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Exported Sep 09, 2020 at 12:58 PM

HL7 FHIR eReferral Workstream



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Added by Tim Berezny • Updated Feb 19, 2019 at 11:21 AM

Business Context

This page contains proposed updates to the eReferral spec in response to the CHRIS/HSSO spec harmonization process, as of Nov 2019. Spec writers are encouraged to put proposed changes in here before adding into simplifier.

Duplicate Data in FHIR Resources

[] New | [] UpdateState: [] Draft | [] Ready for Review | [] Approved

One characteristic that implementers often find unintuitive about FHIR is that the same data is often duplicate among multiple resources, rather than be normalized. For example, the Patient is referenced from ServiceRequest and Task and Appointment resources, which may all be included in the same bundle. This is because FHIR is designed as a data exchange format and not a data storage format. When designing exchange formats, you almost always end up choosing robustness and stability (i.e., redundant data) over efficiency.

Learn more about [using FHIR as a data storage format here](#).

When there are redundant fields that represent duplicate data, it is expected that the data would be the same. This specification does not specify where priority is when redundant data fields differ, it is recommended to reject the payload in its entirety. Some examples where data is expected to match include (but are not limited to):

- **Patient** across ServiceRequest, Task, Appointment, Communication, DocumentReference
- **ServiceRequest** across Task, Communication, Appointment
- **PractitionerRole** across Service, ServiceRequest.requester and MessageHeader.author

Handling Clinical Resources & Un-profiled Data Elements

[] New | [] UpdateState: [] Draft | [] Ready for Review | [] Approved

The initial focus of this implementation guide is on the *workflow* of eReferral, rather than clinical data associated with eReferrals (e.g., Medication/ Allergies, Observation resources). The intention is that the clinical resources will be profiled in the future releases of eReferral implementation guide. In the interim, if there is a need for implementers to profile specific clinical resources the expectation is to collaborate and contribute those profiles to this implementation guide for broad use.

Otherwise, there are four options for handling data elements that are not mapped to an existing or newly developed profile:

1. Convert into a human-readable text format and included in the **ServiceRequest.note** annotation element.
Use this approach when inbound ad-hoc data can be easily formatted into a text-friendly format. This is the simplest method.
2. Include the data in a **QuestionnaireResponse** resource, which will be included in the initial referral submission bundle, where QuestionnaireResponse.basedOn points to the referral.
Use this approach when it is possible to structure the inbound data in a way that is more computable than a text format.
3. Include the data in a **DocumentReference** resource.
This method is useful when the source data starts as a document format already.
4. Include the data in a **Communication** resource.
This method is similar to method 1 where data is in a text-friendly format, but is send in communication instead of a serviceRequest note. This is generally a method of last resort and discouraged from use, but is technically viable.

Idea: Add 'why' to options 1-4.

If a project requires net new resource(s) that are not included in this provincial eReferral iGuide and cannot be handled via any of the above options, the project should propose additional profile(s) to supplement the provincial eReferral iGuide, and work with the eReferral workstream to add the new requirements into the provincial eReferral iGuide if there is a general applicability to the eReferral ecosystem.

Routing Options (Extension)

New | Update

State: Draft | Ready for Review | Approved

Some referral processes may ask the referrer to provide some data that impacts the receiver's automated referral processing rules. The rules for how a receiver processes their referrals can be unique to the receiver. Some examples include routing based on:

- The type of referrer (from the hospital, primary care, out of province, etc...)
- The patient's Postal Code FSA (e.g., K8N, L0L, etc...)
- The first letter of the patient's last name (e.g., A-J, K-Z)

To handle this, use the "Routing Options" extension, which is included in both the ServiceRequest AND MessageHeader (for add-service-request) resources. By also including the extension in the MessageHeader, it makes it easier for implementers to find the key routing-related data fields without needing to dig further into the referral payload.

Future Development: When the eReferral process is combined with a service directory, the directory must be able to publish the valueSet of referral options that are available for a selected service.

note: the actual extension should be listed elsewhere in the specification. It will be 0..*. Also, can an extension expert please review this structure.

