHSNSkinPreparationCode

Value Set: NHSNSkinPreparationCode urn:oid:2.16.840.1.114222.4.11.3183 (Clinical Focus: Skin antiseptic used prior to catheter insertion for NHSN surveillance reporting of Central Line Insertion Practices (CLIP) adherence monitoring),(Data Element Scope: A code identifying the manufactured skin preparation solution used.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3183/expansion			
Code	Code System	Code System OID	Print Name
20791	RxNorm	urn:oid:2.16.840.1.113883.6.88	chlorhexidine gluconate
797541	RxNorm	urn:oid:2.16.840.1.113883.6.88	isopropyl alcohol
8611	RxNorm	urn:oid:2.16.840.1.113883.6.88	povidone-iodine

Figure 167: Skin Preparation Clinical Statement (V2) Example

<pre> <substanceAdministration moodCode="EVN" classCode="SBADM" negationInd="false"> <!-- C-CDA Medication Activity templateId --> <templateId root="2.16.840.1.113883.10.20.22.4.16"/> <!-- HAI Skin preparation Clinical Statement (V2) templateId --> <templateId root="2.16.840.1.113883.10.20.5.6.162" extension="2014-12-01" /> <id nullFlavor="NA"/> <statusCode code="completed"/> <effectiveTime xsi:type="IVL_TS"> <low nullFlavor="NA"/> <high nullFlavor="NA"/> </effectiveTime> <consumable> <manufacturedProduct classCode="MANU"> <templateId root="2.16.840.1.113883.10.20.22.4.23" /> <manufacturedMaterial classCode="MMAT"> <code codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm" code="6052" displayName="Alcohol"/> </manufacturedMaterial> </manufacturedProduct> </consumable> ... </substanceAdministration> </pre>

Figure 168: Skin Preparation Clinical Statement (V2) - Chlorhexidine Not Applied Example

```
<substanceAdministration moodCode="EVN" classCode="SBADM" negationInd="true">
  <!-- C-CDA Medication Activity templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.16" />
  <!-- HAI Skin preparation Clinical Statement (V2) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.162"
    extension="2014-12-01"/>
  <id nullFlavor="NA" />
  <statusCode code="completed" />
  <effectiveTime xsi:type="IVL_TS">
    <low nullFlavor="NA" />
    <high nullFlavor="NA" />
  </effectiveTime>
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- C-CDA Medication Information templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.23"/>
      <manufacturedMaterial classCode="MMAT">
        <code codeSystem="2.16.840.1.113883.6.88"
          codeSystemName="RxNorm"
          code="20791"
          displayName="Chlorhexidine gluconate" />
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
  <!-- if chlorhexidine was not applied, record here whether it was contraindicated -->
  <entryRelationship typeCode="RSON">
    <!-- Contraindicated Observation -->
    <!-- It is true (not-negated) that the target statement was contraindicated -->
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Indication templateId-->
      <templateId root="2.16.840.1.113883.10.20.22.4.19" />
      <!-- HAI Contraindicated Observation (V2) templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.118"
        extension="2014-12-01" />
      ...
    </observation>
  </entryRelationship>
</substanceAdministration>
```

3.110Skin-Preparation Solutions Applied Organizer (V2)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.183:2014-12-01 (closed)]

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Release 2, DSTU 2.1 - US Realm

Table 448: Skin-Preparation Solutions Applied Organizer (V2) Contexts

Contained By:	Contains:
Central-Line Insertion Preparation Organizer (V2) (required)	Skin Preparation Clinical Statement (V2) (required)

This organizer reports what skin-preparation solutions were applied. It is one of the actions recorded in the first, preparatory step in the central-line insertion practice sequence.

The Skin Preparation Clinical Statement provides the list of skin preparation solutions to record.

Table 449: Skin-Preparation Solutions Applied Organizer (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.183:2014-12-01)					
@classCode	1..1	SHALL		1129-22252	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER
@moodCode	1..1	SHALL		1129-22253	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1129-22254	
@root	1..1	SHALL		1129-28110	2.16.840.1.113883.10.20.5.6.183
@extension	1..1	SHALL		1129-30293	2014-12-01
statusCode	1..1	SHALL		1129-22257	
@code	1..1	SHALL		1129-22258	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
component	1..*	SHALL		1129-22260	
substanceAdministration	1..1	SHALL		1129-30432	Skin Preparation Clinical Statement (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.162:2014-12-01)

1. **SHALL** contain exactly one [1..1] @classCode="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1129-22252).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1129-22253).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1129-22254) such that it

- a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.183" (CONF:1129-28110).
 - b. **SHALL** contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30293).
4. **SHALL** contain exactly one [1..1] statusCode (CONF:1129-22257).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1129-22258).
5. **SHALL** contain at least one [1..*] component (CONF:1129-22260).
 - a. Such components **SHALL** contain exactly one [1..1] [Skin Preparation Clinical Statement \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.162:2014-12-01) (CONF:1129-30432).
 - b. A component containing a Skin Preparation Clinical Statement **SHALL** be present for each skin-preparation solution required by the NHSN protocol. One additional such component element **MAY** be present recording an uncoded (text) skin-preparation solution (CONF:1129-22262).

Figure 169: Skin-Preparation Solutions Applied Organizer (V2) Example

```

<organizer moodCode="EVN" classCode="CLUSTER">
  <!-- Skin-Preparation Solutions Applied Organizer (V2) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.183"
    extension="2014-12-01" />
  <statusCode code="completed"/>
  <component>
    <substanceAdministration>
      <!-- C-CDA Medication Activity templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.16"/>
      <!-- HAI Skin Preparation Clinical Statement (V2) templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.162"
        extension="2014-12-01" />
      ...
    </substanceAdministration>
  </component>
  ...
</organizer>

```

3.111 Solutions Dried Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.163 (closed)]

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Table 450: Solutions Dried Observation Contexts

Contained By:	Contains:
Central-Line Insertion Practice Clinical Statement (V2) (required)	

This clinical statement represents the second step in the central-line insertion practice sequence: whether the skin-preparation solution(s) applied had dried before the next step, which is the central-line insertion itself.

If the step was completed at this place in the sequence, set the value of @negationInd to false. If this step was not completed at this place in the sequence, set the value of @negationInd to true.

Table 451: Solutions Dried Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.163)					
@classCode	1..1	SHALL		86-20938	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-20939	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-20940	
templateId	1..1	SHALL		86-28277	
@root	1..1	SHALL		86-28278	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-20943	
@root	1..1	SHALL		86-20944	2.16.840.1.113883.10.20.5.6.163
id	1..1	SHALL		86-20945	
@nullFlavor	1..1	SHALL		86-22783	NA
code	1..1	SHALL		86-20946	
@code	1..1	SHALL	CS	86-20947	ASSERTION
@codeSystem	1..1	SHALL		86-28389	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-20948	
@code	1..1	SHALL		86-20949	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-20950	
@code	1..1	SHALL		86-20952	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 3114-6

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-20938).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-20939).
4. **SHALL** contain exactly one [1..1] @negationInd (CONF:86-20940).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-28277) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28278).

6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-20943) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.163" (CONF:86-20944).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-20945).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22783).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-20946).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-20947).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28389).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-20948).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-20949).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:86-20950).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="3114-6" Solution(s) had dried (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:86-20952).

Figure 170: Solutions Dried Observation Example

```
<sequenceNumber value="2"/>
<observation moodCode="EVN" classCode="OBS" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Solutions Dried Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.163"/>
  <id nullFlavor="NA" />
  <code code="ASSERTION"
        codeSystem="2.16.840.1.113883.5.4" />
  <statusCode code="completed"/>
  <value xsi:type="CD"
        code="3114-6"
        codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        displayName="Solution(s) had dried"/>
</observation>
```

3.112Specimen Collection Encounter (ARO) (V2)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.187:2020-04-01 (closed)]

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Table 452: Specimen Collection Encounter (ARO) (V2) Contexts

Contained By:	Contains:
Specimen Collection Procedure (ARO) (V4) (required)	Patient Admitted This Encounter Observation (required)

The Specimen Collection Encounter (ARO) records the in-facility location where a specimen was collected.

This template conforms to the C-CDA Encounter Activities template. That template requires an id; in the NHSN ARO Report, the id of the encounter is not reported, therefore a "NA" nullFlavor is used for the required id.

The participant element represents the in-facility location where the specimen was collected. The value of participantRole/id/@root will be the same as the healthCareFacility in the encompassingEncounter, but here it is scoping the in-facility location where the specimen was collected, represented in the @extension.

The contained Patient Admitted This Encounter Observation represents whether or not the patient was admitted to an inpatient location during this encounter.

Table 453: Specimen Collection Encounter (ARO) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.187:2020-04-01)					
@classCode	1..1	SHALL		4459-22649	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		4459-22650	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		4459-28279	
@root	1..1	SHALL		4459-28280	2.16.840.1.113883.10.20.22.4.49
templateId	1..1	SHALL		4459-22651	
@root	1..1	SHALL		4459-22652	2.16.840.1.113883.10.20.5.6.187
@extension	1..1	SHALL		4459-30795	2020-04-01
id	1..1	SHALL		4459-22653	
@nullFlavor	1..1	SHALL		4459-22654	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = NA
effectiveTime	1..1	SHALL		4459-22655	
@nullFlavor	1..1	SHALL		4459-22656	NA
participant	1..1	SHALL		4459-22657	
@typeCode	1..1	SHALL		4459-22658	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		4459-22659	
@classCode	1..1	SHALL		4459-22660	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = SDLOC
id	1..1	SHALL		4459-22661	
@root	1..1	SHALL		4459-22662	
@extension	1..1	SHALL		4459-22663	
playingEntity	1..1	SHALL		4459-22664	
@classCode	1..1	SHALL		4459-22665	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PLC
code	1..1	SHALL		4459-	urn:oid:2.16.840.1.113883.13.

XPath	Card.	Verb	Data Type	CONF#	Value
				22666	19 (NHSNHealthcareServiceLocationCode)
entryRelationship	1..1	SHALL		4459-30796	
@typeCode	1..1	SHALL		4459-30798	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		4459-30797	Patient Admitted This Encounter Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.266:2020-04-01)

1. Conforms to Encounter Activities template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.49).
2. **SHALL** contain exactly one [1..1] **@classCode="ENC"** Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4459-22649).
3. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4459-22650).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4459-28279) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.49"** (CONF:4459-28280).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:4459-22651) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.6.187"** (CONF:4459-22652).
 - b. **SHALL** contain exactly one [1..1] **@extension="2020-04-01"** (CONF:4459-30795).
6. **SHALL** contain exactly one [1..1] **id** (CONF:4459-22653).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4459-22654).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4459-22655).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CONF:4459-22656).
8. **SHALL** contain exactly one [1..1] **participant** (CONF:4459-22657).
 - a. This participant **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:4459-22658).
 - b. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:4459-22659).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode="SDLOC"** Service delivery location (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:4459-22660).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **id** (CONF:4459-22661).

The value of @root must be the NHSN assigned Facility OID.

1. This id **SHALL** contain exactly one [1..1] @root (CONF:4459-22662).

The value of @extension must be a value registered with NHSN.

2. This id **SHALL** contain exactly one [1..1] @extension (CONF:4459-22663).
- iii. This participantRole **SHALL** contain exactly one [1..1] playingEntity (CONF:4459-22664).
 1. This playingEntity **SHALL** contain exactly one [1..1] @classCode="PLC" Place (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:4459-22665).
 2. This playingEntity **SHALL** contain exactly one [1..1] code, which **SHALL** be selected from ValueSet [NHSNHealthcareServiceLocationCode](#) urn:oid:2.16.840.1.113883.13.19 **DYNAMIC** (CONF:4459-22666).
9. **SHALL** contain exactly one [1..1] entryRelationship (CONF:4459-30796).
 - a. This entryRelationship **SHALL** contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4459-30798).
 - b. This entryRelationship **SHALL** contain exactly one [1..1] [Patient Admitted This Encounter Observation](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.266:2020-04-01) (CONF:4459-30797).

Figure 171: Specimen Collection Encounter (ARO) (V2) Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!-- [HAI R3N1] Specimen Collection Encounter (ARO) (V2) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.187" extension="2020-04-01" />
  <!-- [C-CDA R1.1] Encounter Activities -->
  <templateId root="2.16.840.1.113883.10.20.22.4.49" />
  <id nullFlavor="NA" />
  <effectiveTime nullFlavor="NA" />

  <!-- The in-facility location where the specimen was collected -->
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />
      <playingEntity classCode="PLC">
        <code codeSystem="2.16.840.1.113883.6.259" codeSystemName="HL7
HealthCareServiceLocation" code="1029-8" displayName="Medical/Surgical Critical Care" />
      </playingEntity>
    </participantRole>
  </participant>

  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- [HAI R3N1] Patient Admitted This Encounter Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.266" extension="2020-04-01" />
      ...
    </observation>
  </entryRelationship>
</encounter>
```

3.113 Specimen Collection Encounter (LIO)

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.5.6.164 (closed)]

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Release 1 - US Realm

Table 454: Specimen Collection Encounter (LIO) Contexts

Contained By:	Contains:
Specimen Collection Procedure (LIO) (required)	

The Specimen Collection Encounter (LIO) records the facility location where a specimen was collected and, if the patient was an inpatient, the date the patient was admitted or transferred to that in-facility location.

This template conforms to the C-CDA Encounter Activities template. That template requires an id; in the NHSN LIO Report, the id of the encounter is not reported, therefore a "NA" nullFlavor is used for the required id.

The participant element represents the facility location where the specimen was collected. The value of participantRole/id/@root will be the same as the healthCareFacility in the encompassingEncounter, but here it is scoping the facility location where the specimen was collected, represented in the @extension.

Table 455: Specimen Collection Encounter (LIO) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.164)					
@classCode	1..1	SHALL		86-21563	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		86-21564	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-28281	
@root	1..1	SHALL		86-28282	2.16.840.1.113883.10.20.22.4.49
templateId	1..1	SHALL		86-21567	
@root	1..1	SHALL		86-21568	2.16.840.1.113883.10.20.5.6.164
id	1..1	SHALL		86-21569	
@nullFlavor	1..1	SHALL		86-21583	NA
effectiveTime	1..1	SHALL		86-21584	
participant	1..1	SHALL		86-21571	
@typeCode	1..1	SHALL		86-21572	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		86-21573	
@classCode	1..1	SHALL		86-21574	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = SDLOC
id	1..1	SHALL		86-21575	
@root	1..1	SHALL		86-21576	
@extension	1..1	SHALL		86-21577	
playingEntity	1..1	SHALL		86-21578	
@classCode	1..1	SHALL		86-21579	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PLC
code	1..1	SHALL		86-21580	urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode)

1. Conforms to Encounter Activities template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.49).
2. **SHALL** contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21563).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21564).
4. **SHALL** contain exactly one [1..1] templateId (CONF:86-28281) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.49" (CONF:86-28282).

5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21567) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.164" (CONF:86-21568).
6. **SHALL** contain exactly one [1..1] **id** (CONF:86-21569).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-21583).
7. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-21584).
 - a. If the patient was an inpatient, an effectiveTime/low element **SHALL** be present representing the date the patient was admitted or transferred to that location (CONF:86-21585).
 - b. If the patient was not an inpatient and the encounter DateTime is not known or not available, an appropriate nullFlavor **SHALL** be used on effectiveTime element (CONF:86-21604).
8. **SHALL** contain exactly one [1..1] **participant** (CONF:86-21571).
 - a. This participant **SHALL** contain exactly one [1..1] **@typeCode**="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:86-21572).
 - b. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:86-21573).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="SDLOC" Service delivery location (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:86-21574).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **id** (CONF:86-21575).

The value of **@root** must be the NHSN assigned Facility OID.

1. This id **SHALL** contain exactly one [1..1] **@root** (CONF:86-21576).

The value of **@extension** must be a value registered with NHSN.

2. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:86-21577).
- iii. This participantRole **SHALL** contain exactly one [1..1] **playingEntity** (CONF:86-21578).
 1. This playingEntity **SHALL** contain exactly one [1..1] **@classCode**="PLC" Place (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:86-21579).
 2. This playingEntity **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNHealthcareServiceLocationCode](#) urn:oid:2.16.840.1.113883.13.19 **DYNAMIC** (CONF:86-21580).

Figure 172: Specimen Collection Location and Admission Date (LIO) Example

```
<!-- Location and admission date -->
<encounter classCode="ENC" moodCode="EVN">
  <!-- C-CDA Encounter Activities templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.49" />
  <!-- HAI Specimen Collection Encounter (LIO) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.164" />
  <id nullFlavor="NA" />
  <!-- If person was an inpatient at the in-facility location
        where the specimen was taken:
        date admitted/transferred there -->
  <effectiveTime>
    <low value="20090117" />
  </effectiveTime>
  <!-- The in-facility location where the specimen was taken -->
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />
      <playingEntity classCode="PLC">
        <code codeSystem="2.16.840.1.113883.6.259"
              codeSystemName="HL7 HealthcareServiceLocation"
              code="1029-8"
              displayName="Medical/Surgical Critical Care" />
      </playingEntity>
    </participantRole>
  </participant>
</encounter>
```

3.114 Specimen Collection Procedure (ARO) (V4)

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.188:2020-04-01
(closed)]

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Table 456: Specimen Collection Procedure (ARO) (V4) Contexts

Contained By:	Contains:
Findings Section in an ARO Report (V4) (required)	Specimen Collection Encounter (ARO) (V2) (required) Isolate Susceptibility Tests Organizer (V4) (required)

The Specimen Collection Procedure (ARO) records the date a specimen was collected and the type of specimen. It includes a Specimen Collection Encounter (ARO), which records the in-facility location where the specimen was collected. The template is derived from the Specimen Collection Procedure template from Public Health Case Reports.

In the ARO Report, a collection procedure code is not recorded. The effectiveTime element records the date when the specimen was collected. The participant element records the specimen type.

Table 457: Specimen Collection Procedure (ARO) (V4) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.188:2020-04-01)					
@classCode	1..1	SHALL		4459-22668	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		4459-22669	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		4459-22670	
@root	1..1	SHALL		4459-22671	2.16.840.1.113883.10.20.5.6.188
@extension	1..1	SHALL		4459-30472	2020-04-01
effectiveTime	1..1	SHALL		4459-22672	
@value	1..1	SHALL		4459-22673	
specimen	1..1	SHALL		4459-27160	
specimenRole	1..1	SHALL		4459-27161	
specimenPlayingEntity	1..1	SHALL		4459-27162	
code	1..1	SHALL		4459-27163	urn:oid:2.16.840.1.114222.4.11.3249 (NHSNSpecimenTypeCode)
entryRelationship	1..1	SHALL		4459-22681	
@typeCode	1..1	SHALL		4459-22682	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
@inversionInd	1..1	SHALL		4459-22683	true
encounter	1..1	SHALL		4459-22684	Specimen Collection Encounter (ARO) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.187:2020-04-01)
entryRelationship	1..*	SHALL		4459-27164	
@typeCode	1..1	SHALL		4459-27165	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
@inversionInd	1..1	SHALL		4459-27432	true
organizer	1..1	SHALL		4459-30471	Isolate Susceptibility Tests Organizer (V4) (identifier:

XPath	Card.	Verb	Data Type	CONF#	Value
					urn:hl7ii:2.16.840.1.113883.10.20.5.6.201:2020-04-01

1. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4459-22668).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4459-22669).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4459-22670) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.188" (CONF:4459-22671).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2020-04-01" (CONF:4459-30472).
4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:4459-22672).
 - a. This **effectiveTime** **SHALL** contain exactly one [1..1] **@value** (CONF:4459-22673).
5. **SHALL** contain exactly one [1..1] **specimen** (CONF:4459-27160).
 - a. This **specimen** **SHALL** contain exactly one [1..1] **specimenRole** (CONF:4459-27161).
 - i. This **specimenRole** **SHALL** contain exactly one [1..1] **specimenPlayingEntity** (CONF:4459-27162).
 1. This **specimenPlayingEntity** **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNSpecimenTypeCode](#) urn:oid:2.16.840.1.114222.4.11.3249 **DYNAMIC** (CONF:4459-27163).
6. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:4459-22681) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:4459-22682).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" (CONF:4459-22683).
 - c. **SHALL** contain exactly one [1..1] [Specimen Collection Encounter \(ARO\) \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.187:2020-04-01) (CONF:4459-22684).
7. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:4459-27164) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:4459-27165).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" (CONF:4459-27432).
 - c. **SHALL** contain exactly one [1..1] [Isolate Susceptibility Tests Organizer \(V4\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.201:2020-04-01) (CONF:4459-30471).

Table 458: NHSNSpecimenTypeCode

Value Set: NHSNSpecimenTypeCode urn:oid:2.16.840.1.114222.4.11.3249

(Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the type of specimen.),(Data Element Scope: A code identifying the type of entity playing the role of specimen. A code identifying the type of specimen.),(Inclusion Criteria:),(Exclusion Criteria:)

This value set was imported on 9/16/2020 with a version of Latest.

Value Set Source:

<https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3249/expansion>

Code	Code System	Code System OID	Print Name
110893002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Cutaneous cytologic material (specimen)
110894008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Mammary cytologic material (specimen)
110896005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Subcutaneous cytologic material (specimen)
110903005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Nasal cytologic material (specimen)
110926003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Gallbladder cytologic material (specimen)
110931001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Penis cytologic material (specimen)
110933003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Prostate cytologic material (specimen)
110935005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Testis cytologic material (specimen)
110937002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Seminal vesicle cytologic material (specimen)
110939004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Vas deferens cytologic material (specimen)
...			

Figure 173: Specimen Collection Procedure (ARO) (V4) Example

```
<procedure classCode="PROC" moodCode="EVN">
  <!-- [HAI R3N1] Specimen Collection Procedure (ARO) (V4) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.188" extension="2020-04-01" />
  <!-- Date specimen collected -->
  <effectiveTime value="20200121" />
  <specimen>
    <specimenRole>
      <specimenPlayingEntity>
        <!-- Specimen type -->
        <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"
code="119297000" displayName="Blood specimen" />
        </specimenPlayingEntity>
      </specimenRole>
    </specimen>
  <!-- [HAI R3N1] Specimen Collection Encounter (ARO) -->
  <entryRelationship typeCode="COMP" inversionInd="true">
    <encounter classCode="ENC" moodCode="EVN">
      <!-- [HAI R3N1] Specimen Collection Encounter (ARO) (V2) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.187" extension="2020-04-01" />
      <!-- [C-CDA R1.1] Encounter Activities -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" />
      ...
    </encounter>
  </entryRelationship>
  <!-- [HAI R3N1] Isolate Susceptibility Tests Organizer (V4) -->
  <entryRelationship typeCode="COMP" inversionInd="true">
    <organizer classCode="CLUSTER" moodCode="EVN">
      <!-- [HAI R3D1.1] Isolate Susceptibility Tests Organizer (V3) -->
      <templateId root="2.16.840.1.113883.10.20.5.6.201" extension="2020-04-01" />
      ...
    </organizer>
  </entryRelationship>
</procedure>
```

3.115 Specimen Collection Procedure (LIO)

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.165 (closed)]

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Release 1 - US Realm

Table 459: Specimen Collection Procedure (LIO) Contexts

Contained By:	Contains:
Pathogen Identified Observation (LIO) (V2) (required)	Specimen Collection Encounter (LIO) (required)

The Specimen Collection Procedure (LIO) records the date a specimen was collected and the type of specimen. It includes a Specimen Collection Encounter (LIO), which records the facility location where the specimen was collected and, for an inpatient, the date the patient was admitted or transferred to that in-facility location. The template is derived from the Specimen Collection Procedure template from Public Health Case Reports.

In the LIO Report, a collection procedure code is not recorded. The effectiveTime element records the date when the specimen was collected. The participant element records the specimen type.

Table 460: Specimen Collection Procedure (LIO) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.165)					
@classCode	1..1	SHALL		86-21389	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		86-21390	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-21982	
@root	1..1	SHALL		86-21983	2.16.840.1.113883.10.20.5.6.165
effectiveTime	1..1	SHALL		86-21391	
@value	1..1	SHALL		86-21392	
participant	1..1	SHALL		86-21393	
@typeCode	1..1	SHALL		86-21394	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRD
participantRole	1..1	SHALL		86-21395	
@classCode	1..1	SHALL		86-21396	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = SPEC
playingEntity	1..1	SHALL		86-21397	
code	1..1	SHALL		86-21398	urn:oid:2.16.840.1.114222.4.11.3249 (NHSNSpecimenTypeCode)
@nullFlavor	0..1	MAY		86-28200	UNK
entryRelationship	1..1	SHALL		86-21400	
@typeCode	1..1	SHALL		86-21401	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
@inversionInd	1..1	SHALL		86-21402	true
encounter	1..1	SHALL		86-21403	Specimen Collection Encounter (LIO) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.164

1. **SHALL** contain exactly one [1..1] **@classCode**="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21389).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21390).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21982) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.165" (CONF:86-21983).

4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-21391).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] **@value** (CONF:86-21392).
5. **SHALL** contain exactly one [1..1] **participant** (CONF:86-21393).
 - a. This participant **SHALL** contain exactly one [1..1] **@typeCode="PRD"** Product (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:86-21394).
 - b. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:86-21395).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode="SPEC"** Specimen (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:86-21396).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **playingEntity** (CONF:86-21397).

To record a specimen type, use @code. To record that the specimen type is not known, set the value of @nullFlavor to UNK.

1. This playingEntity **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNSpecimenTypeCode](#) urn:oid:2.16.840.1.114222.4.11.3249 **DYNAMIC** (CONF:86-21398).
 - a. This code **MAY** contain zero or one [0..1] **@nullFlavor="UNK"** (CONF:86-28200).
6. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:86-21400).
 - a. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-21401).
 - b. This entryRelationship **SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:86-21402).
 - c. This entryRelationship **SHALL** contain exactly one [1..1] [Specimen Collection Encounter \(LIO\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.164) (CONF:86-21403).

Figure 174: Specimen Collection Procedure (LIO) Example

```
<!-- Specimen collection procedure contains specimen collection encounter -->
<procedure classCode="PROC" moodCode="EVN">
  <!-- Specimen Collection Procedure (LIO) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.165" />
  <!-- Date specimen collected -->
  <effectiveTime value="20090121" />

  <!-- Specimen type -->
  <participant typeCode="PRD">
    <participantRole classCode="SPEC">
      <playingEntity>
        <code codeSystem="2.16.840.1.113883.6.96"
          codeSystemName="SNOMED CT"
          code="122571007"
          displayName="Pericardial fluid"/>
      </playingEntity>
    </participantRole>
  </participant>
  <entryRelationship typeCode="COMP" inversionInd="true">
    <!-- Specimen Collection Encounter (LIO) -->
    <encounter classCode="ENC" moodCode="EVN">
      <!-- C-CDA Encounter Activities templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.49" />
      <!-- HAI Specimen Collection Encounter (LIO) templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.164" />
      <id nullFlavor="NA" />
      <effectiveTime>
        <low value="20090117"/>
      </effectiveTime>
    </encounter>
  </entryRelationship>
</procedure>
```

3.116 Spinal Fusion Level Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.166 (closed)]

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Release 1 - US Realm

Table 461: Spinal Fusion Level Observation Contexts

Contained By:	Contains:
Procedure Details Clinical Statement in a Procedure Report [V2] (optional)	

This observation records the spinal level of a spinal fusion procedure.

Table 462: Spinal Fusion Level Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.166)					
@classCode	1..1	SHALL		86-21543	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21544	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-28283	
@root	1..1	SHALL		86-28284	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-21553	
@root	1..1	SHALL		86-21554	2.16.840.1.113883.10.20.5.6.166
id	1..1	SHALL		86-21555	
@nullFlavor	1..1	SHALL		86-22775	NA
code	1..1	SHALL		86-21545	
@code	1..1	SHALL		86-21546	ASSERTION
@codeSystem	1..1	SHALL		86-28390	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-21547	
@code	1..1	SHALL		86-21548	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-21549	urn:oid:2.16.840.1.113883.13.11 (NHSNSpinalFusionLevelCode)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21543).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21544).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28283) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28284).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21553) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.166" (CONF:86-21554).
6. **SHALL** contain exactly one [1..1] **id** (CONF:86-21555).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22775).
7. **SHALL** contain exactly one [1..1] **code** (CONF:86-21545).

- a. This code **SHALL** contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21546).
 - b. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28390).
8. **SHALL** contain exactly one [1..1] statusCode (CONF:86-21547).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21548).
9. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHALL** be selected from ValueSet [NHSNSpinalFusionLevelCode](#) urn:oid:2.16.840.1.113883.13.11 **DYNAMIC** (CONF:86-21549).

Table 463: NHSNSpinalFusionLevelCode

Value Set: NHSNSpinalFusionLevelCode urn:oid:2.16.840.1.113883.13.11 (Clinical Focus: NHSN surveillance reporting: surgical site infections),(Data Element Scope: A coded observation value describing the spinal fusion level.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.11/expansion			
Code	Code System	Code System OID	Print Name
1101-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Atlas-axis
1102-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Atlas-axis/Cervical
1103-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Cervical
1104-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Cervical/Dorsal/Dorsolumbar
1105-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Dorsal/Dorsolumbar
1106-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Lumbar/Lumbosacral

Figure 175: Spinal Fusion Level Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Spinal Fusion Level Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.166"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="1101-5"
    displayName="atlas-axis (C1-C2 only)"/>
</observation>
```

3.117SSI Detected Using Toolkit Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.206 (closed)]

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Table 464: SSI Detected Using Toolkit Observation Contexts

Contained By:	Contains:
Infection Details Section in an SSI Report (V2) (required)	

This template indicates that a surgical site infection was identified through the use of discharge diagnosis or procedure codes as described in the NHSN reporting protocol. It is based on the C-CDA Problem Observation template.