NOTE: THE ACTUAL EXTENSION DOES NOT BELONG IN THE BUSINESS RULES SECTION

```
"extension": [
  {
    "url": "http://www.baseurl.com/xyz/fhir-extension-routing-options",
    "valueCodeableConcept": {
      "coding": [
        {
          "code": "self",
          "display": "Patient Self Referral"
        }
      ],
      "text": "Patient Self Referral"
    }
  }
]
```

Note: Remove Note & extension from here and make it codeable concept in MessageHeader extension

Gender, Birth Sex & Gender Identity

[] New | [] Update

State: [] Draft | [] Ready for Review | [] Approved

Patient.gender is to be used to specify the observed patient gender at the time of the referral (regardless of the gender presentation at birth). This is also referred to as "administrative gender", which is the gender that the patient is considered to have for administration and record keeping purposes. This property is often used as an input to patient matching algorithms.

Due to its importance in patient matching algorithms, gender is a mandatory element. In the case where a referral does not need to know gender, set "Patient.gender" = "unknown"

Note that the [FHIR Patient resource](#) documentation discusses patient.gender in depth.

Regarding more detailed tracking of gender identity there are ongoing discussions in the standards community, this implementation guide is waiting on a community consensus. If more detailed gender values are required, an implementer may consider using the FHIR [patient-genderIdentity extension](#). To specify birth sex, consider using the [US Core birthSex extension](#) or the CIHI IRRS FHIR Implementation Guide.

Patient Present Location (Extension)

State: Draft | Ready for Review | Approved

Sometimes a referral needs to communicate where the patient is at the time of the referral (e.g., in Ward X of Hospital Y), which may be different from the patient's home address. To communicate this, use the *****patient-presentLocation (needs definition)***** extension, which references a Location resource.

Present location can be nested using Location.partOf to communicate locations with multiple levels, e.g., Location.partOf > Location for WardX > HospitalY.

PUT PROPOSED EXAMPLE EXTENSION HERE

Note: ServiceRequest -

1. add extension PatientPresentLocation with reference to Location resource - 0..1 MS = true
2. referralSourceType - rename to RoutingOptions (codeableconcept - value set - extensible and bind it to 7.1 Referral Source Types with 3 values - EMS, DR, CSA, MHA & IRH) and also add it to MessageHeader root level as well - 2 places) 0..* MS = true

Add "Referral Source Type -" to all values e.g.

MHA = Referral Source Type - Mental Health & Addictions

Request Authorizer vs. Submitter

New | Update

State: Draft | Ready for Review | Approved

Sometimes the person who *authorizes* a referral can be different from the person who *submits* it (e.g., a hospital physician authorizes a referral that is submitted by a discharge planner). In this scenario:

- the referral *authorizer* is captured by ServiceRequest.requester, and may also be mapped onto MessageHeader.author when submitting the referral.
- the referral *submitter* is captured by MessageHeader.sender, which upon message receipt is then mapped by the receiving system onto Task.requester.

For subsequent messages in the referral lifecycle (e.g., adding an appointment, updating the status, etc.), the MessageHeader.author will continue to be used to indicate the authorizer, and MessageHeader.sender will indicate who sent it.

In the case where authorizer and submitter are the same, only `MessageHeader.author` is needed (`MessageHeader.sender` can be omitted).

Patient Self Referral

New | Update

State: Draft | Ready for Review | Approved

To indicate that a referral is a self-referral initiated by the patient, make the `ServiceRequest.requester` element reference the same Patient resource as is referenced in `ServiceRequest.subject`.

Note: This version of the iGuide only supports the above mentioned behavior, the detailed business rules will be included in the future release. It is not necessarily expected to be supported by the implementers of this iGuide.

Requisition / Multiple Connected Referrals

New | Update

State: Draft | Ready for Review | Approved

When multiple connected referrals are made simultaneously (e.g., 3 home care services after discharge from hospital to home, multiple lab tests such as blood work and urinalysis in a single requisition, etc...), they can all be submitted in the same *add-service-request*. This is known as a "requisition" (in `ServiceRequest` resource). There is some special handling to consider for requisitions.

REQUISITION IDENTIFIER: Each service request in the *add-service-request* message will be connected via the "`ServiceRequest.requisition`" element with a common identifier. The requisition identifier must be included in all future/subsequent `MessageHeaders` related to this referral, in the `referralIdentifier` extension.

COMMON DATA: Note that it is expected that duplicate common elements would have common values, e.g., all service requests should

- have the same patient
- have the same submitter,
- have a target `ServiceRequest` performer pointing to a `HealthcareService` (or `ProviderRole`) from a single organization

Some other fields are optionally the same depending on the use case. For example:

- Reason for referral (i.e., `reasonCode.text`) may be duplicated among all related referrals or may differ.

COMMUNICATIONS: If there is a communication that is related to the entire requisition, the communication should have Communication.basedOn reference all of the service requests within the requisition.

Tracking Tasks

[] New | [✓] Update <-- replace section currently titled "Referral Status")

State: [] Draft | [] Ready for Review | [✓] Approved

When there are tasks to be completed in association with the referral process, use the Task resource to track and communicate the progress of that activity.

Important Note: "Process Request" is required for processing the status of referrals. However, the other task codes described are in their early conceptual phase and are not yet fully detailed in this iGuide, but will be included with more detail in a future version.

Each task has a code that indicates some common referral related tasks as follows:

- **Process Request** - Due to limitations with the FHIR ServiceRequest.status field, the *Task* resource is used to track the status of a ServiceRequest. Task.status tracks the overall status of the referral (draft | requested | received | accepted | etc...). Referral targets may also have their own custom statuses as defined by their internal process flow (e.g., waiting for manager approval), which can be communicated via Task.businessStatus.text, or use one of the common values in the extensible codeset published with this iGuide. A task with this code **MUST** be added to every referral by the *target* system on receipt of the referral. The task is updated by the provider, and the updates are communicated to the requester in the notify-update-status message or notify-update-service-request.
- **RFI** - This task is used to communicate that a "Request for Information" has been issued to the referral requester (from the referral provider). The status of the task updated by the requested, and sent back to the provider with a communication.
- **Data Correction** - Sometimes a requester sends out-of-date patient information to a provider. The provider may have more accurate information and wish to provide it back to the requester, advising them to update their own data set. This task can be created by the provider but would be updated and completed by the requester, who would then send the task back to the provider to inform them that the task was complete.
- **General** - A "General" task is an ad-hoc task whose meaning is specified as text in in Task.description (e.g., "Contact supervisor for final approval").

Note that when processing a task, it is the responsibility of the system that performs the task to update its status, and communicate that change back to the other party:

--- (code for the valueset section)

process-request (Process Request) - "Primary task associated with tracking the status of a service request"

request-for-information (Request for Information for Requester): "Request for more information Information to be completed by the referral requester"

general (General Task): " General ad-hoc tasks that for a referral detailed in Task.description (e.g., Contact supervisor for final approval)

data-correction : Providing up-to-date information of patient records/referral information (generally is from provider to the requester)

Service Request Identifier Handling

Tim to update - refer 4.3 Resource Identifiers of HSSO v0.18 spec

- expansion of serviceRequest.requestIdentifier extension

Include ServiceRequest Identifiers in all subsequent messages

New | Update

State: Draft | Ready for Review | Approved

Any number of identifiers can be submitted with a new referral in the ServiceRequest.identifier element. Also, a single ServiceRequest.requestion can be submitted to indicate connected referrals. All future messages after the initial add-service-request message (e.g., notify-add-appointment, notify-update-status) MUST include both of these identifiers in the MessageHeader.referralIdentifier extension.

Including these identifiers in all messages has a number of benefits:

- An RMS source can track a referral with its own internal IDs
- A referral that passes through multiple systems can be tracked, with more identifiers added to the ServiceRequest along the way

Specifying a Service

New | Update

State: Draft | Ready for Review | Approved

Although this iGuide does not profile a health service directory or provider registry, a directory/registry of some sort would need to provide a reference value for ServiceRequest.performer element, which specifies the service requested.