When the surgical site infection was identified through the use of discharge diagnosis or procedure codes, set the value of @negationInd to false. When the surgical site infection was not identified through the use of discharge diagnosis or procedure codes, set the value of @negationInd to true. If this observation is not required per the NHSN protocol, then set the value of @nullFlavor to "NA".

Table 465: SSI Detected Using Toolkit Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.206)					
@nullFlavor	0..1	MAY		1101-30277	NA
@classCode	1..1	SHALL		1101-30278	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1101-30279	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	0..1	MAY		1101-30280	
templateId	1..1	SHALL		1101-30282	
@root	1..1	SHALL		1101-30283	2.16.840.1.113883.10.20.5.6.206
id	1..1	SHALL		1101-30284	
@nullFlavor	1..1	SHALL		1101-30285	NA
code	1..1	SHALL		1101-30286	
@code	1..1	SHALL		1101-30287	ASSERTION
@codeSystem	1..1	SHALL		1101-30288	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		1101-30289	
@code	1..1	SHALL		1101-30290	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	1101-30291	
@code	1..1	SHALL		1101-30292	1238-5
@codeSystem	1..1	SHALL		1101-30293	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277

If this observation is not required per the NHSN protocol then set the value of @nullFlavor to NA.

- MAY** contain zero or one [0..1] @nullFlavor="NA" (CONF:1101-30277).
 - If the value of @nullFlavor is set to NA then the value of @negationInd **SHALL NOT** be set (CONF:1101-30298).
- SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1101-30278).

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1101-30279).
4. **MAY** contain zero or one [0..1] **@negationInd** (CONF:1101-30280).
 - a. If the surgical site infection was identified through the use of discharge diagnosis or procedure codes, the value of **@negationInd** **SHALL** be false. If the surgical site infection was not identified through the use of discharge diagnosis or procedure codes, the value of **@negationInd** **SHALL** be true. If the value of **@negationInd** is set then the value of **@nullFlavor** **SHALL NOT** be set (CONF:1101-30281).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:1101-30282) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.206" (CONF:1101-30283).
6. **SHALL** contain exactly one [1..1] **id** (CONF:1101-30284).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:1101-30285).
7. **SHALL** contain exactly one [1..1] **code** (CONF:1101-30286).
 - a. This **code** **SHALL** contain exactly one [1..1] **@code**="ASSERTION" (CONF:1101-30287).
 - b. This **code** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1101-30288).
8. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1101-30289).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1101-30290).
9. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1101-30291).
 - a. This **value** **SHALL** contain exactly one [1..1] **@code**="1238-5" SSI detected using the NHSN ICD-Code based Admit and Readmit SSI Surveillance Toolkit (CONF:1101-30292).
 - b. This **value** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1101-30293).

Figure 176: SSI Detected Using Toolkit Observation Example

```
<!--
  If the surgical site infection was identified through the use
  of discharge diagnosis or procedure codes, the value of
  @negationInd SHALL be false.
  If the surgical site infection was not identified through the
  use of discharge diagnosis or procedure codes,
  the value of @negationInd SHALL be true.
  If the value of @negationInd is set then the value of
  @nullFlavor SHALL NOT be set.

  If this observation is not required per the NHSN protocol
  set the value of nullFlavor to NA as follows:
  <observation classCode="OBS" moodCode="EVN" nullFlavor="NA">
-->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- SSI Detected Using Toolkit Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.206"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD" code="1238-5"
    displayName="SSI detected using the NHSN ICD-Code based Admit
      and Readmit SSI Surveillance Toolkit"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"/>
</observation>
```

3.118 SSI Detection Method

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.261:2019-04-01
(closed)]

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Table 466: SSI Detection Method Contexts

Contained By:	Contains:
Infection-Type Observation in an OPC SSI Event (required)	

This template indicates that a surgical site infection event was identified by the ASC facility where the procedure was originally performed through the use of Active/Passive surveillance methods. The type of method used is recorded in code and the specific method is recorded in value.

Table 467: SSI Detection Method Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.261:2019-04-01)					
@classCode	1..1	SHALL		4395-30794	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		4395-30795	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		4395-30788	
@root	1..1	SHALL		4395-30797	2.16.840.1.113883.10.20.5.6.261
@extension	1..1	SHALL		4395-30804	2019-04-01
id	1..1	SHALL		4395-30805	
@nullFlavor	1..1	SHALL		4395-30806	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA
code	1..1	SHALL		4395-30846	
@code	1..1	SHALL		4395-30847	urn:oid:2.16.840.1.113883.10.20.5.9.31 (NHSNSSIDetectionMethodType)
statusCode	1..1	SHALL		4395-30791	
@code	1..1	SHALL		4395-30801	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	4395-30848	
@code	1..1	SHALL		4395-30849	urn:oid:2.16.840.1.113883.10.20.5.9.29 (NHSNSSIDetectionMethod)

1. Conforms to Procedure Activity Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.13).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:4395-30794).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:4395-30795).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-30788) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.261" (CONF:4395-30797).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30804).
5. **SHALL** contain exactly one [1..1] **id** (CONF:4395-30805).

- a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:4395-30806).

The surveillance method type (Active/Passive)

6. **SHALL** contain exactly one [1..1] code (CONF:4395-30846).
 - a. This code **SHALL** contain exactly one [1..1] @code, which **SHALL** be selected from ValueSet [NHSNSSIDetectionMethodType](#) urn:oid:2.16.840.1.113883.10.20.5.9.31 **DYNAMIC** (CONF:4395-30847).
7. **SHALL** contain exactly one [1..1] statusCode (CONF:4395-30791).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:4395-30801).
8. **SHALL** contain exactly one [1..1] value with @xsi:type="CD" (CONF:4395-30848).

The code specifying the specific SSI Detection method used to identify the SSI event

- a. This value **SHALL** contain exactly one [1..1] @code, which **SHALL** be selected from ValueSet [NHSNSSIDetectionMethod](#) urn:oid:2.16.840.1.113883.10.20.5.9.29 **DYNAMIC** (CONF:4395-30849).

Table 468: NHSNSSIDetectionMethodType

Value Set: NHSNSSIDetectionMethodType urn:oid:2.16.840.1.113883.10.20.5.9.31 (Clinical Focus: NHSN surveillance reporting: surgical site infections),(Data Element Scope: Code identifying the type of observation.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.31/expansion			
Code	Code System	Code System OID	Print Name
1309-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.27 7	Active surgical site infection (SSI) detection method
1312-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.27 7	Passive surgical site infection (SSI) detection method

Table 469: NHSNSSIDetectionMethod

Value Set: NHSNSSIDetectionMethod urn:oid:2.16.840.1.113883.10.20.5.9.29

(Clinical Focus: NHSN surveillance reporting: surgical site infections),(Data Element Scope: A coded observation value describing how the facility performed the procedure detected the SSI.),(Inclusion Criteria:),(Exclusion Criteria:)

This value set was imported on 10/14/2020 with a version of Latest.

Value Set Source:

<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.29/expansion>

Code	Code System	Code System OID	Print Name
1321-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Review of patient's medical record
1322-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Post-discharge surgeon survey
1323-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Post-discharge patient letter
1324-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Post-discharge patient phone call
1325-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Cooperative infection prevention process between facilities
1326-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Patient or caregiver contacts facility to report
1327-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Patient returns to outpatient facility for follow-up
1328-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Surgeon contacts facility to report
1329-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Report from another facility (inpatient, health department, emergency department, etc.)

Figure 177: SSI Detection Method Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- [HAI R3D4] SSI Detection Method -->
  <templateId root="2.16.840.1.113883.10.20.5.6.261" extension="2019-04-01" />
  <id nullFlavor="NA" />
  <code codeSystem="2.16.840.1.113883.6.277"
    code="1309-4"
    codeSystemName="cdcNHSN"
    displayName="Active SSI Detection Method" />
  <statusCode code="completed" />
  <value xsi:type="CD" code="1321-9"
    displayName="Review of patient's medical record"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN" />
</observation>
```

3.119 Sterile Barriers Applied Clinical Statement

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.167 (closed)]

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Table 470: Sterile Barriers Applied Clinical Statement Contexts

Contained By:	Contains:
Central-Line Insertion Preparation Organizer (V2) (required)	

This clinical statement records sterile barriers applied. It is used in the first, preparatory step in the central-line insertion practice.

Table 471: Sterile Barriers Applied Clinical Statement Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.167)					
@classCode	1..1	SHALL		86-21531	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		86-21532	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21533	false
templateId	1..1	SHALL		86-28285	
@root	1..1	SHALL		86-28286	2.16.840.1.113883.10.20.22.4.14
templateId	1..1	SHALL		86-21558	
@root	1..1	SHALL		86-21559	2.16.840.1.113883.10.20.5.6.167
id	1..1	SHALL		86-21560	
@nullFlavor	1..1	SHALL		86-22772	
code	1..1	SHALL		86-21534	
@code	1..1	SHALL		86-21535	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 370822003
statusCode	1..1	SHALL		86-21561	
@code	1..1	SHALL		86-21562	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
participant	0..*	MAY		86-21536	
@typeCode	1..1	SHALL		86-21537	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV
participantRole	1..1	SHALL		86-21538	
@classCode	1..1	SHALL		86-21539	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
playingDevice	1..1	SHALL		86-21540	
code	1..1	SHALL		86-21541	urn:oid:2.16.840.1.114222.4.11.3184 (NHSNSterileBarrierCode)

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. **SHALL** contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21531).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21532).
4. **SHALL** contain exactly one [1..1] @negationInd="false" (CONF:86-21533).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-28285) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28286).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21558) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.167" (CONF:86-21559).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-21560).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor** (CONF:86-22772).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-21534).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="370822003" Use of sterile technique (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:86-21535).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21561).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-21562).
10. **MAY** contain zero or more [0..*] **participant** (CONF:86-21536).
 - a. The participant, if present, **SHALL** contain exactly one [1..1] **@typeCode**="DEV" Device (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:86-21537).
 - b. The participant, if present, **SHALL** contain exactly one [1..1] **participantRole** (CONF:86-21538).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 **STATIC**) (CONF:86-21539).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **playingDevice** (CONF:86-21540).
 1. This playingDevice **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNSterileBarrierCode](#) urn:oid:2.16.840.1.114222.4.11.3184 **DYNAMIC** (CONF:86-21541).

Table 472: NHSN Sterile Barrier Code

Value Set: NHSN Sterile Barrier Code urn:oid:2.16.840.1.114222.4.11.3184 (Clinical Focus: NHSN surveillance reporting: sterile barriers used during catheter insertion for Central Line Insertion Practices (CLIP) adherence monitoring),(Data Element Scope: A code describing the type of sterile barrier used.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3184/expansion			
Code	Code System	Code System OID	Print Name
6110-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Mask
6111-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Sterile gown
6112-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Large sterile drape
6113-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Sterile gloves
6122-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Cap

Figure 178: Sterile Barriers Applied Clinical Statement Example

```

<procedure moodCode="EVN" classCode="PROC" negationInd="false">
  <!-- C-CDA Procedure Activity Procedure templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.14" />
  <!-- HAI Sterile Barriers Applied Clinical Statement templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.167" />
  <id nullFlavor="NA" />
  <code code="370822003"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    displayName="Use of Sterile Technique" />
  <statusCode code="completed" />
  <participant typeCode="DEV">
    <participantRole classCode="MANU">
      <playingDevice>
        <code code="6110-1"
          codeSystem="2.16.840.1.113883.6.277"
          codeSystemName="cdcNHSN"
          displayName="Mask/Eye shield" />
      </playingDevice>
    </participantRole>
  </participant>
  ...
</procedure>

```

3.120 Summary Data Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.185 (closed)]

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Table 473: Summary Data Observation Contexts

Contained By:	Contains:
Summary Encounter (required) Summary Encounter (NICU) (required) Summary Data Observation (POM) (optional) Summary Data Observation (VAT) (optional) Summary Encounter (HP-FLU) (required)	

The Summary Data Observation is used in some population-summary reports.

The documentationOf/serviceEvent/code in the header identifies the intended content of the report. For example, cdcNHSN code 1879-6 indicates that the data content is "Summary data reporting catheter and ventilator use in an ICU". NHSN protocol specifies which data to report for each type of content. The data required by NHSN for most types of content, at time of publication, are shown in the tables below.

The table of codes for a particular report indicate what data are required at time of publication for the NHSN protocol. Accordingly, the Summary Encounter will contain the same number of Summary Data Observations as codes in the table.

Most Summary Data Observations are a simple code-value pair. The code element identifies the datum being reported, and the value element records a number of days, patients, episodes, or events.

Table 474: Summary Data Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185)					
@classCode	1..1	SHALL		86-22407	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-22408	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-22409	
@root	1..1	SHALL		86-22410	2.16.840.1.113883.10.20.5.6.185
code	1..1	SHALL		86-22411	
statusCode	1..1	SHALL		86-22412	
@code	1..1	SHALL		86-28189	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL		86-22413	

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:86-22407).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:86-22408).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22409) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.185" (CONF:86-22410).
4. **SHALL** contain exactly one [1..1] **code** (CONF:86-22411).
 - a. If this is ICU Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Intensive Care Unit (ICU) Summary Data table below (CONF:86-28193).
 - b. If this is NICU Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Neonatal Intensive Care Unit (NICU) Summary Data table below (CONF:86-28194).
 - c. If this is SCA Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Specialty Care Area (SCA) Summary Data table below (CONF:86-28195).
 - d. If this is VAT (Dialysis) Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Vascular Access Type (Dialysis) Summary Data table below (CONF:86-28196).
 - e. If this is POM Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Prevention Process and Outcome Measures (POM) Summary Data table below (CONF:86-28199).
 - f. If this is OPC Same Day Outcome Measures Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for OPC Same Day Outcome Measures Summary Data table below (CONF:86-28407).
 - g. If this is HP-FLU Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Healthcare Personnel Influenza Vaccination Summary Data table below (CONF:86-28405).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-22412).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28189).
6. **SHALL** contain exactly one [1..1] **value** (CONF:86-22413).
 - a. If the observation reports a number of days, the value of value/xsi:type **SHALL** be PQ and the value of value/@unit **SHALL** be d. If the observation reports a number of patients, episodes or events the value of value/@xsi:type **SHALL** be INT. If the value is a code, the value of value/@xsi:type **SHALL** be CD (CONF:86-26183).

Table 475: Codes for Intensive Care Unit (ICU) Summary Data

Value Set: Codes for Intensive Care Unit (ICU) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.12 (Clinical Focus: NHSN surveillance reporting: denominators for intensive care unit (ICU)),(Data Element Scope: Code identifying the type of observation.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.12/expansion			
Code	Code System	Code System OID	Print Name
1826-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of new episodes of mechanical ventilation (EMV)
1833-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of central line days
1834-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of airway pressure release ventilation (APRV) days
1851-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of patient days
1852-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of ventilator days
1853-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of urinary catheter days

Table 476: Codes for Neonatal Intensive Care Unit (NICU) Summary Data

Value Set: Codes for Neonatal Intensive Care Unit (NICU) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.13 (Clinical Focus: NHSN surveillance reporting: denominators for neonatal intensive care unit (NICU)),(Data Element Scope: Code identifying the type of observation.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.13/expansion			
Code	Code System	Code System OID	Print Name
1333-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of episodes of mechanical ventilation (EMV) days
1851-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of patient days
1852-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of ventilator days
1853-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of urinary catheter days
1854-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of central line days including umbilical catheter

Table 477: Codes for Specialty Care Area (SCA) Summary Data

Value Set: Codes for Specialty Care Area (SCA) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.16 (Clinical Focus: NHSN surveillance reporting: denominators for specialty care area (SCA) and oncology (ONC)),(Data Element Scope: Code identifying the type of observation.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.16/expansion			
Code	Code System	Code System OID	Print Name
1826-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of new episodes of mechanical ventilation (EMV)
1834-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of airway pressure release ventilation (APRV) days
1851-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of patient days
1852-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of ventilator days
1853-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of urinary catheter days
3305-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of temporary central line days
3306-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of permanent central line days

Table 478: Codes for Vascular Access Type (Dialysis) Summary Data

Value Set: Codes for Vascular Access Type (Dialysis) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.17
(Clinical Focus: NHSN surveillance reporting: monthly reporting denominators for dialysis),(Data Element Scope: Code identifying the type of observation.),(Inclusion Criteria:),(Exclusion Criteria:)

This value set was imported on 10/14/2020 with a version of Latest.

Value Set Source:

<https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.17/expansion>

Code	Code System	Code System OID	Print Name
2310-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of chronic hemodialysis patients: fistula
2311-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of fistula patients who undergo buttonhole cannulation
2312-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of chronic hemodialysis patients: graft
2313-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of chronic hemodialysis patients: tunneled central line
2314-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of chronic hemodialysis patients: non-tunneled central line
2315-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of chronic hemodialysis patients: other access device
2316-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Summary data reporting vascular access types for chronic hemodialysis patients

Table 479: Codes for Prevention Process and Outcome Measures (POM) Summary Data

Value Set: Codes for Prevention Process and Outcome Measures (POM) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.15 (Clinical Focus: NHSN surveillance reporting: monthly reporting denominators for prevention process and outcome measures),(Data Element Scope: Code identifying the type of observation.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.15/expansion			
Code	Code System	Code System OID	Print Name
1827-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of patient days adjusted for MDRO reporting (for inpatient location)
1828-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of admissions adjusted for MDRO reporting (for inpatient location)
1830-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of patient days adjusted for C. difficile reporting (for inpatient location)
1864-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of observations in which hand hygiene was indicated
1865-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of observations in which hand hygiene was performed
1866-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of observations in which the use of gown and gloves was indicated
1867-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of observations in which gown and gloves were used
1870-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Timing of active surveillance testing (AST)
1871-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Active surveillance testing (AST) eligible patients
1872-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of patients eligible for monitoring at admission/transfer in
...			

Table 480: Codes for Healthcare Personnel Influenza Vaccination (HP FLU) Summary Data

Value Set: Codes for Healthcare Personnel Influenza Vaccination (HP FLU) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.10 (Clinical Focus: NHSN surveillance reporting: numbers of healthcare personnel in categories tracked for an influenza season),(Data Element Scope: Code identifying the type of observation.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.10/expansion			
Code	Code System	Code System OID	Print Name
86552-7	LOINC	urn:oid:2.16.840.1.113883.6.1	Staff [#] who worked at facility at least one day from October 1 through March 31
86553-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Staff [#] who received influenza vaccination at the facility
86554-3	LOINC	urn:oid:2.16.840.1.113883.6.1	Staff [#] who provided documentation of influenza vaccine receipt
86555-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Staff [#] who had a medical contraindication to the influenza vaccine
86556-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Staff [#] who declined influenza vaccine
86557-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Staff [#] with unknown influenza vaccination status

Table 481: Codes for Outpatient Procedure Component Same Day Outcome Measures Summary Data

Value Set: Codes for Outpatient Procedure Component Same Day Outcome Measures Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.32 (Clinical Focus: NHSN surveillance reporting: monthly reporting denominators for Outpatient Procedure Component Same Day Outcome Measures),(Data Element Scope: Code identifying the type of observation.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.32/expansion			
Code	Code System	Code System OID	Print Name
1890-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of total facility encounters (for outpatient location)

Figure 179: Summary Data Observation Example—NICU

```
<!-- second participant: a subgroup of population reported on -->
<participant typeCode="SBJ" contextControlCode="OP">
  <participantRole classCode="PRS">
    <code codeSystem="2.16.840.1.113883.6.277"
      codeSystemName="cdcNHSN"
      code="3300-1"
      displayName="The subset of inpatients whose
        birth weight is under 750gm"/>
  </participantRole>
</participant>

<entryRelationship typeCode="COMP">
  <observation classCode="OBS" moodCode="EVN">
    <!-- Summary Data Observation templateId -->
    <templateId root="2.16.840.1.113883.10.20.5.6.185"/>
    <code code="1853-1"
      codeSystem="2.16.840.1.113883.6.277"
      codeSystemName="cdcNHSN"
      displayName="Number of urinary catheter days" />
    <statusCode code="completed" />
    <value unit="d"
      value="23"
      xsi:type="PQ" />
  </observation>
</entryRelationship>
```

Figure 180: Summary Data Observation Example—SCA

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Summary Data Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.185"/>
  <code codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="3306-8"
    displayName="Number of permanent central line days"/>
  <statusCode code="completed"/>
  <value xsi:type="PQ"
    unit="d"
    value="100"/>
</observation>
```

Figure 181: Summary Data Observation Example—ICU

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Summary Data Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.185"/>
  <code codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="1851-5"
        displayName="Number of Patient Days"/>
  <statusCode code="completed"/>
  <value xsi:type="PQ"
        unit="d"
        value="100"/>
</observation>
```

Figure 182: Summary Data Observation Example—HP-FLU

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Summary Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.185" />
  <code codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        code="86553-5"
        displayName="Number of HCP who received an influenza
        vaccination at this healthcare facility since
        influenza vaccine became available this
        season" />
  <statusCode code="completed" />
  <value xsi:type="INT" value="55" />
</observation>
```

3.121 Summary Data Observation (AU/AR)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 2 - US Realm

Table 482: Summary Data Observation (AU/AR) Contexts

Contained By:	Contains:
Summary Encounter Patient Presence (AUP) (V2) (required)	
Summary Encounter (AUP) (V2) (required)	
Summary Encounter (ARO) (V3) (required)	

This template specializes the Summary Data Observation for the AU/AR population-summary reports. The documentationOf/serviceEvent/code in the header identifies the intended content of the report. For example, cdcNHSN code 1887-9 indicates that the data content is "Summary data reporting

Antimicrobial Usage". NHSN protocol specifies which data to report for each type of content. The data required by NHSN for each type of content, at time of publication, are shown in the tables below. The table of codes for a particular report indicate what data are required at time of publication for the NHSN protocol. Accordingly, the Summary Encounter will contain the same number of Summary Data Observations as codes in the table.

Most Summary Data Observations are a simple code-value pair. The code element identifies the datum being reported, and the value element records a number of days, patients, episodes, or events.

Table 483: Summary Data Observation (AU/AR) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01)					
@classCode	1..1	SHALL		1181-30549	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1181-30550	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1181-30545	
@root	1..1	SHALL		1181-30551	2.16.840.1.113883.10.20.5.6.229
@extension	1..1	SHALL		1181-30561	2015-04-01
code	1..1	SHALL		1181-30546	
statusCode	1..1	SHALL		1181-30547	
@code	1..1	SHALL		1181-30559	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL		1181-30548	

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1181-30549).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1181-30550).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1181-30545) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.6.229"** (CONF:1181-30551).
 - b. **SHALL** contain exactly one [1..1] **@extension="2015-04-01"** (CONF:1181-30561).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1181-30546).
 - a. If this is ARO Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Antimicrobial Resistance Option (ARO) Summary Data table below (CONF:1181-30552).

- b. If this is AUP Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Antimicrobial Usage, Pharmacy (AUP) Summary Data table below (CONF:1181-30557).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1181-30547).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1181-30559).
6. **SHALL** contain exactly one [1..1] **value** (CONF:1181-30548).
 - a. If the observation reports a number of days, the value of value/xsi:type **SHALL** be PQ and the value of value/@unit **SHALL** be d. If the observation reports a number of patients, episodes or events the value of value/@xsi:type **SHALL** be INT. If the value is a code, the value of value/@xsi:type **SHALL** be CD (CONF:1181-30560).

Table 484: Codes for Antimicrobial Resistance Option (ARO) Summary Data

Value Set: Codes for Antimicrobial Resistance Option (ARO) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.8 (Clinical Focus: NHSN surveillance reporting: monthly reporting denominators for antimicrobial resistance.),(Data Element Scope: Code identifying the type of observation.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.8/expansion			
Code	Code System	Code System OID	Print Name
1851-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of patient days
1862-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of admissions
2409-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of blood cultures performed
1863-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of encounters

Table 485: Codes for Antimicrobial Usage, Pharmacy (AUP) Summary Data

Value Set: Codes for Antimicrobial Usage, Pharmacy (AUP) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.9 (Clinical Focus: NHSN surveillance reporting: monthly reporting denominators for antimicrobial usage),(Data Element Scope: Code identifying the type of observation.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.9/expansion			
Code	Code System	Code System OID	Print Name
1862-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of admissions
2524-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of therapy days
2525-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of patient-present days

Figure 183: Summary Data Observation (AU/AR) Example

<pre><observation classCode="OBS" moodCode="EVN"> <!-- Summary Data Observation (AU/AR) templateId --> <templateId root="2.16.840.1.113883.10.20.5.6.229" extension="2015-04-01"/> <code code="2409-1" codeSystem="2.16.840.1.113883.6.277" codeSystemName="cdcNHSN" displayName="Number of blood cultures performed"/> <statusCode code="completed"/> <value xsi:type="INT" value="24" /> </observation></pre>

3.122Summary Data Observation (AUP)

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.194 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 1 - US Realm

Table 486: Summary Data Observation (AUP) Contexts

Contained By:	Contains:
Summary Encounter (AUP) (V2) (required)	

This template specializes the Summary Data Observation for an Antimicrobial Use (AUP) Summary Report.

The Summary Data Observation (AUP) records data for the antimicrobial stratified by route of administration. (See the NHSN protocol for how the values are calculated.) If a value is not applicable for a combination of drug and route, the value of @nullFlavor must be "NA".