Every referral must specify a target service via ServiceRequest.performer, pointing to either a HealthcareService or PractitionerRole. This is typically shared as a reference to an externally hosted URL, which uniquely identifies this service. The meaning of this URL should be known by the RMS target, as a service that it can process an eReferral for.

In addition, ServiceRequest.code can be used to further define a specific procedure under a service. For example:

- performer = Orthopaedic Surgeon, code=Knee Surgery
- performer = Meals on Wheels, code = Frozen Meals

A service directory would also be required to specify what codes are available for a given HealthcareService or PractitionerRole.

ITEMS BELOW HERE ARE PLACEHOLDERS

Health Card Number (Extension)

New | Update

State: Draft | Ready for Review | Approved

EHO Please put something here - Radhika

- comment: Version code extension

- comment: required (hcn-absent-reason extension)

- comment: patient matching - HCN used in patient matching algorithm

Comments & Events



John Wills

Wasn't sure where to put these so have attached word docs based on the eHO template.

1. Preamble to Use Cases
2. Basic Referral to Service
3. Advanced Referral to Service including appointment

Feel free to modify or remove #1 to fit the IG approach. Note that it assumes the HSSO use case to central intake will also be published at this time

Be aware that 2 & 3 are just drafts as I wait for feedback from the SCA program business folks.

Mar 06, 2019 at 2:44 PM · Notified 1 person



John Wills



UseCasePreamble.docx 29 KB • [Download](#)



ReferralToServiceWithAppointment.docx 42.4 KB • [Do...](#)



ReferralToService.docx 31.6 KB • [Download](#)

Mar 06, 2019 at 2:45 PM · Notified 1 person



John Wills
Use Cases Introduction

This Implementation Guide is intended to cover use cases for many different referral care paths. As eReferral Care Paths are defined and implemented they can be characterised by repeating patterns based on both the underlying technology and the referral workflow. This guide describes the technical building blocks to support these patterns, including functionality for sharing documents, reporting status back to the referral originators, and messaging between the participants. The three use cases described here are example of three patterns:

1. **Basic Referral Directly to a Service**, in which a referral is sent directly to a specific health service described in a shared Health Services Directory.
2. **Basic Referral to Central Intake**, in which a referral is sent directly a Central Intake Service described in a shared Health Services Directory. The Central Intake Service will assess the referral request and forward as appropriate to downstream service providers. The types of information returned to the originator depend on the pathway and actors involved in the end-to-end processing of the referral.
3. **Advanced Referral Directly to a Service**, in which, similar to pattern 1, a referral is sent directly to a Service described in a shared Health Services Directory. In this pattern however, the health service information and requested data noted in the Health Services Directory can be supplemented in real time with service-specific clinical decision support information and additional data requirements – such as available appointment slots - to support the request and enhance the business process.

Mar 07, 2019 at 11:23 AM · Notified 1 person



John Wills
eReferral Directly to Service

Table-Use Case #1: Referral to Service

Jane Doe is an independent senior who lives alone. She has had a recent injury that resulted in an ER visit, and has a follow-up appointment with her family doctor, Dr Jones who notices her appearance is not as crisp as usual. Jane admits she is struggling with keeping up with laundry and other chores due to her injury and Dr Jones believes she would benefit with some housekeeping services. He is a busy physician with one secretary who is kept busy answering the phone most of the day. He wants to quickly search “housekeeping”, pick a community service close to Jane and send a referral. Dr. Jones knows from previous experience that this referral will not get lost like a fax, and he can expect an update on the request via his email and within the patient record.

Dr. Jones initiates a search for the service from his EMR and, after selecting a housekeeping service appropriate to Jane, he is presented with a form with some of the information already automatically filled in with data from his EMR. He completes the form and clicks Submit to send the referral request details to Caredove, the Service Providers Referral Management System (RMS).