Table 487: Summary Data Observation (AUP) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.194)					
@classCode	1..1	SHALL		86-22910	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-22911	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-22912	
@root	1..1	SHALL		86-22913	2.16.840.1.113883.10.20.5.6.194
code	1..1	SHALL		86-22914	
statusCode	1..1	SHALL		86-22915	
@code	1..1	SHALL		86-28111	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL		86-22916	
methodCode	1..1	SHALL		86-23044	urn:oid:2.16.840.1.114222.4.11.3361 (NHSNRouteOfAdministration AURPCode)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22910).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22911).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22912) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.194" (CONF:86-22913).
4. **SHALL** contain exactly one [1..1] **code** (CONF:86-22914).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-22915).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28111).
6. **SHALL** contain exactly one [1..1] **value** (CONF:86-22916).
7. **SHALL** contain exactly one [1..1] **methodCode**, which **SHALL** be selected from ValueSet [NHSNRouteOfAdministrationAURPCode](#) urn:oid:2.16.840.1.114222.4.11.3361 **DYNAMIC** (CONF:86-23044).
8. If the observation reports a number of days, the value of value/xsi:type **SHALL** be PQ and the value of value/@unit **SHALL** be d. If the observation reports a number of patients, the value of value/@xsi:type **SHALL** be INT. If the value is a code, the value of value/@xsi:type **SHALL** be CD (CONF:86-22917).

Table 488: NHSNRouteOfAdministrationAURPCode

Value Set: NHSNRouteOfAdministrationAURPCode urn:oid:2.16.840.1.114222.4.11.3361 (Clinical Focus: NHSN surveillance reporting: Antimicrobial Use summary, route by which antimicrobial was administered),(Data Element Scope: A method code describing the route of administration of the antimicrobial.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3361/expansion			
Code	Code System	Code System OID	Print Name
447694001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Respiratory tract route (qualifier value)
447964005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Digestive tract route (qualifier value)
47625008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Intravenous route (qualifier value)
78421000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Intramuscular route (qualifier value)

Figure 184: Summary Data Observation (AUP) Example

<pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.20.5.6.194" /> <code codeSystem="2.16.840.1.113883.6.277" codeSystemName="cdcNHSN" code="2524-7" displayName="Number of Therapy Days" /> <statusCode code="completed" /> <value xsi:type="PQ" unit="d" value="3" /> <methodCode code="447694001" codeSystemName="SNOMED CT" codeSystem="2.16.840.1.113883.6.96" displayName="Respiratory tract route"/> </observation></pre>

3.123Summary Data Observation (HV)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.235:2015-10-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 3, DSTU 1 - US Realm

Table 489: Summary Data Observation (HV) Contexts

Contained By:	Contains:
Summary Encounter (HV) (V2) (required)	

This template specializes the Summary Data Observation for an HAI Hemovigilance (HV) Summary Report.

The documentationOf/serviceEvent/code in the header identifies the intended content of the report. NHSN protocol specifies which data to report for each type of content. The data required by NHSN for each type of content, at time of publication, are shown in the tables below.

The table of codes for a particular report indicate what data are required at time of publication for the NHSN protocol. Accordingly, the Summary Encounter will contain the same number of Summary Data Observations as codes in the table.

Most Summary Data Observations are a simple code-value pair. The code element identifies the datum being reported, and the value element records a number of days, patients, episodes, or events.

Table 490: Summary Data Observation (HV) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.235:2015-10-01)					
@classCode	1..1	SHALL		1202-30675	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1202-30676	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1202-30671	
@root	1..1	SHALL		1202-30677	2.16.840.1.113883.10.20.5.6.235
@extension	1..1	SHALL		1202-30684	2015-10-01
code	1..1	SHALL		1202-30672	urn:oid:2.16.840.1.113883.10.20.5.9.11 (Codes for Hemovigilance (HV) Summary Data)
statusCode	1..1	SHALL		1202-30673	
@code	1..1	SHALL		1202-30683	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	INT	1202-30674	

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1202-30675).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1202-30676).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1202-30671) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.235" (CONF:1202-30677).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-10-01" (CONF:1202-30684).

4. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Codes for Hemovigilance \(HV\) Summary Data](#) urn:oid:2.16.840.1.113883.10.20.5.9.11 **DYNAMIC** (CONF:1202-30672).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1202-30673).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1202-30683).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="INT"** (CONF:1202-30674).

Table 491: Codes for Hemovigilance (HV) Summary Data

Value Set: Codes for Hemovigilance (HV) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.11 (Clinical Focus: NHSN surveillance reporting: monthly reporting denominators for hemovigilance),(Data Element Scope: Code identifying the type of observation.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.11/expansion			
Code	Code System	Code System OID	Print Name
3436-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Number of patient samples collected for type and screen or crossmatch
3538-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Total crossmatch procedures
3539-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Total patients transfused

Figure 185: Summary Data Observation (HV) Example

<pre> <observation classCode="OBS" moodCode="EVN"> <!-- Summary Data Observation (HV) --> <templateId root="2.16.840.1.113883.10.20.5.6.235" extension="2015-10-01" /> <code codeSystem="2.16.840.1.113883.6.277" codeSystemName="cdcNHSN" code="3539-4" displayName="Total patients transfused" /> <statusCode code="completed" /> <value xsi:type="INT" value="74" /> </observation> </pre>

3.124 Summary Data Observation (POM)

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.192 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 1 - US Realm

Table 492: Summary Data Observation (POM) Contexts

Contained By:	Contains:
Summary Encounter (POM) (required)	Summary Data Observation (optional)

This template extends the Summary Data Observation for a POM Report.

When recording AST outcome measures, Summary Data Observation (POM)s record the organism monitored; the data required by NHSN protocol are recorded within those observations.

Table 493: Summary Data Observation (POM) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.192)					
@classCode	1..1	SHALL		86-22855	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-22856	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-22857	
@root	1..1	SHALL		86-22858	2.16.840.1.113883.10.20.5.6.192
code	1..1	SHALL		86-22859	
statusCode	1..1	SHALL		86-22860	
@code	1..1	SHALL		86-28112	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL		86-22861	
entryRelationship	0..*	MAY		86-23372	
observation	1..1	SHALL		86-23373	Summary Data Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22855).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22856).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22857) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.192" (CONF:86-22858).
4. **SHALL** contain exactly one [1..1] **code** (CONF:86-22859).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-22860).

- a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28112).
6. **SHALL** contain exactly one [1..1] value (CONF:86-22861).
 - a. To record which organism was monitored (code/@code 3193-0 AST Organism Monitored), the value of value/@code **SHALL** be selected from ValueSet NHSNOrganismASTCode 2.16.840.1.114222.4.11.3283 **DYNAMIC** (CONF:86-22862).
 - b. To record the timing of monitoring (code/@code 1870-5 Timing), the value of value/@code **SHALL** be selected from ValueSet 2.16.840.1.114222.4.11.3247 NHSNTimingCode **DYNAMIC** (CONF:86-22863).
 - c. To record eligibility criteria for monitoring (code/@code 1871-3 Eligibility), the value of value/@code **SHALL** be selected from ValueSet 2.16.840.1.114222.4.11.3248 NHSNEligibilityCode **DYNAMIC** (CONF:86-22864).
 - d. If the observation reports a number of days, the value of value/xsi:type **SHALL** be PQ and the value of value/@unit **SHALL** be d. If the observation reports a number of patients, the value of value/@xsi:type **SHALL** be INT. If the value is a code, the value of value/@xsi:type **SHALL** be CD (CONF:86-23371).
7. **MAY** contain zero or more [0..*] entryRelationship (CONF:86-23372).
 - a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] [Summary Data Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185) (CONF:86-23373).
 - b. To record which organism was monitored (code/@code 3193-0 AST Organism Monitored) this observation **SHALL** contain, as entryRelationships where the value of @typeCode is COMP, Summary Data Observations recording the data collected for that class. The specific data required are specified by the NHSN protocol (CONF:86-23374).

Table 494: NHSNOrganismASTCode

Value Set: NHSNOrganismASTCode urn:oid:2.16.840.1.114222.4.11.3283 (Clinical Focus: Organisms monitored for adherence to active surveillance testing (AST) for NHSN reporting purposes),(Data Element Scope: A coded observation value describing the AST organism monitored.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3283/expansion			
Code	Code System	Code System OID	Print Name
113727004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Vancomycin resistant Enterococcus (organism)
115329001	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Methicillin resistant Staphylococcus aureus (organism)

Table 495: NHSNTimingCode

Value Set: NHSNTimingCode urn:oid:2.16.840.1.114222.4.11.3247 (Clinical Focus: NHSN surveillance reporting: active surveillance culture/testing),(Data Element Scope: A coded observation value describing the timing of the organism monitoring.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3247/expansion			
Code	Code System	Code System OID	Print Name
2201-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	On admission only
2202-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	On admission and on discharge/transfer

Table 496: NHSNEligibilityCode

Value Set: NHSNEligibilityCode urn:oid:2.16.840.1.114222.4.11.3248 (Clinical Focus: NHSN surveillance reporting: used to express the category of patients eligible for active surveillance culture/testing),(Data Element Scope: A code identify the type of encounter.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3248/expansion			
Code	Code System	Code System OID	Print Name
2301-0	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	All patients
2302-8	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Only patients with no prior documentation of colonization or infection

Figure 186: Summary Data Observation (POM) Example

```
<!-- example showing AST for MRSA -->
<!-- The organism monitored was MRSA.
      Within this observation are child observations
      that record additional information about the monitoring
      and the data reported by the monitoring. -->
<!-- AST Organism Monitored -->
<observation classCode="OBS" moodCode="EVN">
  <!-- Summary Data Observation (POM) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.192"/>
  <code codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="3193-0"
        displayName="AST Organism Monitored"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT"
        code="115329001"
        displayName="MRSA"/>
  <!-- The observations below are within
        the observation of what organism was monitored -->
  <!-- Timing of monitoring -->
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.185"/>
      ...
    </observation>
  </entryRelationship>
  <!-- Eligibility for monitoring -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.185"/>
      ...
    </observation>
  </entryRelationship>
  <!-- Number eligible on admission-->
  ...
  <!-- Number performed on admission-->
  ...
  <!-- Number eligible on discharge/transfer -->
  ...
  <!-- Number performed on discharge/transfer-->
  ...
  <!-- Number prevalent cases AST/clinical positive-->
  ...
  <!-- Number prevalent cases previously known-->
  ...
  <!-- Number incident cases -->
  ...
</observation>
<!-- end of data about monitoring for this organism -->
```

3.125Summary Data Observation (VAT)

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.195 (closed)]

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Table 497: Summary Data Observation (VAT) Contexts

Contained By:	Contains:
Summary Encounter (VAT) (required)	Summary Data Observation (optional)

This template specializes the Summary Data Observation for a Vascular Access Type Report. When the vascular access type is fistula there is an entryRelationship containing a Summary Data Observation recording the number of patients with buttonhole cannulation.

Table 498: Summary Data Observation (VAT) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.195)					
@classCode	1..1	SHALL		86-22933	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-22934	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-22935	
@root	1..1	SHALL		86-22936	2.16.840.1.113883.10.20.5.6.195
code	1..1	SHALL		86-22937	urn:oid:2.16.840.1.113883.10.20.5.9.17 (Codes for Vascular Access Type (Dialysis) Summary Data)
statusCode	1..1	SHALL		86-22938	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus)
@code	1..1	SHALL		86-28113	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL		86-22939	
entryRelationship	0..1	MAY		86-22940	
@typeCode	1..1	SHALL		86-22941	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		86-22942	Summary Data Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185)

1. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22933).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22934).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22935) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.195" (CONF:86-22936).
4. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [Codes for Vascular Access Type \(Dialysis\) Summary Data](#) urn:oid:2.16.840.1.113883.10.20.5.9.17 **DYNAMIC** (CONF:86-22937).
5. **SHALL** contain exactly one [1..1] **statusCode** (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-22938).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28113).
6. **SHALL** contain exactly one [1..1] **value** (CONF:86-22939).
7. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:86-22940).
 - a. The entryRelationship, if present, **SHALL** contain exactly one [1..1] **@typeCode**="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-22941).
 - b. The entryRelationship, if present, **SHALL** contain exactly one [1..1] [Summary Data Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185) (CONF:86-22942).
 - c. In a VAT Report, the Summary Observation recording the number of patients with fistula **SHALL** contain an entryRelationship where the value of **@typeCode** is COMP, that contains a Summary Data Observation recording the number of those patients with buttonhole cannulation (CONF:86-22943).
8. If the observation reports a number of days, the value of value/xsi:type **SHALL** be PQ and the value of value/@unit **SHALL** be d. If the observation reports a number of patients, the value of value/@xsi:type **SHALL** be INT. If the value is a code, the value of value/@xsi:type **SHALL** be CD (CONF:86-22944).

Figure 187: Summary Data Observation (VAT) Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- Summary Data Observation (VAT) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.195" />
  <code code="2310-1"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    displayName="Number of Chronic Hemodialysis Patients, vascular access
      type is fistula" />
  <statusCode code="completed" />
  <value value="100" xsi:type="INT" />
  <!-- When recording fistula, the patients with buttonhole cannulation
    is also required -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.185" />
      <code code="2311-9"
        codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        displayName="Number of chronic hemodialysis patients, vascular
          access type is fistula, buttonhole cannulation" />
      <statusCode code="completed" />
      <value value="20" xsi:type="INT" />
    </observation>
  </entryRelationship>
</observation>
```

3.126 Summary Encounter

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.5.6.184 (closed)]

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Release 1 - US Realm

Table 499: Summary Encounter Contexts

Contained By:	Contains:
Summary Data Section (required)	Summary Data Observation (required)

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. Each datum is recorded as a Summary Data Observation. The data requirements at time of publication are shown in tables under the generic Summary Data Observation template, above.

The table of codes for a particular report indicate what data are required at time of publication for the NHSN protocol. Accordingly, the Summary Encounter will contain the same number of Summary Data Observations as codes in the table.

A participant element records the location to which the data pertains. It has three parts: a location id, a location type code, and a scoping entity. The location id has the form <id root="..." extension="..." /> representing a location such as ward 9W, or <id root="..." /> representing the whole facility. The scoping entity is optional if an id is present. However, specialized subsets of the facility such as “the

whole facility excluding NICU and well-baby units” have no NHSN location id, and the scopingEntity is required in those cases.

Table 500: Summary Encounter Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.184)					
@classCode	1..1	SHALL		86-22392	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		86-22393	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-22394	
@root	1..1	SHALL		86-22395	2.16.840.1.113883.10.20.5.6.184
participant	1..1	SHALL		86-22397	
@typeCode	1..1	SHALL		86-22398	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		86-22399	
@classCode	1..1	SHALL		86-22400	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC
entryRelationship	1..*	SHALL		86-22404	
@typeCode	1..1	SHALL		86-22405	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		86-22406	Summary Data Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185)

1. **SHALL** contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22392).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22393).
3. **SHALL** contain exactly one [1..1] templateId (CONF:86-22394) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.184" (CONF:86-22395).
4. **SHALL** contain exactly one [1..1] participant (CONF:86-22397) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:86-22398).
 - b. **SHALL** contain exactly one [1..1] participantRole (CONF:86-22399).
 - i. This participantRole **SHALL** contain exactly one [1..1] @classCode="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:86-22400).

The value of @root must be the NHSN assigned Facility OID.
The value of @extension must be a value registered with NHSN.

- ii. If recording data from an in-facility location, the participantRole element **SHALL** contain an id element with both @root and @extension, and a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 **DYNAMIC**, recording the type of location (CONF:86-22401).

The value of @root must be the NHSN assigned Facility OID.

- iii. Or, if recording data from the whole facility, the participantRole element **SHALL** contain an id element with @root (CONF:86-22402).

The value of @root must be the NHSN assigned Facility OID.

- iv. Or, if recording data from a specialized subset of a facility, the participantRole element **SHALL** contain a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 **DYNAMIC**, recording the type of location, and a scopingEntity element where the value of @classCode is "PLC" and id/@root is present (CONF:86-22403).

- 5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:86-22404).
 - a. Such entryRelationships **SHALL** contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-22405).
 - b. Such entryRelationships **SHALL** contain exactly one [1..1] [Summary Data Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185) (CONF:86-22406).

Figure 188: Summary Encounter Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!-- Summary Encounter templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.184" />
  <!-- the in-facility location ID and type -->
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <!-- the facility OID scopes the in-facility location ID -->
      <id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />
      <code codeSystem="2.16.840.1.113883.6.259"
        codeSystemName="HL7 HealthcareServiceLocation"
        code="1029-8"
        displayName="Medical/Surgical Critical Care" />
    </participantRole>
  </participant>

  <!-- Patient Days -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.185" />
      ...
    </observation>
  </entryRelationship>

  <!-- Central Line Days -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.185" />
      ...
    </observation>
  </entryRelationship>
  ...
</entryRelationship>
</encounter>
```

3.127 Summary Encounter (ARO) (V3)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.199:2019-04-01 (closed)]

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Table 501: Summary Encounter (ARO) (V3) Contexts

Contained By:	Contains:
Summary Data Section (ARO) (V3) (required)	Summary Data Observation (AU/AR) (required)

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary

report. For an ARO report, each datum is recorded as a Summary Data Observation (AU/AR). The data requirements at time of publication are shown in a table under the Summary Data Observation (AU/AR) template, above.

A participant element records the location to which the data pertains. The location id has the form <id root="..." extension="..." />.

Table 502: Summary Encounter (ARO) (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.199:2019-04-01)					
@classCode	1..1	SHALL		4395-23077	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		4395-23078	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		4395-23079	
@root	1..1	SHALL		4395-23080	2.16.840.1.113883.10.20.5.6.199
@extension	1..1	SHALL		4395-30919	2019-04-01
participant	1..1	SHALL		4395-23081	
@typeCode	1..1	SHALL		4395-23082	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		4395-23083	
@classCode	1..1	SHALL		4395-23084	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC
id	1..1	SHALL		4395-23085	
@root	1..1	SHALL		4395-23086	
@extension	1..1	SHALL		4395-23087	
code	1..1	SHALL		4395-23088	urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode)
entryRelationship	1..*	SHALL		4395-23092	
@typeCode	1..1	SHALL		4395-23093	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		4395-23094	Summary Data Observation (AU/AR) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01)

1. **SHALL** contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:4395-23077).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:4395-23078).

3. **SHALL** contain exactly one [1..1] **templateId** (CONF:4395-23079) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.199" (CONF:4395-23080).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2019-04-01" (CONF:4395-30919).
4. **SHALL** contain exactly one [1..1] **participant** (CONF:4395-23081) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:4395-23082).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:4395-23083).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:4395-23084).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **id** (CONF:4395-23085).

The value of **@root** must be the NHSN assigned Facility OID.

1. This id **SHALL** contain exactly one [1..1] **@root** (CONF:4395-23086).

The value of **@extension** must be a value registered with NHSN.

2. This id **SHALL** contain exactly one [1..1] **@extension** (CONF:4395-23087).
 - iii. This participantRole **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet [NHSNHealthcareServiceLocationCode](#) urn:oid:2.16.840.1.113883.13.19 **DYNAMIC** (CONF:4395-23088).
5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:4395-23092).
 - a. Such entryRelationships **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:4395-23093).
 - b. Such entryRelationships **SHALL** contain exactly one [1..1] [Summary Data Observation \(AU/AR\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01) (CONF:4395-23094).

Figure 189: Summary Encounter (ARO) (V3)

```
<!-- Summary Encounter -->
<encounter classCode="ENC" moodCode="EVN">
  <!-- Summary Encounter (ARO) (V3) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.199"
    extension="2019-04-01"/>
  <!-- the location id and type -->
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <id root="2.111.111.111.10709" extension="FACWIDEIN"/>
      <code codeSystem="2.16.840.1.113883.6.259"
        codeSystemName="HL7 Healthcare Service Location Code"
        code="1250-0"
        displayName="Facility Wide Inpatient"/>
    </participantRole>
  </participant>

  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation (AU/AR) templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.229"
        extension="2015-04-01"/>
      <code code="1851-5"
        codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        displayName="Patient Days"/>
      <statusCode code="completed"/>
      <value xsi:type="PQ" unit="d" value="235"/>
    </observation>
  </entryRelationship>

  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation (AU/AR) templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.229"
        extension="2015-04-01"/>
      <code code="1862-2" codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        displayName="Admission count"/>
      <statusCode code="completed"/>
      <value xsi:type="INT" value="46"/>
    </observation>
  </entryRelationship>

  <entryRelationship typeCode="COMP">
    <!-- Summary Data Observation (AU/AR) templateId -->
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.5.6.229"
        extension="2015-04-01"/>
      <code code="2409-1" codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        displayName="Blood cultures performed"/>
      <statusCode code="completed"/>
      <value xsi:type="INT" value="24"/>
    </observation>
  </entryRelationship>
```

</encounter>

3.128 Summary Encounter (AUP) (V2)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.198:2015-04-01
(closed)]

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Table 503: Summary Encounter (AUP) (V2) Contexts

Contained By:	Contains:
Summary Data Section (AUP) (V2) (required)	Summary Data Observation (AUP) (required) Summary Data Observation (AU/AR) (required)

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. For an AUP report, data are recorded in both a Summary Data Observation (AU/AR) (non-stratified data) and a Summary Data Observation (AUP) (stratified data). The data requirements at time of publication are shown in a table under the Summary Data Observation (AU/AR) template, above.

A participant element records the location to which the data pertains. It has three parts: a location id, a location type code, and a scoping entity. The location id has the form <id root="..." extension="..."> representing a location such as ward 9W, or <id root="..."> representing the whole facility. The scoping entity is optional if an id is present.

In an Antimicrobial Use Report, each antimicrobial is represented by a Summary Encounter. The antimicrobial is recorded as a participant in the encounter, in addition to the location participant.

Table 504: Summary Encounter (AUP) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.198:2015-04-01)					
@classCode	1..1	SHALL		1181-23019	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1181-23020	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1181-23021	
@root	1..1	SHALL		1181-23022	2.16.840.1.113883.10.20.5.6.198
@extension	1..1	SHALL		1181-30563	2015-04-01
participant	1..1	SHALL		1181-23023	
@typeCode	1..1	SHALL		1181-23024	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		1181-23025	
@classCode	1..1	SHALL		1181-23026	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC
participant	1..1	SHALL		1181-23030	
@typeCode	1..1	SHALL		1181-23031	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM
participantRole	1..1	SHALL		1181-23032	
@classCode	0..1	MAY		1181-23033	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
code	1..1	SHALL		1181-23034	urn:oid:2.16.840.1.114222.4.11.3360 (NHSNAntimicrobialAgentAURPCode)
entryRelationship	1..1	SHALL		1181-23036	
@typeCode	1..1	SHALL		1181-23037	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1181-23038	Summary Data Observation (AU/AR) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01)
entryRelationship	4..4	SHALL		1181-23040	
@typeCode	1..1	SHALL		1181-	urn:oid:2.16.840.1.113883.5.1

XPath	Card.	Verb	Data Type	CONF#	Value
				23041	002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1181-23042	Summary Data Observation (AUP) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.194

1. **SHALL** contain exactly one [1..1] **@classCode**="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1181-23019).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1181-23020).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1181-23021) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.198" (CONF:1181-23022).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-04-01" (CONF:1181-30563).
4. **SHALL** contain exactly one [1..1] **participant** (CONF:1181-23023) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1181-23024).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:1181-23025).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:1181-23026).

The value of **@root** must be the NHSN assigned Facility OID.

The value of **@extension** must be a value registered with NHSN.

- ii. If recording data from an in-facility location, the participantRole element **SHALL** contain an id element with both **@root** and **@extension**, and a code element where the value is selected from ValueSet 2.16.840.1.113883.13.19NHSNHealthcareServiceLocationCode **DYNAMIC**, recording the type of location (CONF:1181-23027).

The value of **@root** must be the NHSN assigned Facility OID.

- iii. Or, if recording data from the whole facility, the participantRole element **SHALL** contain an id element with **@root** (CONF:1181-23028).

The value of **@root** must be the NHSN assigned Facility OID.

- iv. Or, if recording data from a specialized subset of a facility, the participantRole element **SHALL** contain a code element where the value is selected from ValueSet 2.16.840.1.113883.13.19 NHSNHealthcareServiceLocationCode **DYNAMIC**, recording the type of location, and a scopingEntity element where the value of **@classCode** is "PLC" and id/**@root** is present (CONF:1181-23029).

5. **SHALL** contain exactly one [1..1] **participant** (CONF:1181-23030) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode="CSM"** Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1181-23031).
- b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:1181-23032).
 - i. This participantRole **MAY** contain zero or one [0..1] **@classCode="MANU"** (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:1181-23033).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNAntimicrobialAgentAURPCode](#) urn:oid:2.16.840.1.114222.4.11.3360 **DYNAMIC** (CONF:1181-23034).
- 6. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:1181-23036) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1181-23037).
 - b. **SHALL** contain exactly one [1..1] [Summary Data Observation \(AU/AR\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01) (CONF:1181-23038).
 - c. This Summary Data Observation (AU/AR) records Number of Therapy Days for the antimicrobial (this is not a simple total of the stratified data; consult the NHSN protocol for the calculation) (CONF:1181-23039).
- 7. **SHALL** contain [4..4] **entryRelationship** (CONF:1181-23040) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1181-23041).
 - b. **SHALL** contain exactly one [1..1] [Summary Data Observation \(AUP\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.194) (CONF:1181-23042).
 - c. These Summary Data Observation (AUP) elements record Number of Therapy Days for the antimicrobial stratified by route of actual administration (four observations, one for each route) (CONF:1181-23043).

Figure 190: Summary Encounter (AUP) (V2) Example

```
<!-- encounter reporting data for one antimicrobial -->
<encounter classCode="ENC" moodCode="EVN">
  <!-- Summary Encounter (AUP) (V2) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.198"
    extension="2015-04-01"/>
  <!-- the location ID and type -->
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />
      <code codeSystem="2.16.840.1.113883.6.259"
        codeSystemName="HL7 Healthcare Service Location Code"
        code="1029-8"
        displayName="Medical/Surgical Critical Care" />
    </participantRole>
  </participant>
  <!-- the antimicrobial agent reported -->
  <participant typeCode="CSM">
    <participantRole classCode="MANU">
      <code codeSystem="2.16.840.1.113883.6.88"
        codeSystemName="RxNorm"
        code="7980"
        displayName="Penicillin G"/>
    </participantRole>
  </participant>
  <!-- first of five data observations -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation (AU/AR) templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.229"
        extension="2015-04-01"/>
      <code codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="2524-7"
        displayName="Number of Therapy Days"/>
      <statusCode code="completed"/>
      <value xsi:type="PQ" unit="d" value="36"/>
      <!-- use this when recording the four stratified data
      <methodCode codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT"
        code="47625008"
        displayName="Intravenous route" />
      -->
    </observation>
  </entryRelationship>
  <!-- ... four more observations here -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation (AUP) templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.194"/>
      ...
    </observation>
  </entryRelationship>
</encounter>
<!-- end of encounter for this antimicrobial -->
```

3.129 Summary Encounter (HP-FLU)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.241:2017-04-01 (closed)]

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Table 505: Summary Encounter (HP-FLU) Contexts

Contained By:	Contains:
Summary Data Section (HP-FLU) (required)	Summary Data Observation (required)

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward for a specified period. The NHSN protocol defines which data to record for each type of summary report. For an HP-FLU Summary report, each datum is recorded as a Summary Data Observation. The data requirements at time of publication are shown in a table under the Summary Data Observation template, above.

In an HP-FLU Report, the data are stratified by healthcare personnel (HCP) type. A participant is provided to record the HCP type. Represent each HCP type with a separate Summary Encounter (HP-FLU).

Table 506: Summary Encounter (HP-FLU) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.241:2017-04-01)					
@classCode	1..1	SHALL		3311-32	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		3311-33	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3311-26	
@root	1..1	SHALL		3311-34	2.16.840.1.113883.10.20.5.6.241
@extension	1..1	SHALL		3311-44	2017-04-01
participant	1..1	SHALL		3311-29	
@typeCode	1..1	SHALL		3311-40	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = SBJ
participantRole	1..1	SHALL		3311-30	
@classCode	1..1	SHALL		3311-41	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = PART
code	1..1	SHALL		3311-42	urn:oid:2.16.840.1.113883.10.20.5.9.6 (HealthcarePersonnelType)
entryRelationship	1..*	SHALL		3311-25	
@typeCode	1..1	SHALL		3311-43	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		3311-31	Summary Data Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185)

1. **SHALL** contain exactly one [1..1] **@classCode**="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3311-32).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3311-33).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3311-26) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.241" (CONF:3311-34).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-04-01" (CONF:3311-44).
4. **SHALL** contain exactly one [1..1] **participant** (CONF:3311-29) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="SBJ" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3311-40).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:3311-30).

- i. This participantRole **SHALL** contain exactly one [1..1] @classCode="PART" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3311-41).
 - ii. This participantRole **SHALL** contain exactly one [1..1] code, which **SHALL** be selected from ValueSet [HealthcarePersonnelType](#) urn:oid:2.16.840.1.113883.10.20.5.9.6 **DYNAMIC** (CONF:3311-42).
5. **SHALL** contain at least one [1..*] entryRelationship (CONF:3311-25).
 - a. Such entryRelationships **SHALL** contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:3311-43).
 - b. Such entryRelationships **SHALL** contain exactly one [1..1] [Summary Data Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185) (CONF:3311-31).

Table 507: HealthcarePersonnelType

Value Set: HealthcarePersonnelType urn:oid:2.16.840.1.113883.10.20.5.9.6 (Clinical Focus: NHSN surveillance reporting: monthly reporting denominators for healthcare personnel influenza vaccination (HP-FLU), type of healthcare personnel that received influenza vaccination),(Data Element Scope: A code identifying the type of healthcare personnel),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.6/expansion			
Code	Code System	Code System OID	Print Name
2366-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Employees (staff on facility payroll)
2367-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Licensed independent practitioners: physicians, advanced practice nurses, and physician assistants
2368-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Adult students or trainees and volunteers
2369-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Other contract personnel

Figure 191: Summary Encounter (HP-FLU) Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!-- [HAI R3D2] Summary Encounter (HP-FLU) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.241" extension="2017-04-01" />
  <!-- This encounter reports on a subset of the total group -->
  <participant typeCode="SBJ" contextControlCode="OP">
    <participantRole classCode="PART">
      <code codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="2366-3"
        displayName="Employees (staff on facility payroll)" />
    </participantRole>
  </participant>

  <!-- This summary observation reports the number of HCP
    who worked at the facility in the flu season -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.185" />
      ...
    </observation>
  </entryRelationship>

  <!-- Each of the following summary observations report the
    number of HCP in that vaccination category -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.185" />
      ...
    </observation>
  </entryRelationship>
  ...
</encounter>
```

3.130Summary Encounter (HV) (V2)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.234:2016-08-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 3, DSTU 1.1 - US Realm

Table 508: Summary Encounter (HV) (V2) Contexts

Contained By:	Contains:
Summary Data Section (HV) (V2) (required)	Summary Data Observation (HV) (required) Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2) (required) Blood Product Usage Summary Observation (V2) (required) Pathogen Reduced Apheresis Platelet Usage Summary Observation (optional)

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report.

For a Hemovigilance Summary Report, each datum is recorded as a Summary Data Observation (HV). The data requirements at time of publication are shown in a table under the Summary Data Observation (HV) template, above.

The Summary Encounter (HV) includes a Blood Product Usage Summary Observation for each type of blood product being reported and, conditionally (if the facility transfused pathogen reduced apheresis platelets), a Pathogen Reduced Apheresis Platelet Usage Summary Observation for each type of pathogen reduced apheresis platelet being reported.

A participant element records the location to which the data pertains. The location id has the form <id root="..." extension="..." /> with an extension of 'FACWIDEIN' representing the whole facility.

Table 509: Summary Encounter (HV) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.234:2016-08-01)					
@classCode	1..1	SHALL		3247-30669	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		3247-30670	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3247-30653	
@root	1..1	SHALL		3247-30660	2.16.840.1.113883.10.20.5.6.234
@extension	1..1	SHALL		3247-30661	2016-08-01
participant	1..1	SHALL		3247-30654	
@typeCode	1..1	SHALL		3247-30668	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		3247-30655	
@classCode	1..1	SHALL		3247-30667	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC
id	1..1	SHALL		3247-30656	
@root	1..1	SHALL		3247-30662	
@extension	1..1	SHALL		3247-30663	FACWIDEIN
code	1..1	SHALL		3247-30657	urn:oid:2.16.840.1.113883.6.259 (HSLOC)
@code	1..1	SHALL		3247-30664	1250-0
@codeSystem	1..1	SHALL		3247-30665	2.16.840.1.113883.6.259
@displayName	1..1	SHOULD		3247-30666	Facility Wide Inpatient
entryRelationship	1..*	SHALL		3247-30652	
@typeCode	1..1	SHALL		3247-30659	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		3247-30658	Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1

XPath	Card.	Verb	Data Type	CONF#	Value
					0.20.5.6.236:2016-08-01
entryRelationship	1..*	SHALL		3247-30733	
@typeCode	1..1	SHALL		3247-30734	COMP
observation	1..1	SHALL		3247-30735	Blood Product Usage Summary Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.5.6.237:2016-08-01)
entryRelationship	0..*	MAY		3247-30792	
observation	1..1	SHALL		3247-30793	Pathogen Reduced Apheresis Platelet Usage Summary Observation (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.5.6.240:2016-08-01)
entryRelationship	1..*	SHALL		3247-30730	
@typeCode	1..1	SHALL		3247-30731	COMP
observation	1..1	SHALL		3247-30732	Summary Data Observation (HV) (identifier: urn:hl7ii:2.16.840.1.113883.1.0.20.5.6.235:2015-10-01)

1. **SHALL** contain exactly one [1..1] **@classCode="ENC"** Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3247-30669).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3247-30670).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3247-30653) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.6.234"** (CONF:3247-30660).
 - b. **SHALL** contain exactly one [1..1] **@extension="2016-08-01"** (CONF:3247-30661).
4. **SHALL** contain exactly one [1..1] **participant** (CONF:3247-30654) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:3247-30668).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:3247-30655).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode="SDLOC"** Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:3247-30667).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **id** (CONF:3247-30656).

The value of **@root** must be the NHSN assigned Facility OID.

1. This id **SHALL** contain exactly one [1..1] @root (CONF:3247-30662).
The value of @extension must be a value registered with NHSN.
2. This id **SHALL** contain exactly one [1..1] @extension="FACWIDEIN" (CONF:3247-30663).
- iii. This participantRole **SHALL** contain exactly one [1..1] code (CodeSystem: HSLOC urn:oid:2.16.840.1.113883.6.259 **DYNAMIC**) (CONF:3247-30657).
 1. This code **SHALL** contain exactly one [1..1] @code="1250-0" (CONF:3247-30664).
 2. This code **SHALL** contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.259" (CONF:3247-30665).
 3. This code **SHOULD** contain exactly one [1..1] @displayName="Facility Wide Inpatient" (CONF:3247-30666).
5. **SHALL** contain at least one [1..*] entryRelationship (CONF:3247-30652) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:3247-30659).
 - b. **SHALL** contain exactly one [1..1] [Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.236:2016-08-01) (CONF:3247-30658).

There *SHALL* be exactly 123 Blood Product Usage Summary Observation entryRelationships (one for each value in the value set NHSN Summary Blood Product Usage (urn:oid:2.16.840.1.114222.4.11.7353))

6. **SHALL** contain at least one [1..*] entryRelationship (CONF:3247-30733) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" Has component (CONF:3247-30734).
 - b. **SHALL** contain exactly one [1..1] [Blood Product Usage Summary Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.237:2016-08-01) (CONF:3247-30735).

If the facility transfused pathogen reduced apheresis platelets (i.e. the apheresis platelet total for any of codes 3514-7, 3515-4, 3516-2, 3517-0, 3518-8, or 3519-6 is > 0) then there *SHALL* be exactly 12 Pathogen Reduced Apheresis Platelet Usage Summary Observation entryRelationships (one for each value in the value set NHSN Pathogen Reduced Apheresis Platelet Usage (urn:oid:2.16.840.1.113883.10.20.5.9.5))

7. **MAY** contain zero or more [0..*] entryRelationship (CONF:3247-30792) such that it
 - a. **SHALL** contain exactly one [1..1] [Pathogen Reduced Apheresis Platelet Usage Summary Observation](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.240:2016-08-01) (CONF:3247-30793).
8. **SHALL** contain at least one [1..*] entryRelationship (CONF:3247-30730) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="COMP" Has component (CONF:3247-30731).

- b. **SHALL** contain exactly one [1..1] [Summary Data Observation \(HV\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.235:2015-10-01) (CONF:3247-30732).

Figure 192: Summary Encounter (HV) (V2) Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!-- Summary Encounter (HV) (V2) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.234" extension="2016-08-01" />
  <!-- the location ID and type -->
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="FACWIDEIN" />
      <code codeSystem="2.16.840.1.113883.6.259" codeSystemName="HL7
HealthCareServiceLocation" code="1250-0" displayName="FACWIDEIN" />
    </participantRole>
  </participant>
  <!-- Blood product summaries
  There SHALL be exactly 102 Blood Product Usage Summary Observation
  entryRelationships (one for each value in the value set NHSN Summary
  Blood Product Usage (urn:oid:2.16.840.1.114222.4.11.7353))
  -->

  <!-- Total number of units transfused - Whole blood -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- [HAI] Blood Product Usage Summary Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.237" extension="2015-10-01" />
      ...
    </observation>
  </entryRelationship>
  <!-- Total number of aliquots transfused - Whole blood -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- [HAI] Blood Product Usage Summary Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.237" extension="2015-10-01" />
      ...
    </observation>
  </entryRelationship>
  <!-- Total number of Discards - Whole blood -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- [HAI] Blood Product Usage Summary Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.237" extension="2015-10-01" />
      ...
    </observation>
  </entryRelationship>
  ...
  <entryRelationship typeCode="COMP">
    <!-- Facility Transfuses Blood Products Treated with Pathogen Reduction Technology
    Observation -->
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- [HAI R3D1.1] Facility Transfuses Blood Products Treated with
      Pathogen Reduction Technology Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.236" extension="2016-08-01" />
      ...
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation (HV) -->
```

```

    <templateId root="2.16.840.1.113883.10.20.5.6.235" extension="2015-10-01" />
    ...
  </observation>
</entryRelationship>
...
</encounter>

```

3.131 Summary Encounter (NICU)

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.5.6.191 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 1 - US Realm

Table 510: Summary Encounter (NICU) Contexts

Contained By:	Contains:
Summary Data Section (NICU) (V2) (required)	Summary Data Observation (required)

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. For a NICU Summary report, each datum is recorded as a Summary Data Observation. The data requirements at time of publication are shown in a table under the Summary Data Observation template, above.

In a NICU Report, the data are stratified by birthweight. A second participant is provided to record the participant subgroup. Represent each group with a separate Summary Encounter.

Table 511: Summary Encounter (NICU) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.191)					
@classCode	1..1	SHALL		86-22817	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		86-22818	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-22819	
@root	1..1	SHALL		86-22820	2.16.840.1.113883.10.20.5.6.191
participant	1..1	SHALL		86-22821	
@typeCode	1..1	SHALL		86-22822	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		86-22823	
@classCode	1..1	SHALL		86-22824	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC
participant	1..1	SHALL		86-22828	
@typeCode	1..1	SHALL		86-22829	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = SBJ
participantRole	1..1	SHALL		86-22830	
@classCode	1..1	SHALL		86-22831	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PRS
code	1..1	SHALL		86-22832	urn:oid:2.16.840.1.114222.4.11.3234 (NHSNPopulationCategoryCode)
entryRelationship	1..*	SHALL		86-22834	
@typeCode	1..1	SHALL		86-22835	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		86-22836	Summary Data Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185)

1. **SHALL** contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22817).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22818).
3. **SHALL** contain exactly one [1..1] templateId (CONF:86-22819) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.191" (CONF:86-22820).
4. **SHALL** contain exactly one [1..1] participant (CONF:86-22821) such that it

- a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:86-22822).
- b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:86-22823).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode="SDLOC"** Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:86-22824).

The value of @root must be the NHSN assigned Facility OID.

The value of @extension must be a value registered with NHSN.

- ii. If recording data from an in-facility location, the participantRole element **SHALL** contain an id element with both @root and @extension, and a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 **DYNAMIC**, recording the type of location (CONF:86-22825).

The value of @root must be the NHSN assigned Facility OID.

- iii. Or, if recording data from the whole facility, the participantRole element **SHALL** contain an id element with @root (CONF:86-22826).

The value of @root must be the NHSN assigned Facility OID.

- iv. Or, if recording data from a specialized subset of a facility, the participantRole element **SHALL** contain a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 **DYNAMIC**, recording the type of location, and a scopingEntity element where the value of @classCode is "PLC" and id/@root is present (CONF:86-22827).

5. **SHALL** contain exactly one [1..1] **participant** (CONF:86-22828) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="SBJ"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:86-22829).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:86-22830).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode="PRS"** (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:86-22831).
 - ii. This participantRole **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet [NHSNPopulationCategoryCode](#) urn:oid:2.16.840.1.114222.4.11.3234 **DYNAMIC** (CONF:86-22832).
6. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:86-22834).
 - a. Such entryRelationships **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-22835).
 - b. Such entryRelationships **SHALL** contain exactly one [1..1] [Summary Data Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185) (CONF:86-22836).

Table 512: NHSNPopulationCategoryCode

Value Set: NHSNPopulationCategoryCode urn:oid:2.16.840.1.114222.4.11.3234 (Clinical Focus: NHSN surveillance reporting: categories of birth weights and gestational ages used with denominators for neonatal intensive care unit (NICU)),(Data Element Scope: A code describing the population category associated with the data being reported.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3234/expansion			
Code	Code System	Code System OID	Print Name
1334-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Extremely preterm (<28 weeks)
1335-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Very preterm (28 to <32 weeks)
1336-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Moderate to late preterm (32 to <37 weeks)
1337-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Term (>=37 weeks)
3300-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Birth weight under 750 grams
3301-9	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Birth weight 751-1000 grams
3302-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Birth weight 1001-1500 grams
3303-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Birth weight 1501-2500 grams
3304-3	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Birth weight over 2500 grams

Figure 193: Summary Encounter (NICU) Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!--Summary Encounter (NICU) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.191" />
  <!-- the location id and type -->
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />
      <code codeSystem="2.16.840.1.113883.6.259"
        codeSystemName="HL7 HealthcareServiceLocation"
        code="1029-8"
        displayName="Medical/Surgical Critical Care" />
    </participantRole>
  </participant>

  <!-- This encounter reports on a subset of the total group -->
  <participant typeCode="SBJ" contextControlCode="OP">
    <participantRole classCode="PRS">
      <code codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="3300-1"
        displayName="Birthweight under 750g" />
    </participantRole>
  </participant>

  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!--Summary Data Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.185" />
      <code codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="1851-5"
        displayName="Patient Days" />
      <statusCode code="completed" />
      <value xsi:type="PQ" unit="d" value="23" />
    </observation>
  </entryRelationship>

  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!--Summary Data Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.185" />
      <code codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="1852-3"
        displayName="Ventilator Days" />
      <statusCode code="completed" />
      <value xsi:type="PQ" unit="d" value="5" />
    </observation>
  </entryRelationship>

  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!--Summary Data Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.185" />
      <code codeSystem="2.16.840.1.113883.6.277"
```

```

        codeSystemName="cdcNHSN"
        code="1854-9"
        displayName="Number of central line days including umbilical catheter" />
        <statusCode code="completed" />
        <value xsi:type="PQ" unit="d" value="5" />
    </observation>
</entryRelationship>

<entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
        <!--Summary Data Observation templateId -->
        <templateId root="2.16.840.1.113883.10.20.5.6.185" />
        <code codeSystem="2.16.840.1.113883.6.277"
            codeSystemName="cdcNHSN"
            code="1854-9"
            displayName="Central Line Days including umbilical catheter" />
        <statusCode code="completed" />
        <value xsi:type="PQ" unit="d" value="5" />
    </observation>
</entryRelationship>
</encounter>

```

3.132 Summary Encounter (POM)

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.5.6.193 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports
Release 1 - US Realm

Table 513: Summary Encounter (POM) Contexts

Contained By:	Contains:
Summary Data Section (POM) (V3) (required)	Summary Data Observation (POM) (required)

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. The Summary Encounter (POM) contains one or more Summary Data Observations (POM). The data requirements at time of publication are shown in a table under the Summary Data Observation template, above.

The POM Report records summary data for a location during a specified period. It can be submitted at the facility-wide level or at the unit level.

- In either case, the data reported is Number of Total Facility Patient Days and Number of Total Facility Admissions, or Number of Total Facility Encounters (as appropriate for an inpatient location or an outpatient location).
- In a facility-level report, the Number of MDRO Patient Days and Number of MDRO Admissions, or Number of MDRO Encounters (as appropriate for an inpatient location or an outpatient location) is recorded.
- In a facility-level report, if the facility includes reporting for C.difficile at the facility-wide level in its monthly plan, data adjusted for C.difficile reporting are required; see the NHSN protocol for definitions and calculations.

Table 514: Summary Encounter (POM) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.193)					
@classCode	1..1	SHALL		86-22866	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		86-22867	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-22868	
@root	1..1	SHALL		86-22869	2.16.840.1.113883.10.20.5.6.193
participant	1..1	SHALL		86-22870	
@typeCode	1..1	SHALL		86-22871	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		86-22872	
@classCode	1..1	SHALL		86-22873	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC
entryRelationship	1..*	SHALL		86-22877	
@typeCode	1..1	SHALL		86-22878	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		86-22879	Summary Data Observation (POM) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.192)

1. **SHALL** contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22866).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22867).
3. **SHALL** contain exactly one [1..1] templateId (CONF:86-22868) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.193" (CONF:86-22869).
4. **SHALL** contain exactly one [1..1] participant (CONF:86-22870) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:86-22871).
 - b. **SHALL** contain exactly one [1..1] participantRole (CONF:86-22872).
 - i. This participantRole **SHALL** contain exactly one [1..1] @classCode="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:86-22873).

The value of @root must be the NHSN assigned Facility OID.

The value of @extension must be a value registered with NHSN.

- ii. If recording data from an in-facility location, the participantRole element **SHALL** contain an id element with both @root and @extension, and a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 **DYNAMIC**, recording the type of location (CONF:86-22874).

The value of @root must be the NHSN assigned Facility OID.

- iii. Or, if recording data from the whole facility, the participantRole element **SHALL** contain an id element with @root (CONF:86-22875).

The value of @root must be the NHSN assigned Facility OID.

- iv. Or, if recording data from a specialized subset of a facility, the participantRole element **SHALL** contain a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 **DYNAMIC**, recording the type of location, and a scopingEntity element where the value of @classCode is "PLC" and id/@root is present (CONF:86-22876).

5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:86-22877).

- a. Such entryRelationships **SHALL** contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-22878).
- b. Such entryRelationships **SHALL** contain exactly one [1..1] [Summary Data Observation \(POM\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.192) (CONF:86-22879).

Figure 194: Summary Encounter (POM) Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!-- Summary Encounter (POM) -->
  <templateId root="2.16.840.1.113883.10.20.5.6.193" />
  <!-- the location id and type -->
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />
      <code codeSystem="2.16.840.1.113883.6.259"
        codeSystemName="HL7 HealthcareServiceLocation"
        code="1029-8"
        displayName="Medical/Surgical Critical Care" />
    </participantRole>
  </participant>

  <!-- Number of Total Facility Patient days -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation POM -->
      <templateId root="2.16.840.1.113883.10.20.5.6.192" />
      ...
    </observation>
  </entryRelationship>

  <!-- Number of Total Facility Admissions -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation POM -->
      <templateId root="2.16.840.1.113883.10.20.5.6.192" />
      ...
    </observation>
  </entryRelationship>

  <!-- If the report is facility-wide, inpatient, NHSN requires additional
  observations here, constructed as above but with different codes:
  1827-5 Number of MDRO Patient Days
  1828-3 Number of MDRO Admissions
  1829 Number of MDRO Encounters
  1830-9 Number of Patient Days as adjusted for C.Diff reporting
  1831-7 Number of Admissions as adjusted for C.Diff reporting
  If the report is not facility-wide, NHSN will collect but does not require the
  surveillance details shown below. -->

  <!-- Number hand hygiene indicated -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation POM -->
      <templateId root="2.16.840.1.113883.10.20.5.6.192" />
      ...
    </observation>
  </entryRelationship>

  <!-- Number hand hygiene performed -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation POM -->
```

```

        <templateId root="2.16.840.1.113883.10.20.5.6.192" />
        ...
    </observation>
</entryRelationship>

<!-- Number gown and gloves indicated -->
<entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
        <!-- Summary Data Observation POM -->
        ...
    </observation>
</entryRelationship>

<!-- Number gown and gloves used -->
<entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
        <!-- Summary Data Observation POM -->
        <templateId root="2.16.840.1.113883.10.20.5.6.192" />
        ...
    </observation>
</entryRelationship>

<!-- MRSA was monitored -->
<entryRelationship typeCode="COMP" negationInd="false">
    <observation classCode="OBS" moodCode="EVN">
        <!-- Summary Data Observation POM -->
        <templateId root="2.16.840.1.113883.10.20.5.6.192" />
        ...
    </observation>
</entryRelationship>
<!-- end of AST for MRSA data -->
</encounter>

```

3.133 Summary Encounter (VAT)

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.5.6.196 (closed)]

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Table 515: Summary Encounter (VAT) Contexts

Contained By:	Contains:
Summary Data Section (VAT) (required)	Summary Data Observation (VAT) (required)

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. Each datum in a VAT Report is recorded as a Summary Data Observation (VAT). The data requirements at time of publication are shown in a table under the Summary Data Observation template, above.

A participant element records the location to which the data pertains. It has three parts: a location id, a location type code, and a scoping entity. The location id has the form <id root="..." extension="..."/> representing a location such as ward 9W, or <id root="..."/> representing the whole facility.

Table 516: Summary Encounter (VAT) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.196)					
@classCode	1..1	SHALL		86-22951	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		86-22952	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-22953	
@root	1..1	SHALL		86-22954	2.16.840.1.113883.10.20.5.6.196
participant	1..1	SHALL		86-22955	
@typeCode	1..1	SHALL		86-22956	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		86-22957	
@classCode	1..1	SHALL		86-22958	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC
entryRelationship	1..*	SHALL		86-22962	
@typeCode	1..1	SHALL		86-22963	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		86-22964	Summary Data Observation (VAT) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.195)

1. **SHALL** contain exactly one [1..1] **@classCode="ENC"** Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-22951).
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-22952).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22953) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.6.196"** (CONF:86-22954).
4. **SHALL** contain exactly one [1..1] **participant** (CONF:86-22955) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode="LOC"** Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:86-22956).
 - b. **SHALL** contain exactly one [1..1] **participantRole** (CONF:86-22957).
 - i. This participantRole **SHALL** contain exactly one [1..1] **@classCode="SDLOC"** Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:86-22958).

The value of @root must be the NHSN assigned Facility OID.
The value of @extension must be a value registered with NHSN.

- ii. If recording data from an in-facility location, the participantRole element **SHALL** contain an id element with both @root and @extension, and a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 **DYNAMIC**, recording the type of location (CONF:86-22959).

The value of @root must be the NHSN assigned Facility OID.

- iii. Or, if recording data from the whole facility, the participantRole element **SHALL** contain an id element with @root (CONF:86-22960).

The value of @root must be the NHSN assigned Facility OID.

- iv. Or, if recording data from a specialized subset of a facility, the participantRole element **SHALL** contain a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 **DYNAMIC**, recording the type of location, and a scopingEntity element where the value of @classCode is "PLC" and id/@root is present (CONF:86-22961).

- 5. **SHALL** contain at least one [1..*] **entryRelationship** (CONF:86-22962).
 - a. Such entryRelationships **SHALL** contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-22963).
 - b. Such entryRelationships **SHALL** contain exactly one [1..1] [Summary Data Observation \(VAT\)](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.195) (CONF:86-22964).

Figure 195: Summary Encounter (VAT) Example

```
<encounter classCode="ENC" moodCode="EVN">
  <!-- Summary Encounter (VAT) template -->
  <templateId root="2.16.840.1.113883.10.20.5.6.196" />
  <!-- the in-facility location ID and type -->
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <!-- the facility OID scopes the in-facility location ID -->
      <id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />
      <code codeSystem="2.16.840.1.113883.6.259"
        codeSystemName="HL7 HealthcareServiceLocation"
        code="1153-6"
        displayName="Outpatient Hemodialysis Clinic" />
    </participantRole>
  </participant>
  <!-- Number of Chronic Hemodialysis Patients, vascular access type is fistula -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation (VAT) template -->
      <templateId root="2.16.840.1.113883.10.20.5.6.195" />
      ...
    </observation>
  </entryRelationship>
  ...
</encounter>
```

3.134 Summary Encounter Patient Presence (AUP) (V2)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.197:2015-04-01
(closed)]

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Release 2 - US Realm

Table 517: Summary Encounter Patient Presence (AUP) (V2) Contexts

Contained By:	Contains:
Summary Data Section (AUP) (V2) (required)	Summary Data Observation (AU/AR) (required)

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. The Summary Encounter Patient Presence (AUP) contains one or more Summary Data Observations (AU/AR). The data requirements at time of publication are shown in a table under the Summary Data Observation (AU/AR) template, above.

NHSN reporting requires:

- If the reporting location is a single unit such as a ward, Number of Patient-Present Days, or
- If the encounter location is facility-wide rather than a single unit, Number of Admissions and Number of Patient-present Days.

Table 518: Summary Encounter Patient Presence (AUP) (V2) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.197:2015-04-01)					
@classCode	1..1	SHALL		1181-22995	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC
@moodCode	1..1	SHALL		1181-22996	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1181-22997	
@root	1..1	SHALL		1181-22998	2.16.840.1.113883.10.20.5.6.197
@extension	1..1	SHALL		1181-30562	2015-04-01
participant	1..1	SHALL		1181-22999	
@typeCode	1..1	SHALL		1181-23000	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC
participantRole	1..1	SHALL		1181-23001	
@classCode	1..1	SHALL		1181-23002	urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC
entryRelationship	1..*	SHALL		1181-23006	
@typeCode	1..1	SHALL		1181-23007	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		1181-23008	Summary Data Observation (AU/AR) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01)

1. **SHALL** contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1181-22995).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1181-22996).
3. **SHALL** contain exactly one [1..1] templateId (CONF:1181-22997) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.197" (CONF:1181-22998).
 - b. **SHALL** contain exactly one [1..1] @extension="2015-04-01" (CONF:1181-30562).
4. **SHALL** contain exactly one [1..1] participant (CONF:1181-22999) such that it
 - a. **SHALL** contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1181-23000).
 - b. **SHALL** contain exactly one [1..1] participantRole (CONF:1181-23001).