Caredove notifies April, the Service Provider representative, of the incoming request and also sends an eMail to Jane (if eMail information is part of the request). April contacts Jane using her preferred method of communication and arranges the appropriate services. Dr Jones' EMR is updated that Jane has had services set-up, and with their on-going status.

| Step | Description

- | 1. | Patient visits Primary Care Physician (PCP) as a follow-up from an ER encounter
- | 2. | Upon consultation, the Patient and PCP agree that the Patient would benefit from in-home housekeeping services.
- | 3. | PCP searches for and selects an appropriate service from a Services Catalogue, which is integrated with the EMR.
- | 4. | PCP completes and submits the appropriate form to the Service Providers Referral Management System. Some of the data in the form has been automatically filled-in from the integrated EMR.
- | 5. | The Service Provider is notified of the incoming referral by their Referral Management System and contacts the patient to arrange housekeeping services
- | 6. | PCP is notified in their EMR of the on-going status of the housekeeping service

Alternate Flows:

- If the Service Provider is unable to provide the requested services, this status is noted in the Referral Management System, and automatically forwarded to the PCP EMR
- If the patient declines the service, this status is noted in the Referral Management System, and automatically forwarded to the PCP EMR

Assumptions

- PCP EMR is integrated with Referral Management System

Mar 07, 2019 at 11:24 AM · Notified 1 person



John Wills
eReferral with Advanced Business Logic

Table-Use Case #2: Referral to Service with Booked Appointment

John Doe is a complex senior patient who lives alone. He has a Nurse Practitioner who is working very closely with him with both medical and social issues. John could use some exercise, but really the NP wants to give him a reason to leave his home and socialize. She suggests Gentle Exercise classes, and he begrudgingly agrees. The NP knows that if left up to him, he will not pursue this further, so she wants to send him home with a day, time and location for at least one class. She is confident that the referral recipient will get all the information they need, pulled from her EMR, and together they find a location, date and time that will work for him. The NP is willing and able to sign him up for his class and complete all the necessary details in the sign-up form. Afterwards she prints off what he needs to take home, and also knows that an email will be waiting for him when he gets home. She is happy that she does not need to duplicate the information from the referral in his patient record as this has automatically updated for her in her EMR.

The community service provider is notified that John has signed up for this specific class and is able to take appropriate action.

| Step | Description

- | 1. | Patient visits Nurse Practitioner (NP) as a follow-up from previous discussions.
- | 2. | Upon consultation, the Patient and NP agree that the Patient would benefit from a structured exercise program.
- | 3. | The NP searches for and selects an appropriate Exercise Program from a Services Catalogue, which is integrated with the EMR and with the NP's Referral Management System (RMS).
- | 4. | The NP completes and submits the first part of an appropriate form, provided by the NP's RMS for the selected service, to the Service Provider's Referral Management System (RMS). Part one of the form is based on the service details in the Services Catalogue, and some of the data in the form has been automatically filled-in from the integrated EMR.
- | 5. | The Service Provider's RMS immediately provides the second part of the form for the Patient and NP to complete. Part 2 of the form includes real-time information from the service provider, such as available appointment slots, and other service-specific details such as clinical decision support information and additional data requirements that may not have been included in the more generic Service Catalogue information. In consultation with the Patient the NP selects an appointment date, completes Part 2 of the form and submits it.
- | 6. | The NPs integrated RMS informs the Patient by eMail [\[JW1\]](#) that the referral has been sent to the Exercise Program Service Provider, and the Service Provider's RMS provides the Patient with the appropriate appointment information along with a link to change the date if needed.
- | 7. | The Service Provider is notified of the incoming referral by their RMS, the appointment date, and that the Patient has already accepted to appointment date.

| 8. | The NP is automatically updated in both their EMR and their integrated RMS of status changes related to the referral to the Exercise Program.

Alternate Flows:

- If the Service Provider is unable to provide the requested services, this is noted in Part 2 of the form, the NP's RMS, and in the integrated EMR
- If the Patient cancels the service, this status is noted in the NP's RMS, and in the integrated EMR

[\[JW1\]](#) Confirm who sends which eMails

Mar 07, 2019 at 11:25 AM · Notified 1 person



ion moraru

Use Case for multiple ServiceRequest entries in the same Bundle and eReferral workflow

Main workflow:

1. When PCP referred patients to HCC they previously used a paper form which contained multiple services listed.
2. PCP will select one or more services listed on the paper form and fax it to the HCC central intake.
3. The intake care coordinators received the referral form and created a referral profile for the patient.
4. Once registered the patient goes through an HCC assessment process to determine eligibility for HCC services.
5. Once the assessment has been completed, based on the assessment outcomes, the care coordinator determines patient's eligibility for the services requested and possibly other services (not requested but necessary).
6. If the patient is eligible for at least one service a service plan would be created for the patient and services would be provisioned as required.
7. Ideally the HCC care coordinators communicate the service outcomes back to PCP.