- i. This participantRole **SHALL** contain exactly one [1..1] @classCode="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 **STATIC**) (CONF:1181-23002).

The value of @root must be the NHSN assigned Facility OID.

The value of @extension must be a value registered with NHSN.

- ii. If recording data from an in-facility location, the participantRole element **SHALL** contain an id element with both @root and @extension, and a code element where the value is selected from ValueSet 2.16.840.1.113883.13.19NHSNHealthcareServiceLocationCode **DYNAMIC**, recording the type of location (CONF:1181-23003).

The value of @root must be the NHSN assigned Facility OID.

- iii. Or, if recording data from the whole facility, the participantRole element **SHALL** contain an id element with @root (CONF:1181-23004).

The value of @root must be the NHSN assigned Facility OID.

- iv. Or, if recording data from a specialized subset of a facility, the participantRole element **SHALL** contain a code element where the value is selected from ValueSet 2.16.840.1.113883.13.19 NHSNHealthcareServiceLocationCode **DYNAMIC**, recording the type of location, and a scopingEntity element where the value of @classCode is "PLC" and id/@root is present (CONF:1181-23005).

5. **SHALL** contain at least one [1..*] entryRelationship (CONF:1181-23006).

- a. Such entryRelationships **SHALL** contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1181-23007).
- b. Such entryRelationships **SHALL** contain exactly one [1..1] [Summary Data Observation \(AU/AR\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01) (CONF:1181-23008).

6. This Summary Encounter **SHALL** contain a Summary Data Observation (AU/AR) that records Number of Patient-present Days for the reporting location (CONF:1181-23011).

7. If the reporting location is facility-wide inpatient units, this Summary Encounter **SHALL** contain a second Summary Data Observation (AU/AR) that records Number of Admissions (CONF:1181-23012).

Figure 196: Summary Encounter Patient Presence (AUP) (V2)

```
<!-- encounter recording patient presence -->
<encounter classCode="ENC" moodCode="EVN">
  <!-- Summary Encounter Patient Presence (AUP) templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.197"
    extension="2015-04-01" />
  <!-- the location ID and type -->
  <participant typeCode="LOC">
    <participantRole classCode="SDLOC">
      <id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />
      <code codeSystem="2.16.840.1.113883.6.259"
        codeSystemName="HL7 Healthcare Service Location Code"
        code="1029-8"
        displayName="Medical/Surgical Critical Care" />
    </participantRole>
  </participant>
  <!-- report for a single unit: Number of Patient-present Days -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- Summary Data Observation (AU/AP) templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.229"
        extension="2015-04-01" />
      ...
    </observation>
  </entryRelationship>
  <!-- if the reporting location is facility-wide inpatient units,
    a second observation recording Number of Admissions -->
</encounter>
```

3.135 Suspected Source Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.168 (closed)]

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Table 519: Suspected Source Observation Contexts

Contained By:	Contains:
Positive Blood Culture Observation (V3) (optional)	Imputability Observation (required)

This observation records a suspected source of a finding.

This observation and its value set are used in an Evidence of Infection (Dialysis) Report. It could be generalized for broader use.

Table 520: Suspected Source Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.168)					
@classCode	1..1	SHALL		86-21508	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21509	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21510	false
templateId	1..1	SHALL		86-28287	
@root	1..1	SHALL		86-28288	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-21528	
@root	1..1	SHALL		86-21529	2.16.840.1.113883.10.20.5.6.168
id	1..1	SHALL		86-21530	
@nullFlavor	1..1	SHALL		86-22741	NA
code	1..1	SHALL		86-21511	
@code	1..1	SHALL		86-21512	ASSERTION
@codeSystem	1..1	SHALL		86-28356	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-21513	
@code	1..1	SHALL		86-21514	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-21515	
entryRelationship	1..1	SHALL		86-21519	
@typeCode	1..1	SHALL		86-21520	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		86-21521	Imputability Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.134)
code	1..1	SHALL		86-21522	
@code	1..1	SHALL	CD	86-21523	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2307-7
value	1..1	SHALL	CD	86-21524	
@code	1..1	SHALL	CD	86-21525	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 60022001

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21508).

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21509).
4. **SHALL** contain exactly one [1..1] **@negationInd**="false" (CONF:86-21510).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28287) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28288).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-21528) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.168" (CONF:86-21529).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-21530).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22741).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-21511).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-21512).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28356).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21513).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21514).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:86-21515).
 - a. In an Evidence of Infection (Dialysis) report, to represent the suspected source as a code, the value of **@code** **SHALL** be selected from ValueSet NHSNSuspectedSourceTypeCode 2.16.840.1.114222.4.11.6008 **DYNAMIC** (CONF:86-21516).
 - b. If the suspected source is not listed in Value Set 2.16.840.1.114222.4.11.6008 NHSNSuspectedSourceTypeCode, set the value of **@nullFlavor** to 'OTH' (CONF:86-21517).
 - c. If the suspected source is uncertain, set the value of **@nullFlavor** to "NI" (CONF:86-21518).
11. **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:86-21519) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-21520).
 - b. **SHALL** contain exactly one [1..1] Imputability Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.134) (CONF:86-21521).
 - i. This observation **SHALL** contain exactly one [1..1] **code** (CONF:86-21522).
 1. This code **SHALL** contain exactly one [1..1] **@code**="2307-7" Imputability of positive blood culture to the suspected source (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:86-21523).
 - ii. This observation **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:86-21524).

1. This value **SHALL** contain exactly one [1..1] @code="60022001"
Possible (CodeSystem: SNOMED CT
urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:86-21525).

Table 521: NHSNSuspectedSourceTypeCode

Value Set: NHSNSuspectedSourceTypeCode urn:oid:2.16.840.1.114222.4.11.6008 (Clinical Focus: NHSN surveillance reporting: suspected source of infection),(Data Element Scope: A coded observation value describing the suspected source of a finding.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.6008/expansion			
Code	Code System	Code System OID	Print Name
2303-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Contamination
2319-2	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Vascular access

Figure 197: Suspected Source Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Suspected Source of Pathogen templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.168"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION"
    codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="2319-2"
    displayName="Vascular access"/>
  <!-- Imputability = possible (the "suspected" source) -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN" negationInd="false">
      <!-- C-CDA Problem Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
      <!-- HAI Imputability Observation -->
      <templateId root="2.16.840.1.113883.10.20.5.6.134"/>
      <id nullFlavor="NA"/>
      <code codeSystem="2.16.840.1.113883.6.277"
        codeSystemName="cdcNHSN"
        code="2307-7"
        displayName="Imputability of positive blood culture
          to the suspected source"/>
      <statusCode code="completed"/>
      <value xsi:type="CD"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT"
        code="60022001"
        displayName="Possible"/>
    </observation>
  </entryRelationship>
</observation>
```

3.136 Transient Patient Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.169 (closed)]
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Table 522: Transient Patient Observation Contexts

Contained By:	Contains:
Dialysis Patient Observation (required)	

This observation records whether the service location submitting the report is the location where the patient is usually seen. It is used in the Evidence of Infection (Dialysis) Report.

When the service location is not the location where the patient is usually seen, set the value of @negationInd to false. When the service location is the location where the patient is usually seen, set the value of @negationInd to true.

Table 523: Transient Patient Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.169)					
@classCode	1..1	SHALL		86-21451	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21452	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21453	
templateId	1..1	SHALL		86-28289	
@root	1..1	SHALL		86-28290	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-22035	
@root	1..1	SHALL		86-22036	2.16.840.1.113883.10.20.5.6.169
id	1..1	SHALL		86-22737	
@nullFlavor	1..1	SHALL		86-22738	NA
code	1..1	SHALL		86-21454	
@code	1..1	SHALL		86-21455	ASSERTION
@codeSystem	1..1	SHALL		86-28391	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-21456	
@code	1..1	SHALL		86-21457	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-21458	
@code	1..1	SHALL		86-21459	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2304-4

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21451).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21452).
4. **SHALL** contain exactly one [1..1] @negationInd (CONF:86-21453).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-28289) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28290).
6. **SHALL** contain exactly one [1..1] templateId (CONF:86-22035) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.169" (CONF:86-22036).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-22737).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22738).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-21454).
 - a. This **code** **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-21455).
 - b. This **code** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28391).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21456).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21457).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:86-21458).
 - a. This **value** **SHALL** contain exactly one [1..1] **@code**="2304-4" Transient Patient (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 **STATIC**) (CONF:86-21459).

Figure 198: Transient Patient Observation Example

```

<!-- Transient Patient Observation -->
<!-- If the patient is a transient patient, not usually seen at the
      service location submitting the report, set @negationInd to "true". -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Transient Patient Observation templateId-->
  <templateId root="2.16.840.1.113883.10.20.5.6.169"/>
  <id nullFlavor="NA"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="2304-4"
    displayName="Transient patient"/>
</observation>

```

3.137Trauma Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.170 (closed)]

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Table 524: Trauma Observation Contexts

Contained By:	Contains:
Infection Risk Factors Section in a Procedure Report (required)	

This observation records whether the person had trauma. It is used in reporting the circumstances of a procedure.

If trauma was involved, set the value of @negationInd to false. If trauma was not involved, set the value of @negationInd to true.

Table 525: Trauma Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.170)					
@classCode	1..1	SHALL		86-20922	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-20923	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-20924	
templateId	1..*	SHALL		86-28291	
@root	1..1	SHALL		86-28292	2.16.840.1.113883.10.20.22.4.4
templateId	1..*	SHALL		86-20927	
@root	1..1	SHALL		86-20928	2.16.840.1.113883.10.20.5.6.170
id	1..1	SHALL		86-20929	
@nullFlavor	1..1	SHALL		86-22735	NA
code	1..1	SHALL		86-20930	
@code	1..1	SHALL	CS	86-20931	ASSERTION
@codeSystem	1..1	SHALL		86-28392	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-20932	
@code	1..1	SHALL		86-20933	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-20934	
@code	1..1	SHALL		86-20936	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 417746004

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-20922).
3. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-20923).
4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-20924).
5. **SHALL** contain at least one [1..*] **templateId** (CONF:86-28291) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.22.4.4"** (CONF:86-28292).
6. **SHALL** contain at least one [1..*] **templateId** (CONF:86-20927) such that it
 - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.10.20.5.6.170"** (CONF:86-20928).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-20929).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor="NA"** (CONF:86-22735).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-20930).
 - a. This code **SHALL** contain exactly one [1..1] **@code="ASSERTION"** Assertion (CONF:86-20931).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem="2.16.840.1.113883.5.4"** (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28392).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-20932).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code="completed"** Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-20933).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:86-20934).
 - a. This value **SHALL** contain exactly one [1..1] **@code="417746004"** Trauma (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:86-20936).

Figure 199: Trauma Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Trauma Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.170"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    code="417746004"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED"
    displayName="Trauma"/>
</observation>
```

3.138Type of Antimicrobial Start Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.230:2015-10-01 (closed)]

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Release 3, DSTU 1 - US Realm

Table 526: Type of Antimicrobial Start Observation Contexts

Contained By:	Contains:
IV Antibiotic Start Clinical Statement (V4) (optional)	

This observation records whether the antimicrobial start was a new outpatient start or a continuation of an inpatient course.

Table 527: Type of Antimicrobial Start Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.230:2015-10-01)					
@classCode	1..1	SHALL		1202-30558	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1202-30559	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		1202-30548	
@root	1..1	SHALL		1202-30552	2.16.840.1.113883.10.20.5.6.230
@extension	1..1	SHALL		1202-30553	2015-10-01
code	1..1	SHALL		1202-30549	
@code	1..1	SHALL		1202-30554	2335-8
@codeSystem	1..1	SHALL		1202-30555	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
statusCode	1..1	SHALL		1202-30551	
@code	1..1	SHALL		1202-30560	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	1202-30550	
@code	1..1	SHALL		1202-30556	urn:oid:2.16.840.1.114222.4.11.7338 (NHSNStartOrContinuation)

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1202-30558).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1202-30559).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:1202-30548) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.230" (CONF:1202-30552).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2015-10-01" (CONF:1202-30553).
4. **SHALL** contain exactly one [1..1] **code** (CONF:1202-30549).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="2335-8" New outpatient start or continuation of inpatient course (CONF:1202-30554).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1202-30555).
5. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1202-30551).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1202-30560).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:1202-30550).
 - a. This value **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [NHSNStartOrContinuation](#) urn:oid:2.16.840.1.114222.4.11.7338 **DYNAMIC** (CONF:1202-30556).

Table 528: NHSNStartOrContinuation

Value Set: NHSNStartOrContinuation urn:oid:2.16.840.1.114222.4.11.7338 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the type of antimicrobial start.),(Data Element Scope: A coded observation value describing the type of antimicrobial start.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7338/expansion			
Code	Code System	Code System OID	Print Name
2336-6	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	New antibiotic start
2337-4	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Continuation of antimicrobial

Figure 200: Type of Antimicrobial Start Observation

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.5.6.230"
    extension="2015-10-01" />
  <code codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="2335-8"
    displayName="New outpatient start or continuation of inpatient course" />
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="2337-4"
    displayName="Continuation of antimicrobial" />
</observation>
```

3.139 Urinary Catheter Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.171 (closed)]

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Table 529: Urinary Catheter Observation Contexts

Contained By:	Contains:
Infection Risk Factors Section in a UTI Report (required)	Device Insertion Time and Location Procedure (optional) History of Object Presence Observation (optional)

This observation records whether or not the person was using a urinary catheter in a UTI report. If a urinary catheter is present, set the value of @negationInd to false. If the urinary catheter is not present, set the value of @negationInd to true.

Table 530: Urinary Catheter Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.171)					
@classCode	1..1	SHALL		86-21460	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21461	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21462	
templateId	1..1	SHALL		86-28293	
@root	1..1	SHALL		86-28294	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-22114	
@root	1..1	SHALL		86-22117	2.16.840.1.113883.10.20.5.6.171
id	1..1	SHALL		86-22115	
@nullFlavor	1..1	SHALL		86-22727	NA
code	1..1	SHALL		86-21463	
@code	1..1	SHALL	CS	86-22116	ASSERTION
@codeSystem	1..1	SHALL		86-28393	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
statusCode	1..1	SHALL		86-21465	
@code	1..1	SHALL		86-21466	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-21467	
@code	1..1	SHALL		86-21468	3191-4
@codeSystem	1..1	SHALL		86-28394	urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277
entryRelationship	0..*	MAY		86-21469	
@typeCode	1..1	SHALL		86-21470	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
@inversionInd	1..1	SHALL		86-21471	true
procedure	1..1	SHALL		86-21472	Device Insertion Time and Location Procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.122)
entryRelationship	0..1	MAY		86-22728	
@typeCode	1..1	SHALL		86-22729	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		86-22730	History of Object Presence Observation (identifier: urn:oid:2.16.840.1.113883.10.

XPath	Card.	Verb	Data Type	CONF#	Value
					20.5.6.132

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21460).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21461).
4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-21462).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28293) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28294).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22114) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.171" (CONF:86-22117).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-22115).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22727).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-21463).
 - a. This code **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-22116).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28393).
9. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21465).
 - a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21466).
10. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:86-21467).
 - a. This value **SHALL** contain exactly one [1..1] **@code**="3191-4" Urinary catheter present (CONF:86-21468).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:86-28394).
11. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:86-21469) such that it
 - a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-21470).
 - b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" (CONF:86-21471).
 - c. **SHALL** contain exactly one [1..1] [Device Insertion Time and Location Procedure](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.122) (CONF:86-21472).
12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:86-22728) such that it

- a. **SHALL** contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-22729).
- b. **SHALL** contain exactly one [1..1] [History of Object Presence Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.132) (CONF:86-22730).
- c. If a urinary catheter is not present (@negationInd="true"), this entryRelationship **SHALL** be present (CONF:86-22731).

Figure 201: Urinary Catheter Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId. -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Urinary Catheter Observation templateId-->
  <templateId root="2.16.840.1.113883.10.20.5.6.171"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4"
    code="ASSERTION"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.277"
    codeSystemName="cdcNHSN"
    code="3191-4"
    displayName="Urinary Catheter Present"/>
  <entryRelationship typeCode="REFR"
    <procedure classCode="PROC" moodCode="EVN">
      <!-- C-CDA Procedure Activity Procedure templateId -->
      <templateId root="2.16.840.1.113883.10.20.22.4.14" />
      <!-- HAI Device Insertion Time and Location Procedure templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.122" />
      ...
    </entryRelationship>
  </entryRelationship>
</observation>
```

3.140 Vaccination Type Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.242:2017-04-01 (closed)]

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Table 531: Vaccination Type Observation Contexts

Contained By:	Contains:
Summary Data Section (HP-FLU) (required)	

This clinical statement represents the type of vaccination administered.

Table 532: Vaccination Type Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.242:2017-04-01)					
@classCode	1..1	SHALL		3311-61	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		3311-69	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		3311-46	
@root	1..1	SHALL		3311-59	2.16.840.1.113883.10.20.5.6.242
@extension	1..1	SHALL		3311-60	2017-04-01
code	1..1	SHALL		3311-47	
@code	1..1	SHALL		3311-64	30956-7
@codeSystem	1..1	SHALL		3311-65	urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1
value	1..1	SHALL	CD	3311-49	
@code	1..1	SHALL		3311-70	6142004
@codeSystem	1..1	SHALL		3311-71	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
qualifier	1..1	SHALL		3311-50	
name	1..1	SHALL		3311-51	
@code	1..1	SHALL		3311-66	260837004
@codeSystem	1..1	SHALL		3311-67	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96
value	1..1	SHALL		3311-68	
@code	1..1	SHALL		3311-72	21864008
@codeSystem	1..1	SHALL		3311-73	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3311-61).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3311-69).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:3311-46) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.242" (CONF:3311-59).
 - b. **SHALL** contain exactly one [1..1] **@extension**="2017-04-01" (CONF:3311-60).
4. **SHALL** contain exactly one [1..1] **code** (CONF:3311-47).

- a. This code **SHALL** contain exactly one [1..1] **@code**="30956-7" Type [Identifier] Vaccine (CONF:3311-64).
 - b. This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3311-65).
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:3311-49).
Note: Vaccination type (defaults to Influenza)
 - a. This value **SHALL** contain exactly one [1..1] **@code**="6142004" Influenza (CONF:3311-70).
 - b. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3311-71).
 - c. This value **SHALL** contain exactly one [1..1] **qualifier** (CONF:3311-50) such that it
 - i. **SHALL** contain exactly one [1..1] **name** (CONF:3311-51).
 1. This name **SHALL** contain exactly one [1..1] **@code**="260837004" subtype (CONF:3311-66).
 2. This name **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3311-67).
 - ii. **SHALL** contain exactly one [1..1] **value** (CONF:3311-68).
Note: Influenza subtype
 1. This value **SHALL** contain exactly one [1..1] **@code**="21864008" Seasonal (CONF:3311-72).
 2. This value **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3311-73).

Figure 202: Vaccination Type Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- [HAI R3D2] Vaccination Type Observation -->
  <templateId root="2.16.840.1.113883.10.20.5.6.242" extension="2017-04-01" />
  <code code="30956-7"
    displayName="Type [Identifier] Vaccine"
    codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" />
  <value xsi:type="CD" code="6142004"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    displayName="Influenza">
    <qualifier>
      <!-- name is how value "qualifies" the code - Seasonal is a subtype of
Influenza -->
      <name code="260837004"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT"
        displayName="subtype" />
      <value code="21864008"
        codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED CT"
        displayName="Seasonal" />
    </qualifier>
  </value>
</observation>
```

3.141 Vascular Access Type Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.172 (closed)]

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Table 533: Vascular Access Type Observation Contexts

Contained By:	Contains:
Risk Factors Section in an Evidence of Infection (Dialysis) Report (V3) (required)	Buttonhole Cannulation Observation (optional)

This observation records the presence or absence of a type of vascular access. This clinical statement is used in the Risk Factors Section in an Evidence of Infection (Dialysis) Report.

NHSN protocol requires one such observation for each value in the NHSNVascularAccessType value set, and an additional such observation that records whether any other type of vascular access was present.

The value of effectiveTime/low represents the access placement date. NHSN protocol specifies that this date be recorded as year and month. CDA requires that the year be recorded as four digits: the form of an access placement date will be yyyy-mm. If the access placement date is not known, the value of @nullFlavor will be "NI".

When the vascular access type was present set the value of @negationInd to false and record the access placement date in effectiveTime/low/@value. When the vascular access type was absent, set the value of @negationInd to true and set effectiveTime/low/@nullFlavor='NA'.

Table 534: Vascular Access Type Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.172)					
@classCode	1..1	SHALL		86-21474	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-21475	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-21476	
templateId	1..1	SHALL		86-28295	
@root	1..1	SHALL		86-28296	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-22037	
@root	1..1	SHALL		86-22038	2.16.840.1.113883.10.20.5.6.172
id	1..1	SHALL		86-22721	
@nullFlavor	1..1	SHALL		86-22722	
code	1..1	SHALL		86-21477	
@code	1..1	SHALL		86-21478	ASSERTION
@codeSystem	1..1	SHALL		86-28395	urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4
text	0..1	MAY		86-21479	
statusCode	1..1	SHALL		86-21481	
@code	1..1	SHALL		86-21482	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		86-21483	
low	1..1	SHALL		86-21484	
value	1..1	SHALL		86-21487	
entryRelationship	0..1	MAY		86-21490	
@typeCode	1..1	SHALL		86-21491	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP
observation	1..1	SHALL		86-21492	Buttonhole Cannulation Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.115)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).

2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-21474).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-21475).

When the vascular access type was present set the value of **@negationInd** to false. When the vascular access type was absent, set the value of **@negationInd** to true.

4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:86-21476).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28295) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28296).
6. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-22037) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.172" (CONF:86-22038).
7. **SHALL** contain exactly one [1..1] **id** (CONF:86-22721).
 - a. This **id** **SHALL** contain exactly one [1..1] **@nullFlavor** (CONF:86-22722).
8. **SHALL** contain exactly one [1..1] **code** (CONF:86-21477).
 - a. This **code** **SHALL** contain exactly one [1..1] **@code**="ASSERTION" Assertion (CONF:86-21478).
 - b. This **code** **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28395).
9. **MAY** contain zero or one [0..1] **text** (CONF:86-21479).
 - a. The **text** element is to be used for additional information commenting on the vascular access type (CONF:86-21480).
10. **SHALL** contain exactly one [1..1] **statusCode** (CONF:86-21481).
 - a. This **statusCode** **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-21482).
11. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:86-21483).
 - a. This **effectiveTime** **SHALL** contain exactly one [1..1] **low** (CONF:86-21484).
 - i. When the access placement date is not known, the value of **@nullFlavor** **SHALL** be NI (no information) (CONF:86-21485).
 - ii. When the access placement date is known, it **SHALL** be recorded as year and month (yyymm) (CONF:86-21486).
12. **SHALL** contain exactly one [1..1] **value** (CONF:86-21487).
 - a. To record the presence or absence of a vascular access type that is listed in the NHSN Vascular Access Type value set, the value of **@code** **SHALL** be selected from ValueSet 2.16.840.1.114222.4.11.6007 NHSNVascularAccessTypeCode **DYNAMIC** (CONF:86-21488).
 - b. To record that another type of vascular access is present, set the value of **@nullFlavor** to OTH (other) (CONF:86-21489).

If the vascular access type is "Surgically constructed arteriovenous fistula" (SNOMED CT 438503005), this observation **SHALL** contain the following **entryRelationship**

13. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:86-21490) such that it
- SHALL** contain exactly one [1..1] **@typeCode="COMP"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:86-21491).
 - SHALL** contain exactly one [1..1] Buttonhole Cannulation Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.115) (CONF:86-21492).

Table 535: NHSNVascularAccessTypeCode

Value Set: NHSNVascularAccessTypeCode urn:oid:2.16.840.1.114222.4.11.6007 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the vascular access type.),(Data Element Scope: A coded observation value describing the type of vascular access.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.6007/expansion			
Code	Code System	Code System OID	Print Name
1117-1	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Tunneled (dialysis)
1119-7	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Non-tunneled (dialysis)
1969-5	cdcNHSN	urn:oid:2.16.840.1.113883.6.277	Catheter-graft hybrid
439218000	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Surgically constructed arteriovenous graft (finding)
439784005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Surgically constructed arteriovenous fistula (finding)

Figure 203: Vascular Access Type Observation Example

```
<!-- When the vascular access type was present set the value of @negationInd to false and
record the access placement date in effectiveTime/low/@value. When the vascular access type
was absent, set the value of @negationInd to true and set
effectiveTime/low/@nullFlavor='NA'. -->
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Vascular Access Type Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.172"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>
  <statusCode code="completed"/>
  <!-- Access placement date; may be unknown @nullFlavor="NI" -->
  <effectiveTime>
    <low value="200708"/>
  </effectiveTime>
  <value xsi:type="CD"
    codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNOMED CT"
    code="438503005"
    displayName="Surgically constructed arteriovenous fistula"/>
  <!-- If a fistula, specify whether buttonhole cannulation is used -->
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <!-- C-CDA Procedure Activity Observation -->
      <templateId root="2.16.840.1.113883.10.20.22.4.13"/>
      <!-- HAI Buttonhole Cannulation Observation templateId -->
      <templateId root="2.16.840.1.113883.10.20.5.6.115"/>
      ...
    </observation>
  </entryRelationship>
</observation>
```

3.142 Ventricular Assist Device (VAD) Present

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.247:2017-04-01
(closed)]

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Table 536: Ventricular Assist Device (VAD) Present Contexts

Contained By:	Contains:
Infection Risk Factors Section in a BSI Report (V3) (required)	

This procedure represents whether or not a ventricular assist device is present. The code for the procedure is represented with nullFlavor="UNK" as the procedure to implant the ventricular assist device is unknown. The ventricular assist device is represented by the participant.

If a ventricular assist device was present, set the value of @negationInd to false. If a ventricular assist device was not present, set the value of @negationInd to true.

Table 537: Ventricular Assist Device (VAD) Present Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.247:2017-04-01)					
@classCode	1..1	SHALL		3311-226	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC
@moodCode	1..1	SHALL		3311-227	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		3311-228	
templateId	1..1	SHALL		3311-218	
@root	1..1	SHALL		3311-224	2.16.840.1.113883.10.20.5.6.247
@extension	1..1	SHALL		3311-225	2017-04-01
code	1..1	SHALL		3311-215	
@nullFlavor	1..1	SHALL		3311-28443	urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = UNK
statusCode	1..1	SHALL		3311-216	
@code	1..1	SHALL		3311-221	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
participant	0..*	MAY		3311-28445	
@typeCode	1..1	SHALL		3311-28447	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV
participantRole	1..1	SHALL		3311-28446	
@classCode	1..1	SHALL		3311-28448	urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU
playingDevice	1..1	SHALL		3311-28449	
code	1..1	SHALL		3311-28450	
@code	1..1	SHALL		3311-28451	360064003
@codeSystem	1..1	SHALL		3311-28452	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96

1. **SHALL** contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:3311-226).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:3311-227).

If a ventricular assist device (VAD) was present, set the value of `@negationInd` to false. If a ventricular assist device (VAD) was not present set the value of `@negationInd` to true.

3. **SHALL** contain exactly one [1..1] `@negationInd` (CONF:3311-228).
4. **SHALL** contain exactly one [1..1] `templateId` (CONF:3311-218) such that it
 - a. **SHALL** contain exactly one [1..1] `@root="2.16.840.1.113883.10.20.5.6.247"` (CONF:3311-224).
 - b. **SHALL** contain exactly one [1..1] `@extension="2017-04-01"` (CONF:3311-225).

The code for the procedure is represented with `nullFlavor="UNK"` as the procedure to implant the ventricular assist device is unknown.

5. **SHALL** contain exactly one [1..1] `code` (CONF:3311-215).
 - a. This code **SHALL** contain exactly one [1..1] `@nullFlavor="UNK"` Unknown (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:3311-28443).
6. **SHALL** contain exactly one [1..1] `statusCode` (CONF:3311-216).
 - a. This `statusCode` **SHALL** contain exactly one [1..1] `@code="completed"` Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:3311-221).

The ventricular assist device is represented by the participant.

7. **MAY** contain zero or more [0..*] `participant` (CONF:3311-28445).
 - a. The participant, if present, **SHALL** contain exactly one [1..1] `@typeCode="DEV"` Device (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3311-28447).
 - b. The participant, if present, **SHALL** contain exactly one [1..1] `participantRole` (CONF:3311-28446).
 - i. This `participantRole` **SHALL** contain exactly one [1..1] `@classCode="MANU"` Manufactured product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3311-28448).
 - ii. This `participantRole` **SHALL** contain exactly one [1..1] `playingDevice` (CONF:3311-28449).
 1. This `playingDevice` **SHALL** contain exactly one [1..1] `code` (CONF:3311-28450).
 - a. This code **SHALL** contain exactly one [1..1] `@code="360064003"` Ventricular assist device (CONF:3311-28451).
 - b. This code **SHALL** contain exactly one [1..1] `@codeSystem="2.16.840.1.113883.6.96"` (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3311-28452).

Figure 204: Ventricular Assist Device (VAD) Present Example

```
<procedure classCode="PROC" moodCode="EVN" negationInd="false">
  <!-- [HAI R3D2] Ventricular Assist Device (VAD) Present -->
  <templateId root="2.16.840.1.113883.10.20.5.6.247" extension="2017-04-01" />
  <code nullFlavor="UNK" />
  <statusCode code="completed" />
  <participant typeCode="DEV">
    <participantRole classCode="MANU">
      <playingDevice>
        <code code="360064003"
          codeSystem="2.16.840.1.113883.6.96"
          codeSystemName="SNOMED CT"
          displayName="Ventricular assist device" />
      </playingDevice>
    </participantRole>
  </participant>
</procedure>
```

3.143 Weight Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.173 (closed)]

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Table 538: Weight Observation Contexts

Contained By:	Contains:
Infection Risk Factors Section in a Procedure Report (required) Infection Risk Factors Section in an OPC Denominator for Procedure (required)	

This observation records a body weight. NHSN protocol requires that the value be an integer.

Table 539: Weight Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.173)					
@classCode	1..1	SHALL		86-19702	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-19703	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	1..1	SHALL		86-19704	false
templateId	1..1	SHALL		86-28297	
@root	1..1	SHALL		86-28298	2.16.840.1.113883.10.20.22.4.27
templateId	1..1	SHALL		86-19712	
@root	1..1	SHALL		86-19714	2.16.840.1.113883.10.20.5.6.173
id	1..1	SHALL		86-19897	
@nullFlavor	1..1	SHALL		86-22718	NA
code	1..1	SHALL		86-19705	
@code	1..1	SHALL		86-19706	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 27113001
statusCode	1..1	SHALL		86-19707	
@code	1..1	SHALL		86-19708	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		86-19898	
@nullFlavor	1..1	SHALL		86-22719	NA
value	1..1	SHALL	PQ	86-19709	
@value	1..1	SHALL		86-19710	
@unit	1..1	SHALL		86-28399	

1. Conforms to Vital Sign Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.27).
2. **SHALL** contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-19702).
3. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-19703).
4. **SHALL** contain exactly one [1..1] @negationInd="false" (CONF:86-19704).
5. **SHALL** contain exactly one [1..1] templateId (CONF:86-28297) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.27" (CONF:86-28298).
6. **SHALL** contain exactly one [1..1] templateId (CONF:86-19712) such that it
 - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.173" (CONF:86-19714).
7. **SHALL** contain exactly one [1..1] id (CONF:86-19897).

- a. This id **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22718).
8. **SHALL** contain exactly one [1..1] code (CONF:86-19705).
 - a. This code **SHALL** contain exactly one [1..1] @code="27113001" Body weight (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:86-19706).
9. **SHALL** contain exactly one [1..1] statusCode (CONF:86-19707).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-19708).
10. **SHALL** contain exactly one [1..1] effectiveTime (CONF:86-19898).
 - a. This effectiveTime **SHALL** contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22719).
11. **SHALL** contain exactly one [1..1] value with @xsi:type="PQ" (CONF:86-19709).
 - a. This value **SHALL** contain exactly one [1..1] @value (CONF:86-19710).
 - i. The value of @value **SHALL** be a non-negative real number representing the body weight in terms of the units specified in @unit (CONF:86-28400).
 - b. This value **SHALL** contain exactly one [1..1] @unit (CONF:86-28399).

Figure 205: Weight Observation Example

```
<observation classCode="OBS" moodCode="EVN" negationInd="false">
  <!-- C-CDA Vital Sign Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.27"/>
  <!-- HAI Weight Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.5.6.173"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.6.96"
        codeSystemName="SNOMED"
        code="27113001"
        displayName="Body Weight"/>
  <statusCode code="completed"/>
  <effectiveTime nullFlavor="NA"/>
  <value xsi:type="PQ" value="65" unit="kg"/>
</observation>
```

3.144 Wound Class Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.174 (closed)]

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Table 540: Wound Class Observation Contexts

Contained By:	Contains:
Procedure Risk Factors Clinical Statement in a Procedure Report (required)	

NHSN patient safety protocol on this topic is an adaptation of (not a change to) the American College of Surgeons (ACoS) definitions, which are the definitions used by SNOMED. Thus, SNOMED wound-class codes are appropriate for use with this observation.

Table 541: Wound Class Observation Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.174)					
@classCode	1..1	SHALL		86-19679	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		86-19680	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
templateId	1..1	SHALL		86-28299	
@root	1..1	SHALL		86-28300	2.16.840.1.113883.10.20.22.4.4
templateId	1..1	SHALL		86-19689	
@root	1..1	SHALL		86-19690	2.16.840.1.113883.10.20.5.6.174
id	1..1	SHALL		86-19691	
@nullFlavor	1..1	SHALL		86-22717	NA
code	1..1	SHALL		86-19681	
@code	1..1	SHALL		86-19682	urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 420089007
statusCode	1..1	SHALL		86-19683	
@code	1..1	SHALL		86-19684	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
value	1..1	SHALL	CD	86-19685	urn:oid:2.16.840.1.113883.13.9 (NHSNWoundClassCode)

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:86-19679).
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:86-19680).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-28299) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28300).
5. **SHALL** contain exactly one [1..1] **templateId** (CONF:86-19689) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.5.6.174" (CONF:86-19690).
6. **SHALL** contain exactly one [1..1] **id** (CONF:86-19691).
 - a. This id **SHALL** contain exactly one [1..1] **@nullFlavor**="NA" (CONF:86-22717).
7. **SHALL** contain exactly one [1..1] **code** (CONF:86-19681).

- a. This code **SHALL** contain exactly one [1..1] @code="420089007" CDC Wound Classification Category (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 **STATIC**) (CONF:86-19682).
8. **SHALL** contain exactly one [1..1] statusCode (CONF:86-19683).
 - a. This statusCode **SHALL** contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:86-19684).
9. **SHALL** contain exactly one [1..1] value with @xsi:type="CD", where the code **SHALL** be selected from ValueSet [NHSNWoundClassCode](#) urn:oid:2.16.840.1.113883.13.9 **DYNAMIC** (CONF:86-19685).

Table 542: NHSNWoundClassCode

Value Set: NHSNWoundClassCode urn:oid:2.16.840.1.113883.13.9 (Clinical Focus: NHSN surveillance reporting: This value set contains codes describing the wound class.),(Data Element Scope: A coded observation value describing the wound class.),(Inclusion Criteria:),(Exclusion Criteria:) This value set was imported on 10/14/2020 with a version of Latest. Value Set Source: https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.9/expansion			
Code	Code System	Code System OID	Print Name
418115006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Centers for Disease Control and Prevention Class II/Clean-contaminated (finding)
418422005	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Centers for Disease Control and Prevention Class IV/Dirty-infected (finding)
418780004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Centers for Disease Control and Prevention Class I/Clean (finding)
419877002	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Centers for Disease Control and Prevention Class III/Contaminated (finding)

Figure 206: Wound Class Observation Example

```
<observation classCode="OBS" moodCode="EVN">
  <!-- C-CDA Problem Observation templateId -->
  <templateId root="2.16.840.1.113883.10.20.22.4.4"/>
  <!-- HAI Wound Class Observation templateID -->
  <templateId root="2.16.840.1.113883.10.20.5.6.174"/>
  <id nullFlavor="NA"/>
  <code codeSystem="2.16.840.1.113883.6.96"
        code="420089007"
        displayName="Wound Classification Category"/>
  <statusCode code="completed"/>
  <value xsi:type="CD"
        codeSystem="2.16.840.1.113883.6.96"
        code="418115006"
        displayName="CDC Wound Class II/Clean Contaminated"/>
</observation>
```

4 TEMPLATE IDS IN THIS GUIDE

Table 543: Template List

Template Title	Template Type	templateId
Outpatient Procedure Component Denominator for Procedure Report (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.56:2022-04-01
Antimicrobial Resistance Option (ARO) Summary Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.46:2019-04-01
Antimicrobial Use (AUP) Summary Report (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.44:2015-04-01
HAI AUR Antimicrobial Resistance Option (ARO) Report (V6)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.31:2022-04-01
HAI Bloodstream Infection Report (BSI) (V5)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.32:2022-04-01
HAI Central-Line Insertion Practice Numerator Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.36:2022-04-01
HAI Evidence of Infection (Dialysis) Report (V7)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.37:2022-04-01
HAI Laboratory-Identified Organism (LIO) Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.38:2022-04-01
HAI Population Summary Report Generic Constraints	document	urn:oid:2.16.840.1.113883.10.20.5.4.28
HAI Procedure Denominator Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.35.2:2022-04-01
HAI Single-Person Report Generic Constraints (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01
HAI Surgical Site Infection Report (SSI) (V4)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.33.2:2022-04-01
HAI Urinary Tract Infection Numerator Report (UTI) (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.34:2022-04-01
Healthcare Associated Infection Report	document	urn:oid:2.16.840.1.113883.10.20.5.4.25
Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report	document	urn:hl7ii:2.16.840.1.113883.10.20.5.50:2017-04-01
Hemovigilance (HV) Summary Report (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.49:2016-08-01
Intensive Care Unit (ICU) Summary Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.40:2018-04-01
Late Onset Sepsis/Meningitis Denominator (LOS/Men Denom) Report (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.58:2022-04-01
Late Onset Sepsis/Meningitis Event (LOS) Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.53:2022-04-01
Neonatal Intensive Care Unit	document	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
(NICU) Summary Report (V3)		5.41:2018-04-01
Outpatient Procedure Component Denominator for Same Day Outcome Measures Report	document	urn:hl7ii:2.16.840.1.113883.10.20.5.55:2019-04-01
Outpatient Procedure Component Same Day Outcome Measures Event Report (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.54:2022-04-01
Outpatient Procedure Surgical Site Infection (SSI) Event Report (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.57:2022-04-01
Prevention Process and Outcome Measures (POM) Summary Report (V4)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.43:2022-04-01
Specialty Care Area (SCA) Summary Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.42:2018-04-01
Vascular Access Type Report (VAT) Summary Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.45:2018-04-01
Ventilator Associated Event (VAE) Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.51:2022-04-01
COVID-19 Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01
Details Section in an Evidence of Infection (Dialysis) Report (V6)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.41:2019-04-01
Encounters Section in a LIO Report (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.44:2014-12-01
Encounters Section in a LOS/Men Denominator	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.71:2019-04-01
Findings Section in a LIO Report (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.46:2014-12-01
Findings Section in an ARO Report (V4)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.32:2020-04-01
Findings Section in an Infection-Type Report	section	urn:oid:2.16.840.1.113883.10.20.5.5.45
Findings Section in an OPC SSI Report	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.70:2019-04-01
HAI Section Generic Constraints	section	urn:oid:2.16.840.1.113883.10.20.5.5.4.26
Infection Details in Late Onset Sepsis Report	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.64:2018-04-01
Infection Details Section in a BSI Report	section	urn:oid:2.16.840.1.113883.10.20.5.5.38
Infection Details Section in a UTI Report	section	urn:oid:2.16.840.1.113883.10.20.5.5.40
Infection Details Section in a VAE Report	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.59:2017-04-01
Infection Details Section in an OPC SSI Report	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.69:2019-04-01

Template Title	Template Type	templateId
Infection Details Section in an SSI Report (V2)	section	urn:oid:2.16.840.1.113883.10.20.5.539.2
Infection Risk Factors Section in a BSI Report (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.533:2018-04-01
Infection Risk Factors Section in a CLIP Report (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.534:2014-12-01
Infection Risk Factors Section in a Procedure Report	section	urn:oid:2.16.840.1.113883.10.20.5.535
Infection Risk Factors Section in a UTI Report	section	urn:oid:2.16.840.1.113883.10.20.5.536
Infection Risk Factors Section in an OPC Denominator for Procedure	section	urn:hl7ii:2.16.840.1.113883.10.20.5.568:2019-04-01
NHSN Comment Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.561:2017-04-01
NHSN Social History Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.581:2022-04-01
Procedure Details Section in a CLIP Report	section	urn:oid:2.16.840.1.113883.10.20.5.542
Procedure Details Section in a Procedure Report (V2)	section	urn:oid:2.16.840.1.113883.10.20.5.543.2
Procedure Details Section in an OPC Denominator for Procedure	section	urn:hl7ii:2.16.840.1.113883.10.20.5.567:2019-04-01
Report No Events Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.562:2018-04-01
Risk Factors Section in a LOS/Men Denominator	section	urn:hl7ii:2.16.840.1.113883.10.20.5.572:2019-04-01
Risk Factors Section in a LOS/Men Event (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.565:2019-04-01
Risk Factors Section in a VAE Report	section	urn:hl7ii:2.16.840.1.113883.10.20.5.560:2017-04-01
Risk Factors Section in an Evidence of Infection (Dialysis) Report (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.537:2022-04-01
Same Day Outcome Measures Event Details Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.566:2019-04-01
Summary Data Section	section	urn:oid:2.16.840.1.113883.10.20.5.547
Summary Data Section (ARO) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.552:2019-04-01
Summary Data Section (AUP) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.551:2015-04-01
Summary Data Section (HP-FLU)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.558:2017-04-01
Summary Data Section (HV) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.557:2016-08-01
Summary Data Section (NICU) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
		5.5.48:2018-04-01
Summary Data Section (POM) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2022-04-01
Summary Data Section (VAT)	section	urn:oid:2.16.840.1.113883.10.20.5.5.50
Anesthesia Administration Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.112
Antimicrobial Coated Catheter Used Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.217:2014-12-01
Antimicrobial Susceptibility Antibiotic	entry	urn:oid:2.16.840.1.113883.10.20.5.6.176
Antimicrobial Susceptibility Final Interpretation Result	entry	urn:oid:2.16.840.1.113883.10.20.5.6.175
Antimicrobial Susceptibility Isolate Participant (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.202:2020-04-01
Antimicrobial Susceptibility Result Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.186:2016-08-01
Antimicrobial Susceptibility Result Organizer (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.200:2016-08-01
Antimicrobial Susceptibility Tests Organizer (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.177:2016-08-01
APRV or Related at Time of VAE Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.248:2017-04-01
ARO Staph Aureus Specific Tests Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.190
ARO Staph Aureus Specific Tests Result Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.189
ASA Class Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.113
Bacterial Isolate Tested for Carbapenemase Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.222:2014-12-01
Birth Sex Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.200:2016-06-01
Blood Collection Location	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.219:2014-12-01
Blood Product Usage Summary Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.237:2016-08-01
Blood Sample Collected for Culture Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.239:2016-08-01
Bloodstream Infection Evidence Type Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.114
Buttonhole Cannulation Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.115
Carbapenemase Test Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.224:2014-12-01
Carbapenemase Test Organizer	entry	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
		5.6.223:2014-12-01
Carbapenemase Type Identified Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.226:2014-12-01
Central-Line Insertion Practice Clinical Statement (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.116:2014-12-01
Central-Line Insertion Preparation Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.179:2014-12-01
Closure Technique Procedure	entry	urn:oid:2.16.840.1.113883.10.20.5.6.117
Contraindicated Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.118:2014-12-01
Contraindication Type Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.216:2014-12-01
Criteria of Diagnosis Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.180
Criterion of Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.119
Death Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.120
Death Observation in an Evidence of Infection (Dialysis) Report	entry	urn:oid:2.16.840.1.113883.10.20.5.6.121
Device Insertion Time and Location Procedure	entry	urn:oid:2.16.840.1.113883.10.20.5.6.122
Diabetes Mellitus Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.123
Dialysis Clinic Admission Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.124
Dialysis Patient Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.125
Dialyzer Reused Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.231:2015-10-01
Drug-Susceptibility Test Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.126
Duration of Labor Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.127
Endoscope Used Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.128
Epidermolysis Bullosa Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.252:2018-04-01
Extracorporeal Life Support Present	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.246:2017-04-01
Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.236:2016-08-01
Findings Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.182

Template Title	Template Type	templateId
Gender Identity Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.45:2022-06-01
Gestational Age at Birth Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2019-04-01
Guidewire Used Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.129
Hand Hygiene Performed Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.130
Height Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.131
Hemodialysis Catheter Present	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.245:2017-04-01
History of Object Presence Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.132
Hospital Admission Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.133
Imputability Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.134
Inborn/Outborn Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.257:2018-04-01
Infection Condition Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.135
Infection Contributed to Death Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.136
Infection Indicator Organizer (V5)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.181:2019-04-01
Infection Present at the Time of Surgery Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.205
Infection Risk Factors Measurement Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.137
Infection Risk Factors Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.138
Infection-Type Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.139
Infection-Type Observation in an OPC SSI Event	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.263:2019-04-01
Inpatient Psychiatric (IPF) Unit in Facility	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.272:2022-04-01
Inpatient Rehabilitation (IRF) Unit in Facility	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.271:2022-04-01
ISBT Product Code Summary Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01
Isolate Susceptibility Tests Organizer (V4)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.201:2020-04-01
IV Antibiotic Start Clinical Statement (V4)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.140:2019-04-01

Template Title	Template Type	templateId
IV Antifungal Start Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.141
Known or Suspected Munchausen's By Proxy Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.250:2018-04-01
Last Physical Overnight Location Act	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.227:2014-12-01
Last Physical Overnight Location Encounter	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.220:2014-12-01
Location Within Facility Encounter	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.262:2019-04-01
Loss of Vascular Access Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.203
MDRO/CDI Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.142
Mechanical Ventilation Initiation Act	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.244:2017-04-01
NHSN Comment	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01
NHSN COVID-19 Condition Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.270:2021-01-01
No Hemovigilance Adverse Reactions Reported This Month Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.232:2015-10-01
No Hemovigilance Incidents Reported This Month Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.233:2015-10-01
Observed or Suspected Patient Injection into Vascular Line Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.251:2018-04-01
Occasion of HAI Detection Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.144
Other Facility Discharge Act	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.228:2014-12-01
Other Facility Discharge Encounter	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.218:2014-12-01
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
Pathogen Identified Observation (LIO) (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.146:2014-12-01
Pathogen Ranking Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.147
Pathogen Reduced Apheresis Platelet Usage Summary Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.240:2016-08-01
Patient Admitted This Encounter Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.266:2020-04-01

Template Title	Template Type	templateId
PICC/IV Team	entry	urn:oid:2.16.840.1.113883.10.20.5.6.148
Positive Blood Culture Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.149:2019-04-01
Positive Test for Carbapenemase Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.225:2014-12-01
Post-Procedure Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.150
Primary C. Difficile Testing Method This Quarter	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.221:2014-12-01
Prior Discharge Encounter (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.151:2014-12-01
Procedure Details Clinical Statement in a CLIP Report	entry	urn:oid:2.16.840.1.113883.10.20.5.6.155
Procedure Details Clinical Statement in a Procedure Report (V2)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.153.2
Procedure Details Clinical Statement in an Infection-Type Report	entry	urn:oid:2.16.840.1.113883.10.20.5.6.154
Procedure Details in an OPC Denominator for Procedure	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.259:2019-04-01
Procedure Details in an OPC SSI Event	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.265:2019-04-01
Procedure Risk Factors Clinical Statement in a Procedure Report	entry	urn:oid:2.16.840.1.113883.10.20.5.6.156
Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.253:2018-04-01
Pus, Redness, or Increased Swelling Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.157:2019-04-01
Reason for Procedure Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.158
Recorder Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.159
Report No Events	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01
Revision Associated with Prior Infection Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.204
Same Day Outcome Measure Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.208:2019-04-01
Same Day Outcome Measures Organizer (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.212:2019-04-01
Secondary Bloodstream Infection Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.160
Skin Preparation Clinical	entry	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
Statement (V2)		5.6.162:2014-12-01
Skin-Preparation Solutions Applied Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.183:2014-12-01
Solutions Dried Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.163
Specimen Collection Encounter (ARO) (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.187:2020-04-01
Specimen Collection Encounter (LIO)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.164
Specimen Collection Procedure (ARO) (V4)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.188:2020-04-01
Specimen Collection Procedure (LIO)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.165
Spinal Fusion Level Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.166
SSI Detected Using Toolkit Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.206
SSI Detection Method	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.261:2019-04-01
Sterile Barriers Applied Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.167
Summary Data Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.185
Summary Data Observation (AU/AR)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01
Summary Data Observation (AUP)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.194
Summary Data Observation (HV)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.235:2015-10-01
Summary Data Observation (POM)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.192
Summary Data Observation (VAT)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.195
Summary Encounter	entry	urn:oid:2.16.840.1.113883.10.20.5.6.184
Summary Encounter (ARO) (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.199:2019-04-01
Summary Encounter (AUP) (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.198:2015-04-01
Summary Encounter (HP-FLU)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.241:2017-04-01
Summary Encounter (HV) (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.234:2016-08-01
Summary Encounter (NICU)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.191
Summary Encounter (POM)	entry	urn:oid:2.16.840.1.113883.10.20.5

Template Title	Template Type	templateId
		.6.193
Summary Encounter (VAT)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.196
Summary Encounter Patient Presence (AUP) (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.197:2015-04-01
Suspected Source Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.168
Transient Patient Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.169
Trauma Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.170
Type of Antimicrobial Start Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.230:2015-10-01
Urinary Catheter Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.171
Vaccination Type Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.242:2017-04-01
Vascular Access Type Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.172
Ventricular Assist Device (VAD) Present	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.247:2017-04-01
Weight Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.173
Wound Class Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.174

Table 544: Template Containments

Template Title	Template Type	templateId
Outpatient Procedure Component Denominator for Procedure Report (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.56:2022-04-01
NHSN Comment Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01
NHSN Comment	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01
Procedure Details Section in an OPC Denominator for Procedure	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.67:2019-04-01
Procedure Details in an OPC Denominator for Procedure	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.259:2019-04-01
Anesthesia Administration Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.112
Infection Risk Factors Section in an OPC Denominator for Procedure	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.68:2019-04-01
ASA Class Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.113
Weight Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.173
Height Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.131
Diabetes Mellitus Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.123
Procedure Risk Factors Clinical Statement in a Procedure Report	entry	urn:oid:2.16.840.1.113883.10.20.5.6.156
Wound Class Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.174
Endoscope Used Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.128
Antimicrobial Resistance Option (ARO) Summary Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.46:2019-04-01
NHSN Comment Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01
NHSN Comment	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01
Report No Events Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01
Report No Events	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01
Summary Data Section (ARO) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.52:2019-04-01
Summary Encounter (ARO) (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.199:2019-04-01

Template Title	Template Type	templateId
Summary Data Observation (AU/AR)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01
Antimicrobial Use (AUP) Summary Report (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.44:2015-04-01
Summary Data Section (AUP) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.51:2015-04-01
Summary Encounter Patient Presence (AUP) (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.197:2015-04-01
Summary Data Observation (AU/AR)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01
Summary Encounter (AUP) (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.198:2015-04-01
Summary Data Observation (AUP)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.194
Summary Data Observation (AU/AR)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01
HAI AUR Antimicrobial Resistance Option (ARO) Report (V6)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.31:2022-04-01
Findings Section in an ARO Report (V4)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.32:2020-04-01
Specimen Collection Procedure (ARO) (V4)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.188:2020-04-01
Specimen Collection Encounter (ARO) (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.187:2020-04-01
Patient Admitted This Encounter Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.266:2020-04-01
Isolate Susceptibility Tests Organizer (V4)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.201:2020-04-01
ARO Staph Aureus Specific Tests Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.190
ARO Staph Aureus Specific Tests Result Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.189
Antimicrobial Susceptibility Tests Organizer (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.177:2016-08-01
Antimicrobial Susceptibility Final Interpretation Result	entry	urn:oid:2.16.840.1.113883.10.20.5.6.175
Antimicrobial Susceptibility Result Organizer (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.200:2016-08-01
Antimicrobial Susceptibility Result Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.186:2016-08-01
Antimicrobial Susceptibility Isolate Participant (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.202:2020-04-01
HAI Bloodstream Infection Report	document	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
(BSI) (V5)		5.32:2022-04-01
Infection Details Section in a BSI Report	section	urn:oid:2.16.840.1.113883.10.20.5.538
Death Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.120
Infection Contributed to Death Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.136
Post-Procedure Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.150
Procedure Details Clinical Statement in an Infection-Type Report	entry	urn:oid:2.16.840.1.113883.10.20.5.6.154
Infection-Type Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.139
Bloodstream Infection Evidence Type Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.114
Secondary Bloodstream Infection Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.160
Infection Condition Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.135
Occasion of HAI Detection Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.144
Criteria of Diagnosis Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.180
Criterion of Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.119
Findings Section in an Infection-Type Report	section	urn:oid:2.16.840.1.113883.10.20.5.5.45
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
MDRO/CDI Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.142
Findings Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.182
Pathogen Ranking Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.147
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
Drug-Susceptibility Test Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.126
NHSN Comment Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01
NHSN Comment	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01
Infection Risk Factors Section in a BSI Report (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2018-04-01

Template Title	Template Type	templateId
Infection Risk Factors Measurement Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.137
Infection Risk Factors Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.138
Device Insertion Time and Location Procedure	entry	urn:oid:2.16.840.1.113883.10.20.5.6.122
Hemodialysis Catheter Present	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.245:2017-04-01
Extracorporeal Life Support Present	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.246:2017-04-01
Ventricular Assist Device (VAD) Present	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.247:2017-04-01
Known or Suspected Munchausen's By Proxy Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.250:2018-04-01
Observed or Suspected Patient Injection into Vascular Line Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.251:2018-04-01
Epidermolysis Bullosa Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.252:2018-04-01
Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.253:2018-04-01
COVID-19 Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01
NHSN COVID-19 Condition Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.270:2021-01-01
HAI Central-Line Insertion Practice Numerator Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.36:2022-04-01
Procedure Details Section in a CLIP Report	section	urn:oid:2.16.840.1.113883.10.20.5.5.42
Procedure Details Clinical Statement in a CLIP Report	entry	urn:oid:2.16.840.1.113883.10.20.5.6.155
PICC/IV Team	entry	urn:oid:2.16.840.1.113883.10.20.5.6.148
Recorder Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.159
Reason for Procedure Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.158
Guidewire Used Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.129
Infection Risk Factors Section in a CLIP Report (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.34:2014-12-01
Central-Line Insertion Practice Clinical Statement (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.116:2014-12-01

Template Title	Template Type	templateId
Solutions Dried Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.163
Central-Line Insertion Preparation Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.179:2014-12-01
Sterile Barriers Applied Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.167
Hand Hygiene Performed Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.130
Skin-Preparation Solutions Applied Organizer (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.183:2014-12-01
Skin Preparation Clinical Statement (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.162:2014-12-01
Contraindicated Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.118:2014-12-01
Contraindication Type Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.216:2014-12-01
Antimicrobial Coated Catheter Used Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.217:2014-12-01
HAI Evidence of Infection (Dialysis) Report (V7)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.37:2022-04-01
Findings Section in an Infection-Type Report	section	urn:oid:2.16.840.1.113883.10.20.5.5.45
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
MDRO/CDI Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.142
Findings Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.182
Pathogen Ranking Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.147
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
Drug-Susceptibility Test Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.126
Details Section in an Evidence of Infection (Dialysis) Report (V6)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.41:2019-04-01
Death Observation in an Evidence of Infection (Dialysis) Report	entry	urn:oid:2.16.840.1.113883.10.20.5.6.121
Criteria of Diagnosis Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.180
Criterion of Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.119
Hospital Admission Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.133
Dialysis Clinic Admission	entry	urn:oid:2.16.840.1.113883.10.20.5

Template Title	Template Type	templateId
Clinical Statement		.6.124
Loss of Vascular Access Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.203
Infection Indicator Organizer (V5)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.181:2019-04-01
IV Antifungal Start Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.141
IV Antibiotic Start Clinical Statement (V4)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.140:2019-04-01
Type of Antimicrobial Start Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.230:2015-10-01
Blood Sample Collected for Culture Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.239:2016-08-01
Positive Blood Culture Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.149:2019-04-01
Suspected Source Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.168
Imputability Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.134
Blood Collection Location	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.219:2014-12-01
Pus, Redness, or Increased Swelling Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.157:2019-04-01
Risk Factors Section in an Evidence of Infection (Dialysis) Report (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.37:2022-04-01
Vascular Access Type Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.172
Buttonhole Cannulation Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.115
Dialysis Patient Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.125
Transient Patient Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.169
HAI Laboratory-Identified Organism (LIO) Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.38:2022-04-01
Encounters Section in a LIO Report (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.44:2014-12-01
Prior Discharge Encounter (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.151:2014-12-01
Last Physical Overnight Location Act	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.227:2014-12-01
Last Physical Overnight Location Encounter	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.220:2014-12-01
Other Facility Discharge Act	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.228:2014-12-01

Template Title	Template Type	templateId
Other Facility Discharge Encounter	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.218:2014-12-01
Findings Section in a LIO Report (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.46:2014-12-01
Pathogen Identified Observation (LIO) (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.146:2014-12-01
Specimen Collection Procedure (LIO)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.165
Specimen Collection Encounter (LIO)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.164
Bacterial Isolate Tested for Carbapenemase Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.222:2014-12-01
Carbapenemase Test Organizer	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.223:2014-12-01
Carbapenemase Test Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.224:2014-12-01
Positive Test for Carbapenemase Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.225:2014-12-01
Carbapenemase Type Identified Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.226:2014-12-01
HAI Population Summary Report Generic Constraints	document	urn:oid:2.16.840.1.113883.10.20.5.4.28
HAI Procedure Denominator Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.35.2:2022-04-01
Infection Risk Factors Section in a Procedure Report	section	urn:oid:2.16.840.1.113883.10.20.5.5.35
ASA Class Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.113
Weight Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.173
Height Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.131
Trauma Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.170
Diabetes Mellitus Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.123
Procedure Risk Factors Clinical Statement in a Procedure Report	entry	urn:oid:2.16.840.1.113883.10.20.5.6.156
Wound Class Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.174
Endoscope Used Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.128
Duration of Labor Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.127
Procedure Details Section in a	section	urn:oid:2.16.840.1.113883.10.20.5

Template Title	Template Type	templateId
Procedure Report (V2)		.5.43.2
Procedure Details Clinical Statement in a Procedure Report (V2)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.153.2
Anesthesia Administration Clinical Statement	entry	urn:oid:2.16.840.1.113883.10.20.5.6.112
Closure Technique Procedure	entry	urn:oid:2.16.840.1.113883.10.20.5.6.117
Spinal Fusion Level Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.166
Revision Associated with Prior Infection Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.204
HAI Single-Person Report Generic Constraints (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01
NHSN Social History Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.81:2022-04-01
Birth Sex Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.22.4.200:2016-06-01
Gender Identity Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.34.3.45:2022-06-01
HAI Surgical Site Infection Report (SSI) (V4)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.33.2:2022-04-01
Findings Section in an Infection-Type Report	section	urn:oid:2.16.840.1.113883.10.20.5.5.45
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
MDRO/CDI Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.142
Findings Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.182
Pathogen Ranking Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.147
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
Drug-Susceptibility Test Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.126
Infection Details Section in an SSI Report (V2)	section	urn:oid:2.16.840.1.113883.10.20.5.5.39.2
Death Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.120
Infection Contributed to Death Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.136
Infection-Type Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.139
Bloodstream Infection Evidence Type Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.114

Template Title	Template Type	templateId
Secondary Bloodstream Infection Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.160
Infection Condition Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.135
Occasion of HAI Detection Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.144
Criteria of Diagnosis Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.180
Criterion of Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.119
Procedure Details Clinical Statement in an Infection-Type Report	entry	urn:oid:2.16.840.1.113883.10.20.5.6.154
Infection Present at the Time of Surgery Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.205
SSI Detected Using Toolkit Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.206
COVID-19 Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01
NHSN COVID-19 Condition Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.270:2021-01-01
HAI Urinary Tract Infection Numerator Report (UTI) (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.34:2022-04-01
Infection Risk Factors Section in a UTI Report	section	urn:oid:2.16.840.1.113883.10.20.5.5.36
Urinary Catheter Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.171
Device Insertion Time and Location Procedure	entry	urn:oid:2.16.840.1.113883.10.20.5.6.122
History of Object Presence Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.132
Infection Details Section in a UTI Report	section	urn:oid:2.16.840.1.113883.10.20.5.5.40
Death Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.120
Infection Contributed to Death Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.136
Post-Procedure Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.150
Procedure Details Clinical Statement in an Infection-Type Report	entry	urn:oid:2.16.840.1.113883.10.20.5.6.154
Infection-Type Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.139
Bloodstream Infection Evidence Type Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.114

Template Title	Template Type	templateId
Secondary Bloodstream Infection Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.160
Infection Condition Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.135
Occasion of HAI Detection Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.144
Criteria of Diagnosis Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.180
Criterion of Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.119
Findings Section in an Infection-Type Report	section	urn:oid:2.16.840.1.113883.10.20.5.5.45
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
MDRO/CDI Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.142
Findings Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.182
Pathogen Ranking Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.147
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
Drug-Susceptibility Test Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.126
COVID-19 Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01
NHSN COVID-19 Condition Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.270:2021-01-01
Healthcare Associated Infection Report	document	urn:oid:2.16.840.1.113883.10.20.5.4.25
Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report	document	urn:hl7ii:2.16.840.1.113883.10.20.5.50:2017-04-01
Summary Data Section (HP-FLU)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.58:2017-04-01
Summary Encounter (HP-FLU)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.241:2017-04-01
Summary Data Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.185
Vaccination Type Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.242:2017-04-01
NHSN Comment Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01
NHSN Comment	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01
Hemovigilance (HV) Summary	document	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
Report (V2)		5.49:2016-08-01
Summary Data Section (HV) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.57:2016-08-01
No Hemovigilance Adverse Reactions Reported This Month Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.232:2015-10-01
No Hemovigilance Incidents Reported This Month Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.233:2015-10-01
Summary Encounter (HV) (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.234:2016-08-01
Summary Data Observation (HV)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.235:2015-10-01
Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.236:2016-08-01
Blood Product Usage Summary Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.237:2016-08-01
ISBT Product Code Summary Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01
Pathogen Reduced Apheresis Platelet Usage Summary Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.240:2016-08-01
ISBT Product Code Summary Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01
Intensive Care Unit (ICU) Summary Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.40:2018-04-01
Summary Data Section	section	urn:oid:2.16.840.1.113883.10.20.5.5.47
Summary Encounter	entry	urn:oid:2.16.840.1.113883.10.20.5.6.184
Summary Data Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.185
Report No Events Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01
Report No Events	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01
Late Onset Sepsis/Meningitis Denominator (LOS/Men Denom) Report (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.58:2022-04-01
NHSN Comment Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01
NHSN Comment	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01
Encounters Section in a LOS/Men Denominator	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.71:2019-04-01

Template Title	Template Type	templateId
Location Within Facility Encounter	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.262:2019-04-01
Risk Factors Section in a LOS/Men Denominator	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.72:2019-04-01
Infection Risk Factors Measurement Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.137
Gestational Age at Birth Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2019-04-01
Late Onset Sepsis/Meningitis Event (LOS) Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.53:2022-04-01
Findings Section in an Infection-Type Report	section	urn:oid:2.16.840.1.113883.10.20.5.5.45
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
MDRO/CDI Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.142
Findings Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.182
Pathogen Ranking Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.147
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
Drug-Susceptibility Test Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.126
NHSN Comment Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01
NHSN Comment	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01
Infection Details in Late Onset Sepsis Report	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.64:2018-04-01
Death Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.120
Infection Contributed to Death Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.136
Infection-Type Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.139
Bloodstream Infection Evidence Type Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.114
Secondary Bloodstream Infection Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.160
Infection Condition Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.135
Occasion of HAI Detection Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.144
Criteria of Diagnosis Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.180

Template Title	Template Type	templateId
Criterion of Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.119
Inborn/Outborn Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.257:2018-04-01
Risk Factors Section in a LOS/Men Event (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.65:2019-04-01
Infection Risk Factors Measurement Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.137
Infection Risk Factors Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.138
Device Insertion Time and Location Procedure	entry	urn:oid:2.16.840.1.113883.10.20.5.6.122
Gestational Age at Birth Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2019-04-01
Neonatal Intensive Care Unit (NICU) Summary Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.41:2018-04-01
Summary Data Section (NICU) (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.48:2018-04-01
Summary Encounter (NICU)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.191
Summary Data Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.185
Report No Events Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01
Report No Events	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01
Outpatient Procedure Component Denominator for Same Day Outcome Measures Report	document	urn:hl7ii:2.16.840.1.113883.10.20.5.55:2019-04-01
Summary Data Section	section	urn:oid:2.16.840.1.113883.10.20.5.5.47
Summary Encounter	entry	urn:oid:2.16.840.1.113883.10.20.5.6.184
Summary Data Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.185
NHSN Comment Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01
NHSN Comment	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01
Report No Events Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01
Report No Events	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01
Outpatient Procedure Component Same Day Outcome Measures Event Report (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.54:2022-04-01

Template Title	Template Type	templateId
NHSN Comment Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01
NHSN Comment	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01
Same Day Outcome Measures Event Details Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.66:2019-04-01
Same Day Outcome Measures Organizer (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.212:2019-04-01
Same Day Outcome Measure Observation (V3)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.208:2019-04-01
Outpatient Procedure Surgical Site Infection (SSI) Event Report (V2)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.57:2022-04-01
NHSN Comment Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01
NHSN Comment	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01
Infection Details Section in an OPC SSI Report	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.69:2019-04-01
Infection-Type Observation in an OPC SSI Event	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.263:2019-04-01
Infection Condition Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.135
Criteria of Diagnosis Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.180
Criterion of Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.119
SSI Detection Method	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.261:2019-04-01
Procedure Details in an OPC SSI Event	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.265:2019-04-01
Findings Section in an OPC SSI Report	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.70:2019-04-01
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
Findings Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.182
Pathogen Ranking Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.147
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
Drug-Susceptibility Test Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.126
Prevention Process and Outcome Measures (POM) Summary Report (V4)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.43:2022-04-01
Report No Events Section	section	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
		5.5.62:2018-04-01
Report No Events	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01
Summary Data Section (POM) (V3)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2022-04-01
Summary Encounter (POM)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.193
Summary Data Observation (POM)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.192
Summary Data Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.185
Primary C. Difficile Testing Method This Quarter	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.221:2014-12-01
Inpatient Rehabilitation (IRF) Unit in Facility	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.271:2022-04-01
Inpatient Psychiatric (IPF) Unit in Facility	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.272:2022-04-01
Specialty Care Area (SCA) Summary Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.42:2018-04-01
Summary Data Section	section	urn:oid:2.16.840.1.113883.10.20.5.5.47
Summary Encounter	entry	urn:oid:2.16.840.1.113883.10.20.5.6.184
Summary Data Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.185
Report No Events Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01
Report No Events	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01
Vascular Access Type Report (VAT) Summary Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.45:2018-04-01
Summary Data Section (VAT)	section	urn:oid:2.16.840.1.113883.10.20.5.5.50
Summary Encounter (VAT)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.196
Summary Data Observation (VAT)	entry	urn:oid:2.16.840.1.113883.10.20.5.6.195
Summary Data Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.185
NHSN Comment Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01
NHSN Comment	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01
Report No Events Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01
Report No Events	entry	urn:hl7ii:2.16.840.1.113883.10.20.

Template Title	Template Type	templateId
		5.6.249:2018-04-01
Ventilator Associated Event (VAE) Report (V3)	document	urn:hl7ii:2.16.840.1.113883.10.20.5.51:2022-04-01
Findings Section in an Infection-Type Report	section	urn:oid:2.16.840.1.113883.10.20.5.545
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
MDRO/CDI Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.142
Findings Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.182
Pathogen Ranking Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.147
Pathogen Identified Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.145
Drug-Susceptibility Test Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.126
Infection Details Section in a VAE Report	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.59:2017-04-01
Death Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.120
Infection Contributed to Death Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.136
Post-Procedure Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.150
Procedure Details Clinical Statement in an Infection-Type Report	entry	urn:oid:2.16.840.1.113883.10.20.5.6.154
Infection-Type Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.139
Bloodstream Infection Evidence Type Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.114
Secondary Bloodstream Infection Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.160
Infection Condition Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.135
Occasion of HAI Detection Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.144
Criteria of Diagnosis Organizer	entry	urn:oid:2.16.840.1.113883.10.20.5.6.180
Criterion of Diagnosis Observation	entry	urn:oid:2.16.840.1.113883.10.20.5.6.119
Risk Factors Section in a VAE Report	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.60:2017-04-01
Mechanical Ventilation Initiation Act	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.244:2017-04-01

Template Title	Template Type	templateId
APRV or Related at Time of VAE Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.248:2017-04-01
NHSN Comment Section	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01
NHSN Comment	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01
COVID-19 Section (V2)	section	urn:hl7ii:2.16.840.1.113883.10.20.5.5.80:2021-01-01
NHSN COVID-19 Condition Observation (V2)	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.270:2021-01-01
Antimicrobial Susceptibility Antibiotic	entry	urn:oid:2.16.840.1.113883.10.20.5.6.176
Dialyzer Reused Observation	entry	urn:hl7ii:2.16.840.1.113883.10.20.5.6.231:2015-10-01
HAI Section Generic Constraints	section	urn:oid:2.16.840.1.113883.10.20.5.4.26

5 VALUE SETS IN THIS GUIDE

Table 545: Value Sets

Name	OID	URL
Administrative Gender (HL7 V3)	urn:oid:2.16.840.1.113883.1.11.1	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.1/expansion
Asked but Unknown and Other	urn:oid:2.16.840.1.113762.1.4.1114.17	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1114.17/expansion
Codes for Antimicrobial Resistance Option (ARO) Summary Data	urn:oid:2.16.840.1.113883.10.20.5.9.8	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.8/expansion
Codes for Antimicrobial Usage, Pharmacy (AUP) Summary Data	urn:oid:2.16.840.1.113883.10.20.5.9.9	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.9/expansion
Codes for Healthcare Personnel Influenza Vaccination (HP FLU) Summary Data	urn:oid:2.16.840.1.113883.10.20.5.9.10	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.10/expansion
Codes for Hemovigilance (HV) Summary Data	urn:oid:2.16.840.1.113883.10.20.5.9.11	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.11/expansion
Codes for Intensive Care Unit (ICU) Summary Data	urn:oid:2.16.840.1.113883.10.20.5.9.12	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.12/expansion
Codes for Neonatal Intensive Care Unit (NICU) Summary Data	urn:oid:2.16.840.1.113883.10.20.5.9.13	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.13/expansion
Codes for Outpatient Procedure Component Same Day Outcome Measures Summary Data	urn:oid:2.16.840.1.113883.10.20.5.9.32	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.32/expansion
Codes for Prevention Process and Outcome Measures (POM) Summary Data	urn:oid:2.16.840.1.113883.10.20.5.9.15	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.15/expansion
Codes for Specialty Care Area (SCA) Summary Data	urn:oid:2.16.840.1.113883.10.20.5.9.16	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.16/expansion
Codes for Vascular Access Type (Dialysis) Summary Data	urn:oid:2.16.840.1.113883.10.20.5.9.17	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.17/expansion
Ethnicity	urn:oid:2.16.840.1.114222.4.11.837	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.837/expansion
Gender Identity USCDI core	urn:oid:2.16.840.1.113762.1.4.1021.101	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1021.101/expansion
HealthcarePersonnelType	urn:oid:2.16.840.1.113883.10.20.5.9.6	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.6/expansion

Name	OID	URL
		xpansion
NHSN COVID19 Case Classification	urn:oid:2.16.840.1.113883.10.20.5.9.40	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.40/expansion
NHSN Cryoprecipitate (24)	urn:oid:2.16.840.1.114222.4.11.73.15	N/A
NHSN Cryoprecipitate/Psoralen-Treated (44)	urn:oid:2.16.840.1.114222.4.11.75.02	N/A
NHSN Cryoprecipitate/Riboflavin-Treated (45)	urn:oid:2.16.840.1.114222.4.11.75.03	N/A
NHSN Pathogen Reduced Apheresis Platelet Usage	urn:oid:2.16.840.1.113883.10.20.5.9.5	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.5/expansion
NHSN Plasma/Apheresis/Psoralen-Treated (35)	urn:oid:2.16.840.1.114222.4.11.73.26	N/A
NHSN Plasma/Apheresis/Riboflavin-Treated (36)	urn:oid:2.16.840.1.114222.4.11.73.27	N/A
NHSN Plasma/Apheresis/Total (23)	urn:oid:2.16.840.1.114222.4.11.73.14	N/A
NHSN Plasma/Whole Blood Derived/Psoralen-Treated (32)	urn:oid:2.16.840.1.114222.4.11.73.23	N/A
NHSN Plasma/Whole Blood Derived/Riboflavin-Treated (33)	urn:oid:2.16.840.1.114222.4.11.73.24	N/A
NHSN Plasma/Whole Blood Derived/Total (22)	urn:oid:2.16.840.1.114222.4.11.73.13	N/A
NHSN Platelets/Apheresis/Irradiated (19)	urn:oid:2.16.840.1.114222.4.11.73.10	N/A
NHSN Platelets/Apheresis/Irradiated or Leukocyte Reduced (21)	urn:oid:2.16.840.1.114222.4.11.73.12	N/A
NHSN Platelets/Apheresis/Leukocyte Reduced (20)	urn:oid:2.16.840.1.114222.4.11.73.11	N/A
NHSN Platelets/Apheresis/Not Irradiated or Leukocyte Reduced (18)	urn:oid:2.16.840.1.114222.4.11.73.09	N/A
NHSN Platelets/Apheresis/Psoralen-Treated (29)	urn:oid:2.16.840.1.114222.4.11.73.20	N/A
NHSN Platelets/Apheresis/Psoralen-Treated and In Plasma (46)	urn:oid:2.16.840.1.114222.4.11.75.04	N/A
NHSN Platelets/Apheresis/Psoralen-Treated and In Platelet Additive Solution (47)	urn:oid:2.16.840.1.114222.4.11.75.05	N/A

Name	OID	URL
NHSN Platelets/Apheresis/Riboflavin-Treated (30)	urn:oid:2.16.840.1.114222.4.11.7321	N/A
NHSN Platelets/Apheresis/Riboflavin-Treated and In Plasma (48)	urn:oid:2.16.840.1.114222.4.11.7506	N/A
NHSN Platelets/Apheresis/Riboflavin-Treated and In Platelet Additive Solution (49)	urn:oid:2.16.840.1.114222.4.11.7507	N/A
NHSN Platelets/Whole Blood Derived/Irradiated (14)	urn:oid:2.16.840.1.114222.4.11.7305	N/A
NHSN Platelets/Whole Blood Derived/Irradiated and Leukocyte Reduced (16)	urn:oid:2.16.840.1.114222.4.11.7307	N/A
NHSN Platelets/Whole Blood Derived/Leukocyte Reduced (15)	urn:oid:2.16.840.1.114222.4.11.7306	N/A
NHSN Platelets/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (13)	urn:oid:2.16.840.1.114222.4.11.7304	N/A
NHSN Platelets/Whole Blood Derived/Psoralen-Treated (26)	urn:oid:2.16.840.1.114222.4.11.7317	N/A
NHSN Platelets/Whole Blood Derived/Riboflavin-Treated (27)	urn:oid:2.16.840.1.114222.4.11.7318	N/A
NHSN Red Blood Cells/Apheresis/Irradiated (9)	urn:oid:2.16.840.1.114222.4.11.7300	N/A
NHSN Red Blood Cells/Apheresis/Irradiated or Leukocyte Reduced (11)	urn:oid:2.16.840.1.114222.4.11.7302	N/A
NHSN Red Blood Cells/Apheresis/Leukocyte Reduced (10)	urn:oid:2.16.840.1.114222.4.11.7301	N/A
NHSN Red Blood Cells/Apheresis/Not Irradiated or Leukocyte Reduced (8)	urn:oid:2.16.840.1.114222.4.11.7299	N/A
NHSN Red Blood Cells/Apheresis/Riboflavin-Treated (42)	urn:oid:2.16.840.1.114222.4.11.7501	N/A
NHSN Red Blood Cells/Apheresis/S-303-Treated (41)	urn:oid:2.16.840.1.114222.4.11.7500	N/A
NHSN Red Blood Cells/Whole Blood Derived/Irradiated (4)	urn:oid:2.16.840.1.114222.4.11.7295	N/A
NHSN Red Blood Cells/Whole Blood Derived/Irradiated and Leukocyte Reduced (6)	urn:oid:2.16.840.1.114222.4.11.7297	N/A
NHSN Red Blood Cells/Whole Blood Derived/Leukocyte Reduced	urn:oid:2.16.840.1.114222.4.11.7296	N/A

Name	OID	URL
(5)		
NHSN Red Blood Cells/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (3)	urn:oid:2.16.840.1.114222.4.11.7294	N/A
NHSN Red Blood Cells/Whole Blood Derived/Riboflavin-Treated	urn:oid:2.16.840.1.114222.4.11.7499	N/A
NHSN Red Blood Cells/Whole Blood Derived/S-303-Treated	urn:oid:2.16.840.1.114222.4.11.7498	N/A
NHSN Whole Blood Total (1)	urn:oid:2.16.840.1.114222.4.11.7292	N/A
NHSNAntimicrobialAgentAURPCode	urn:oid:2.16.840.1.114222.4.11.3360	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3360/expansion
NHSNASAClassCode	urn:oid:2.16.840.1.113883.13.10	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.10/expansion
NHSNBloodCollectionLocation	urn:oid:2.16.840.1.114222.4.11.7237	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7237/expansion
NHSNBloodStreamInfectionEvidenceTypeCode	urn:oid:2.16.840.1.113883.13.7	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.7/expansion
NHSNCarbaDetectType	urn:oid:2.16.840.1.114222.4.11.7241	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7241/expansion
NHSNCarbaTestMethod	urn:oid:2.16.840.1.114222.4.11.7240	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7240/expansion
NHSNCatheterTypeCode	urn:oid:2.16.840.1.114222.4.11.3185	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3185/expansion
NHSNCdiffTestMethod	urn:oid:2.16.840.1.114222.4.11.7242	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7242/expansion
NHSNClosureTechniqueCode	urn:oid:2.16.840.1.114222.4.11.6051	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.6051/expansion
NHSNContraindicationType	urn:oid:2.16.840.1.114222.4.11.7239	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7239/expansion
NHSNCriterionOfDiagnosisCode	urn:oid:2.16.840.1.114222.4.11.3195	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3195/expansion
NHSNDrugSusceptibilityFindingCode	urn:oid:2.16.840.1.113883.13.13	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.13/expansion
NHSNDrugSusceptibilityTestMethod	urn:oid:2.16.840.1.113883.10.20.5.9.4	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.4/e

Name	OID	URL
		xpansion
NHSNDrugSusceptibilityTestsCode	urn:oid:2.16.840.1.113883.13.15	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.15/expansion
NHSNEligibilityCode	urn:oid:2.16.840.1.114222.4.11.3248	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3248/expansion
NHSNEncounterTypeCode	urn:oid:2.16.840.1.113883.13.1	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.1/expansion
NHSNHealthcareServiceLocationCode	urn:oid:2.16.840.1.113883.13.19	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.19/expansion
NHSNHipReplacementCode	urn:oid:2.16.840.1.113883.13.3	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.3/expansion
NHSNInfectionConditionCode	urn:oid:2.16.840.1.114222.4.11.3196	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3196/expansion
NHSNInfectionRiskFactorsCode	urn:oid:2.16.840.1.113883.13.6	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.6/expansion
NHSNInfectionTypeCode	urn:oid:2.16.840.1.113883.13.20	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.20/expansion
NHSNInfluenzaVaccinationSetting	urn:oid:2.16.840.1.113883.10.20.5.9.7	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.7/expansion
NHSNInsertionSiteCode	urn:oid:2.16.840.1.114222.4.11.3180	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3180/expansion
NHSNKneeReplacementCode	urn:oid:2.16.840.1.113883.13.4	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.4/expansion
NHSNLastLocationEncounterTypeCode	urn:oid:2.16.840.1.113883.10.20.5.9.3	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.3/expansion
NHSNLOS/MENDischargeDisposition	urn:oid:2.16.840.1.113883.10.20.5.9.30	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.30/expansion
NHSNOccasionOfDetectionCode	urn:oid:2.16.840.1.113883.13.12	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.12/expansion
NHSNOPCProcedureCategoryCode	urn:oid:2.16.840.1.113883.10.20.5.9.34	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.34/expansion
NHSNOrganismASTCode	urn:oid:2.16.840.1.114222.4.11.3283	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3283/expansion

Name	OID	URL
NHSNPathogenCode	urn:oid:2.16.840.1.113883.13.16	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.16/expansion/20210514
NHSNPathogenCodeARO	urn:oid:2.16.840.1.113762.1.4.1190.6	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1190.6/expansion/20210514
NHSNPopulationCategoryCode	urn:oid:2.16.840.1.114222.4.11.3234	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3234/expansion
NHSNPopulationSummaryReportTypeCode	urn:oid:2.16.840.1.114222.4.11.3595	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3595/expansion
NHSNPreviousFacility	urn:oid:2.16.840.1.114222.4.11.7238	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7238/expansion
NHSNPreviousPatientLocation	urn:oid:2.16.840.1.114222.4.11.7233	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7233/expansion
NHSNProcedureCategoryCode	urn:oid:2.16.840.1.113883.13.17	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.17/expansion
NHSNReasonForInsertionCode	urn:oid:2.16.840.1.114222.4.11.3182	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3182/expansion
NHSNReportNoEventsAR	urn:oid:2.16.840.1.113883.10.20.5.9.35	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.35/expansion
NHSNReportNoEventsDialysis	urn:oid:2.16.840.1.113883.10.20.5.9.22	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.22/expansion
NHSNReportNoEventsICU	urn:oid:2.16.840.1.113883.10.20.5.9.18	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.18/expansion
NHSNReportNoEventsMDRO	urn:oid:2.16.840.1.113883.10.20.5.9.21	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.21/expansion
NHSNReportNoEventsMDROLTCF	urn:oid:2.16.840.1.113883.10.20.5.1.9.1	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.1.9.1/expansion
NHSNReportNoEventsNICU	urn:oid:2.16.840.1.113883.10.20.5.9.19	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.19/expansion
NHSNReportNoEventsOPCSameDayOutcomeMeasures	urn:oid:2.16.840.1.113883.10.20.5.9.33	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.33/expansion
NHSNReportNoEventsSCA	urn:oid:2.16.840.1.113883.10.20.5.9.20	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.20/expansion
NHSNRoleOfPerformerCode	urn:oid:2.16.840.1.114222.4.11.31	https://vsac.nlm.nih.gov/valueset

Name	OID	URL
	81	/2.16.840.1.114222.4.11.3181/expansion
NHSNRouteOfAdministrationAURP Code	urn:oid:2.16.840.1.114222.4.11.3361	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3361/expansion
NHSNSameDayOutcomeMeasure	urn:oid:2.16.840.1.114222.4.11.7214	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7214/expansion
NHSNSignificantPathogenCode	urn:oid:2.16.840.1.114222.4.11.3194	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3194/expansion
NHSNSkinPreparationCode	urn:oid:2.16.840.1.114222.4.11.3183	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3183/expansion
NHSNSpecimenTypeCode	urn:oid:2.16.840.1.114222.4.11.3249	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3249/expansion
NHSNSpinalFusionApproachCode	urn:oid:2.16.840.1.113883.13.2	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.2/expansion
NHSNSpinalFusionLevelCode	urn:oid:2.16.840.1.113883.13.11	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.11/expansion
NHSNSSIDetectionMethod	urn:oid:2.16.840.1.113883.10.20.5.9.29	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.29/expansion
NHSNSSIDetectionMethodType	urn:oid:2.16.840.1.113883.10.20.5.9.31	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.31/expansion
NHSNStaphAureusSpecificTest	urn:oid:2.16.840.1.114222.4.11.7160	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7160/expansion
NHSNStaphAureusTestResults	urn:oid:2.16.840.1.114222.4.11.6074	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.6074/expansion
NHSNStartOrContinuation	urn:oid:2.16.840.1.114222.4.11.7338	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7338/expansion
NHSNSterileBarrierCode	urn:oid:2.16.840.1.114222.4.11.3184	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3184/expansion
NHSNSummaryBloodProductUsage	urn:oid:2.16.840.1.114222.4.11.7353	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.7353/expansion
NHSNSuspectedSourceTypeCode	urn:oid:2.16.840.1.114222.4.11.6008	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.6008/expansion
NHSNTimingCode	urn:oid:2.16.840.1.114222.4.11.3247	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.3247/expansion

Name	OID	URL
		pansion
NHSNVascularAccessSiteCode	urn:oid:2.16.840.1.114222.4.11.6042	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.6042/expansion
NHSNVascularAccessTypeCode	urn:oid:2.16.840.1.114222.4.11.6007	https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.6007/expansion
NHSNVascularSpecimenCollection Site	urn:oid:2.16.840.1.113883.10.20.5.9.24	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.10.20.5.9.24/expansion
NHSNWoundClassCode	urn:oid:2.16.840.1.113883.13.9	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.13.9/expansion
NullValues_UNK_NA	urn:oid:2.16.840.1.113883.10.20.5.9.2	https://trifolia.lantanagroup.com/TerminologyManagement/ValueSet/View/2863
NullValues_UNK_OTH	urn:oid:2.16.840.1.113883.10.20.5.9.1	https://trifolia.lantanagroup.com/TerminologyManagement/ValueSet/View/2843
ONC Administrative Sex	urn:oid:2.16.840.1.113762.1.4.1	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1/expansion
ProcedureAct statusCode	urn:oid:2.16.840.1.113883.11.20.9.22	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.22/expansion
Race Category Excluding Nulls	urn:oid:2.16.840.1.113883.3.2074.1.1.3	https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.2074.1.1.3/expansion

6 CODE SYSTEMS IN THIS GUIDE

Table 546: Code Systems

Name	OID
Administrative Gender	urn:oid:2.16.840.1.113883.5.1
cdcNHSN	urn:oid:2.16.840.1.113883.6.277
CPT4	urn:oid:2.16.840.1.113883.6.12
Healthcare Provider Taxonomy (HIPAA)	urn:oid:2.16.840.1.113883.6.101
HL7ActClass	urn:oid:2.16.840.1.113883.5.6
HL7ActionCode	urn:oid:2.16.840.1.113883.5.4
HL7ActMood	urn:oid:2.16.840.1.113883.5.1001
HL7ActPriority	urn:oid:2.16.840.1.113883.5.7
HL7ActRelationshipType	urn:oid:2.16.840.1.113883.5.1002
HL7ActStatus	urn:oid:2.16.840.1.113883.5.14
HL7Confidentiality	urn:oid:2.16.840.1.113883.5.25
HL7ContextControl	urn:oid:2.16.840.1.113883.5.1057
HL7EntityClass	urn:oid:2.16.840.1.113883.5.41
HL7NullFlavor	urn:oid:2.16.840.1.113883.5.1008
HL7ParticipationFunction	urn:oid:2.16.840.1.113883.5.88
HL7ParticipationType	urn:oid:2.16.840.1.113883.5.90
HL7RoleClass	urn:oid:2.16.840.1.113883.5.110
HL7RoleCode	urn:oid:2.16.840.1.113883.5.111
HSLOC	urn:oid:2.16.840.1.113883.6.259
ICD-10-CM	urn:oid:2.16.840.1.113883.6.90
ISBT-128	urn:oid:2.16.840.1.113883.6.18
LOINC	urn:oid:2.16.840.1.113883.6.1
Media Type	urn:oid:2.16.840.1.113883.5.79
ObservationInterpretation	urn:oid:2.16.840.1.113883.5.83
ProvenanceParticipantType	urn:oid:2.16.840.1.113883.4.642.4.1131
Race & Ethnicity - CDC	urn:oid:2.16.840.1.113883.6.238
RxNorm	urn:oid:2.16.840.1.113883.6.88
SNOMED CT	urn:oid:2.16.840.1.113883.6.96
UCUM	urn:oid:1.3.6.1.4.1.12009.10.3.1
UCUM	urn:oid:2.16.840.1.113883.6.8

7 CHANGES FROM PREVIOUS VERSION

7.1 Outpatient Procedure Component Denominator for Procedure Report (V2)

Outpatient Procedure Component Denominator for Procedure Report (V2)
(urn:hl7ii:2.16.840.1.113883.10.20.5.56:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	Outpatient Procedure Component Denominator for Procedure Report	Outpatient Procedure Component Denominator for Procedure Report (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.56:2019-04-01	urn:hl7ii:2.16.840.1.113883.10.20.5.56:2022-04-01
Implied Template	HAI Single-Person Report Generic Constraints (urn:oid:2.16.840.1.113883.10.20.5.4.27)	HAI Single-Person Report Generic Constraints (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)
CONF #: 4523-30632 Modified	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.4" (CONF:4395-30632).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30632).
CONF #: 4523-30641 Modified	SHALL contain exactly one [1..1] @extension="2019-04-01" (CONF:4395-30641).	SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-30641).

7.2 HAI AUR Antimicrobial Resistance Option (ARO) Report (V6)

HAI AUR Antimicrobial Resistance Option (ARO) Report (V6)

(urn:hl7ii:2.16.840.1.113883.10.20.5.31:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	HAI AUR Antimicrobial Resistance Option (ARO) Report (V5)	HAI AUR Antimicrobial Resistance Option (ARO) Report (V6)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.31:2020-04-01	urn:hl7ii:2.16.840.1.113883.10.20.5.31:2022-04-01
Implied Template	HAI Single-Person Report Generic Constraints (urn:oid:2.16.840.1.113883.10.20.5.4.27)	HAI Single-Person Report Generic Constraints (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)
CONF #: 4523-30541 Modified	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3" (CONF:4459-30541).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30541).
CONF #: 4523-30542 Modified	SHALL contain exactly one [1..1] @extension="2020-04-01" (CONF:4459-30542).	SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-30542).

7.3 HAI Bloodstream Infection Report (BSI) (V5)

HAI Bloodstream Infection Report (BSI) (V5)

(urn:hl7ii:2.16.840.1.113883.10.20.5.32:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	HAI Bloodstream Infection Report (BSI) (V4)	HAI Bloodstream Infection Report (BSI) (V5)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.32:2021-01-01	urn:hl7ii:2.16.840.1.113883.10.20.5.32:2022-04-01
Implied Template	HAI Single-Person Report Generic Constraints (urn:oid:2.16.840.1.113883.10.20.5.4.27)	HAI Single-Person Report Generic Constraints (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)
CONF #: 4523-28308 Modified	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.1" (CONF:4475-28308).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-28308).
CONF #: 4523-28432 Modified	SHALL contain exactly one [1..1] @extension="2021-01-01" (CONF:4475-28432).	SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-28432).

7.4 HAI Central-Line Insertion Practice Numerator Report (V3)

HAI Central-Line Insertion Practice Numerator Report (V3)

(urn:hl7ii:2.16.840.1.113883.10.20.5.36:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	HAI Central-Line Insertion Practice Numerator Report (V2)	HAI Central-Line Insertion Practice Numerator Report (V3)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.36:2014-12-01	urn:hl7ii:2.16.840.1.113883.10.20.5.36:2022-04-01
Implied Template	HAI Single-Person Report Generic Constraints (urn:oid:2.16.840.1.113883.10.20.5.4.27)	HAI Single-Person Report Generic Constraints (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)
CONF #: 4523-30544 Modified	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.2.1" (CONF:1129-30544).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30544).
CONF #: 4523-30284 Modified	SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30284).	SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-30284).

7.5 HAI Evidence of Infection (Dialysis) Report (V7)

HAI Evidence of Infection (Dialysis) Report (V7)

(urn:hl7ii:2.16.840.1.113883.10.20.5.37:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	HAI Evidence of Infection (Dialysis) Report (V6)	HAI Evidence of Infection (Dialysis) Report (V7)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.37:2019-04-01	urn:hl7ii:2.16.840.1.113883.10.20.5.37:2022-04-01
Implied Template	HAI Single-Person Report Generic Constraints (urn:oid:2.16.840.1.113883.10.20.5.4.27)	HAI Single-Person Report Generic Constraints (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)
CONF #: 4523-30675 Modified	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.4" (CONF:4395-30675).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30675).
CONF #: 4523-30285 Modified	SHALL contain exactly one [1..1] @extension="2019-04-01" (CONF:4395-30285).	SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-30285).

7.6 HAI Laboratory-Identified Organism (LIO) Report (V3)

HAI Laboratory-Identified Organism (LIO) Report (V3)

(urn:hl7ii:2.16.840.1.113883.10.20.5.38:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	HAI Laboratory-Identified Organism (LIO) Report (V2)	HAI Laboratory-Identified Organism (LIO) Report (V3)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.38:2014-12-01	urn:hl7ii:2.16.840.1.113883.10.20.5.38:2022-04-01
Implied Template	HAI Single-Person Report Generic Constraints (urn:oid:2.16.840.1.113883.10.20.5.4.27)	HAI Single-Person Report Generic Constraints (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)
CONF #: 4523-30548 Modified	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.2.1" (CONF:1129-30548).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30548).
CONF #: 4523-30286 Modified	SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30286).	SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-30286).

7.7 HAI Procedure Denominator Report (V3)

HAI Procedure Denominator Report (V3)

(urn:hl7ii:2.16.840.1.113883.10.20.5.35.2:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	HAI Procedure Denominator Report (V2)	HAI Procedure Denominator Report (V3)
Oid	urn:oid:2.16.840.1.113883.10.20.5.35.2	urn:hl7ii:2.16.840.1.113883.10.20.5.35.2:2022-04-01
Implied Template	HAI Single-Person Report Generic Constraints (urn:oid:2.16.840.1.113883.10.20.5.4.27)	HAI Single-Person Report Generic Constraints (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)
CONF #: 4523-31027 Added		SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-31027).
CONF #: 4523-30310 Modified	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.1.1" (CONF:1101-30310).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30310).

7.8 HAI Single-Person Report Generic Constraints (V2)

HAI Single-Person Report Generic Constraints (V2)

(urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	HAI Single-Person Report Generic Constraints	HAI Single-Person Report Generic Constraints (V2)
Oid	urn:oid:2.16.840.1.113883.10.20.5.4.27	urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01
Description	<p>This template records the constraints for HAI single-person reports. It is used by all numerator reports covered by this guide. It is also used by the Procedure Denominator Report.</p> <p>A single-person report must conform to the Healthcare Associated Infection Report template. In addition, key data about the patient are recorded in the recordTarget element.</p> <ul style="list-style-type: none"> • A patient identifier representing the facility-assigned patient ID is required. Other identifiers for the person can also be present, such as a United States Social Security Number (id/@root = 2.16.840.1.113883.4.1), a Medicare beneficiary identifier (id/@root = 2.16.840.1.113883.4.338), or secondary patient IDs (id/@root = the appropriate facility OID for patient IDs). If there isn't an available "other" identifier, then there should not be an id present for that type of identifier. • The patient name is optional; consult the NHSN reporting protocol and requirements. • Patient gender and birthdate are required. <p>The report-specific requirements specify the encounter data to record for each single-person report type. These data always include an identifier for the reporting facility, and usually include the encounter type (inpatient or outpatient), the admission date or encounter date, and the facility unit identifier and</p>	<p>This template records the constraints for HAI single-person reports. It is used by all numerator reports covered by this guide. It is also used by the Procedure Denominator Report.</p> <p>A single-person report must conform to the Healthcare Associated Infection Report template. In addition, key data about the patient are recorded in the recordTarget element.</p> <ul style="list-style-type: none"> • A patient identifier representing the facility-assigned patient ID is required. Other identifiers for the person can also be present, such as a United States Social Security Number (id/@root = 2.16.840.1.113883.4.1), a Medicare beneficiary identifier (id/@root = 2.16.840.1.113883.4.338), or secondary patient IDs (id/@root = the appropriate facility OID for patient IDs). If there isn't an available "other" identifier, then there should not be an id present for that type of identifier. • The patient name is optional; consult the NHSN reporting protocol and requirements. • Patient gender and birthdate are required. <p>The report-specific requirements specify the encounter data to record for each single-person report type. These data always include an identifier for the reporting facility, and usually include the encounter type (inpatient or outpatient), the admission date or encounter date, and the facility unit identifier and</p>

Change	Old	New
	<p>type.</p> <p>Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.</p>	<p>type.</p> <p>**TODO** Add Gender Identity and Birth Sex text if we decide to keep that section in this template</p> <p>Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.</p>
CONF #: 4523-22431 Added		SHALL contain exactly one [1..1] component (CONF:4523-22431).
CONF #: 4523-22432 Added		This component SHALL contain exactly one [1..1] structuredBody (CONF:4523-22432).
CONF #: 4523-22433 Added		This structuredBody SHALL contain at least one [1..*] component (CONF:4523-22433) such that it
CONF #: 4523-22434 Added		SHALL contain exactly one [1..1] section (CONF:4523-22434).
CONF #: 4523-30795 Added		SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-30795).

7.9 HAI Surgical Site Infection Report (SSI) (V4)

HAI Surgical Site Infection Report (SSI) (V4)

(urn:hl7ii:2.16.840.1.113883.10.20.5.33.2:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	HAI Surgical Site Infection Report (SSI) (V3)	HAI Surgical Site Infection Report (SSI) (V4)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.33.2:2021-01-01	urn:hl7ii:2.16.840.1.113883.10.20.5.33.2:2022-04-01
Implied Template	HAI Single-Person Report Generic Constraints (urn:oid:2.16.840.1.113883.10.20.5.4.27)	HAI Single-Person Report Generic Constraints (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)
CONF #: 4523-30312 Modified	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.1" (CONF:4475-30312).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30312).
CONF #: 4523-30868 Modified	SHALL contain zero or one [0..1] @extension="2021-01-01" (CONF:4475-30868).	SHALL contain zero or one [0..1] @extension="2022-04-01" (CONF:4523-30868).

7.10 HAI Urinary Tract Infection Numerator Report (UTI) (V3)

[HAI Urinary Tract Infection Numerator Report \(UTI\) \(V3\)](#)

[\(urn:hl7ii:2.16.840.1.113883.10.20.5.34:2022-04-01\)](#)

Change	Old	New
Status	Published	Draft
Name	HAI Urinary Tract Infection Numerator Report (UTI) (V2)	HAI Urinary Tract Infection Numerator Report (UTI) (V3)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.34:2021-01-01	urn:hl7ii:2.16.840.1.113883.10.20.5.34:2022-04-01
Implied Template	HAI Single-Person Report Generic Constraints (urn:oid:2.16.840.1.113883.10.20.5.4.27)	HAI Single-Person Report Generic Constraints (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)
CONF #: 4523-28320 Modified	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.1" (CONF:4475-28320).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-28320).
CONF #: 4523-30873 Modified	SHALL contain exactly one [1..1] @extension="2021-01-01" (CONF:4475-30873).	SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-30873).

7.11 Late Onset Sepsis/Meningitis Denominator (LOS/Men Denom) Report (V2)

[Late Onset Sepsis/Meningitis Denominator \(LOS/Men Denom\) Report \(V2\)](#)

[\(urn:hl7ii:2.16.840.1.113883.10.20.5.58:2022-04-01\)](#)

Change	Old	New
Status	Published	Draft
Name	Late Onset Sepsis/Meningitis Denominator (LOS/Men Denom) Report	Late Onset Sepsis/Meningitis Denominator (LOS/Men Denom) Report (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.58:2019-04-01	urn:hl7ii:2.16.840.1.113883.10.20.5.58:2022-04-01
Implied Template	HAI Single-Person Report Generic Constraints (urn:oid:2.16.840.1.113883.10.20.5.4.27)	HAI Single-Person Report Generic Constraints (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)
CONF #: 4523-30703 Modified	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.4" (CONF:4395-30703).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30703).
CONF #: 4523-30711 Modified	SHALL contain exactly one [1..1] @extension="2019-04-01" (CONF:4395-30711).	SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-30711).

7.12 Late Onset Sepsis/Meningitis Event (LOS) Report (V3)

Late Onset Sepsis/Meningitis Event (LOS) Report (V3)

(urn:hl7ii:2.16.840.1.113883.10.20.5.53:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	Late Onset Sepsis/Meningitis Event (LOS) Report (V2)	Late Onset Sepsis/Meningitis Event (LOS) Report (V3)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.53:2019-04-01	urn:hl7ii:2.16.840.1.113883.10.20.5.53:2022-04-01
Implied Template	HAI Single-Person Report Generic Constraints (urn:oid:2.16.840.1.113883.10.20.5.4.27)	HAI Single-Person Report Generic Constraints (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)
CONF #: 4523-30745 Modified	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.4" (CONF:4395-30745).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30745).
CONF #: 4523-30973 Modified	SHALL contain exactly one [1..1] @extension="2019-04-01" (CONF:4395-30973).	SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-30973).

7.13 Outpatient Procedure Component Same Day Outcome Measures Event Report (V2)

Outpatient Procedure Component Same Day Outcome Measures Event Report (V2)
(urn:hl7ii:2.16.840.1.113883.10.20.5.54:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	Outpatient Procedure Component Same Day Outcome Measures Event Report	Outpatient Procedure Component Same Day Outcome Measures Event Report (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.54:2019-04-01	urn:hl7ii:2.16.840.1.113883.10.20.5.54:2022-04-01
Implied Template	HAI Single-Person Report Generic Constraints (urn:oid:2.16.840.1.113883.10.20.5.4.27)	HAI Single-Person Report Generic Constraints (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)
CONF #: 4523-30985 Added		This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:4523-30985).
CONF #: 4523-30986 Added		This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime (CONF:4523-30986).
CONF #: 4523-30987 Added		This encompassingEncounter SHALL contain exactly one [1..1] code (CONF:4523-30987).
CONF #: 4523-30988 Added		SHALL contain exactly one [1..1] component (CONF:4523-30988).
CONF #: 4523-30989 Added		This component SHALL contain exactly one [1..1] structuredBody (CONF:4523-30989).
CONF #: 4523-30990 Added		This structuredBody SHALL contain exactly one [1..1] component (CONF:4523-30990) such that it
CONF #: 4523-30991 Added		SHALL contain exactly one [1..1] templateId (CONF:4523-30991) such that it
CONF #: 4523-30992 Added		SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30992).
CONF #: 4523-30993 Added		This low SHALL contain exactly one [1..1] @value (CONF:4523-30993). Note: Admission Date
CONF #: 4395-3 Removed	This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:4395-3).	

Change	Old	New
CONF #: 4395-4 Removed	This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime (CONF:4395-4).	
CONF #: 4395-9 Removed	This encompassingEncounter SHALL contain exactly one [1..1] code (CONF:4395-9).	
CONF #: 4395-10 Removed	SHALL contain exactly one [1..1] component (CONF:4395-10).	
CONF #: 4395-11 Removed	This component SHALL contain exactly one [1..1] structuredBody (CONF:4395-11).	
CONF #: 4395-12 Removed	This structuredBody SHALL contain exactly one [1..1] component (CONF:4395-12) such that it	
CONF #: 4395-18 Removed	SHALL contain exactly one [1..1] templateId (CONF:4395-18) such that it	
CONF #: 4395-19 Removed	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.4" (CONF:4395-19).	
CONF #: 4395-20 Removed	This low SHALL contain exactly one [1..1] @value (CONF:4395-20). Note: Admission Date	
CONF #: 4523-27 Modified	SHALL contain exactly one [1..1] @extension="2019-04-01" (CONF:4395-27).	SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-27).

7.14 Outpatient Procedure Surgical Site Infection (SSI) Event Report (V2)

Outpatient Procedure Surgical Site Infection (SSI) Event Report (V2)

(urn:hl7ii:2.16.840.1.113883.10.20.5.57:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	Outpatient Procedure Surgical Site Infection (SSI) Event Report	Outpatient Procedure Surgical Site Infection (SSI) Event Report (V2)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.57:2019-04-01	urn:hl7ii:2.16.840.1.113883.10.20.5.57:2022-04-01
Implied Template	HAI Single-Person Report Generic Constraints (urn:oid:2.16.840.1.113883.10.20.5.4.27)	HAI Single-Person Report Generic Constraints (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)
CONF #: 4523-46 Modified	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.4" (CONF:4395-46).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-46).
CONF #: 4523-54 Modified	SHALL contain exactly one [1..1] @extension="2019-04-01" (CONF:4395-54).	SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-54).

7.15 Prevention Process and Outcome Measures (POM) Summary Report (V4)

Prevention Process and Outcome Measures (POM) Summary Report (V4)
(urn:hl7ii:2.16.840.1.113883.10.20.5.43:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	Prevention Process and Outcome Measures (POM) Summary Report (V3)	Prevention Process and Outcome Measures (POM) Summary Report (V4)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.43:2018-04-01	urn:hl7ii:2.16.840.1.113883.10.20.5.43:2022-04-01
CONF #: 4523-31026 Added		Preferred document title: "Prevention Process and Outcome Measures (POM) Monthly Monitoring". SHALL contain exactly one [1..1] title (CONF:4523-31026).
CONF #: 3357-30868 Removed	Preferred document title: "Prevention Process and Outcome Measures (POM) Monthly Monitoring". SHALL contain exactly one [1..1] title (CONF:3357-30868).	
CONF #: 4523-30550 Modified	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-30550).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-30550).
CONF #: 4523-30476 Modified	SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30476).	SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-30476).

7.16 Ventilator Associated Event (VAE) Report (V3)

Ventilator Associated Event (VAE) Report (V3)

(urn:hl7ii:2.16.840.1.113883.10.20.5.51:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	Ventilator Associated Event (VAE) Report (V2)	Ventilator Associated Event (VAE) Report (V3)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.51:2021-01-01	urn:hl7ii:2.16.840.1.113883.10.20.5.51:2022-04-01
Implied Template	HAI Single-Person Report Generic Constraints (urn:oid:2.16.840.1.113883.10.20.5.4.27)	HAI Single-Person Report Generic Constraints (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.4.27:2022-04-01)
CONF #: 4523-113 Modified	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.1" (CONF:4475-113).	SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.4.2" (CONF:4523-113).
CONF #: 4523-123 Modified	SHALL contain exactly one [1..1] @extension="2021-01-01" (CONF:4475-123).	SHALL contain exactly one [1..1] @extension="2022-04-01" (CONF:4523-123).

7.17 Risk Factors Section in an Evidence of Infection (Dialysis) Report (V3)

Risk Factors Section in an Evidence of Infection (Dialysis) Report (V3)

(urn:hl7ii:2.16.840.1.113883.10.20.5.5.37:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	Risk Factors Section in an Evidence of Infection (Dialysis) Report (V2)	Risk Factors Section in an Evidence of Infection (Dialysis) Report (V3)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.5.37:2015-10-01	urn:hl7ii:2.16.840.1.113883.10.20.5.5.37:2022-04-01
Description	In an EOID Report, the Risk Factors Section contains at least one Vascular Access Type Observation for each value in the NHSNVascularAccessTypeCode Value Set. Additional observations record whether a vascular access type other than those listed is present and whether or not the patient's dialyzer is reused.	In an EOID Report, the Risk Factors Section contains at least one Vascular Access Type Observation for each value in the NHSNVascularAccessTypeCode Value Set. Additional observations record whether a vascular access type other than those listed is present and whether or not the patient is a maintenance hemodialysis patient.
CONF #: 1202-28365 Removed	SHALL contain exactly one [1..1] entry (CONF:1202-28365) such that it	
CONF #: 1202-28366 Removed	SHALL contain exactly one [1..1] observation (CONF:1202-28366).	

7.18 Summary Data Section (POM) (V3)

Summary Data Section (POM) (V3) (urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2022-04-01)

Change	Old	New
Status	Published	Draft
Name	Summary Data Section (POM) (V2)	Summary Data Section (POM) (V3)
Oid	urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2014-12-01	urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2022-04-01
Description	<p>The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.</p> <p>The POM Summary report typically reports data for an in-facility location, but under some circumstances the NHSN protocol also requires facility-wide data. Use one Summary Encounter (POM) to report the data for the in-facility location and a separate Summary Encounter (POM) to report the facility-wide data. For facility-wide reporting, at the end of each quarter, the NHSN protocol requires the primary C. difficile testing method used most often.</p>	<p>The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.</p> <p>The POM Summary report typically reports data for an in-facility location, but under some circumstances the NHSN protocol also requires facility-wide data. Use one Summary Encounter (POM) to report the data for the in-facility location and a separate Summary Encounter (POM) to report the facility-wide data. For facility-wide reporting, at the end of each quarter, the NHSN protocol requires the primary C. difficile testing method used most often. This section also contains information about whether the facility contains CMS-certified Inpatient Rehabilitation (IRF) and/or Inpatient Psychiatric (IPF) units.</p>
CONF #: 4523-31022 Added		Required per NHSN Protocol only if location is facility-wide and month is March, June, September, or December. SHOULD contain zero or one [0..1] entry (CONF:4523-31022) such that it
CONF #: 4523-31023 Added		SHALL contain exactly one [1..1] observation (CONF:4523-31023).
CONF #: 4523-31024 Added		Required per NHSN Protocol only if location is facility-wide and month is March, June, September, or

Change	Old	New
		December. SHOULD contain zero or one [0..1] entry (CONF:4523-31024) such that it
CONF #: 4523-31025 Added		SHALL contain exactly one [1..1] observation (CONF:4523-31025).