For the purpose of an eReferral you could image source and target referral system implementing the paper flow with a referral Bundle containing multiple ServiceRequest entries for the same Patient resources.

In scope for HCC eReferral the communication of service plans and referral outcomes is a mandatory requirement.

The main referral workflow for HCC has to account for other alternate flows.

AF1 - Alternate Flow - RFI

Upon receiving the initial referral HCC determines more information is required because

a Home Assessment form (issued by MOH) was not attached to the referral.

An RFI request is issued by the target system to the eReferral source system to notify PCP of the missing information.

PCP receives and reviews the RFI request from HCC intake and decides to update the referral with an attached Home Assessment form (the document attachment could be physically attached to the Bundle or just referred to using a DocumentReference resource).

HCC intake care coordinator receives the updated bundle including the document resource and processes the referral to completion using the remaining steps in the main workflow.

AF2 - Alternate Flow - Referral Updates

After submitting the initial referral PCP determines one of the 3 ServiceRequest entries is no longer required.

PCP updates the initial referral bundle to remove one service and commits the update in their EMR/Referral System.

HCC intake care coordinator receives the updated bundle and processes the referral to completion using the remaining steps in the main workflow based on the modified requests.

This alternate flow can have an alternate of its own if PCP removes one of the initial services and adds a new ServiceRequest to the bundle.

AF2.1 - Alternate Flow - Referral Updates with one ServiceRequest removed and new ServiceRequest entry added to the initial bundle.

This is processing of this alternate case is similar to the above main alternate flow.

AF3 - Alternate Flow - Cancellation

If after the initial referral submission consisting in one or more ServiceRequest entries PCP determines the referral to HCC is no longer required

due to changes in the Patient profile, patient condition or consent status PCP can issue a cancellation of the referral bundle.

HCC intake care coordinator receives the referral cancellation message and closes the file on the HCC end.

The main workflow and the alternate flows have to be supported by certain concepts:

1. Multiple ServiceRequest in one Bundle
2. Bundle updates that can contain changes to existing resources or to resources that are added/removed.
3. Status should be tracked at the Bundle (i.e. New, Updated, Cancelled) as well as status of individual ServiceRequest resources (active, revoked, etc.)
4. The Bundle should have a unique business Identifier that will be preserved over multiple messages until the referral reaches a final state (Cancelled/Completed).
5. When communicating state transitions of the referral the system should include a human language description of the change.

Oct 01, 2019 at 5:57 PM · Notified 2 people



Tim Berezny, CTO Caredove, Chair FHIR eReferral Specification Working Group

In preparation for tomorrow's meeting to sync the specs and in response to subsequent conversations, I've updated my commentary.



HCC Changes Feedback 2019-10-07.xlsx 19.3 KB • [Do...](#)

Oct 07, 2019 at 10:10 PM · Notified 2 people



Tim Berezny, CTO Caredove, Chair FHIR eReferral Specification Working Group

I've added 6 new + 1 updated business rules in simplifier ready for review.

- Duplicate Data in FHIR Resources
- Handling Clinical Resources & Unprofiled Data Elements
- Routing Options (Extension)
- Gender (Extension)
- Patient Present Location (Extension)
- Request Authorizer vs. Submitter
- Patient Self Referral

There are probably another half dozen business rules to write, which I will continue to work on later this week. However I wanted to get something out early to review as timelines are tight to get version 1 out the door. Feel free to make improved wording/grammar clarifications in the body of the simplifier page itself, and write any deeper comments or suggestions about content changes in the comments of the simplifier page.

The goal is to approve all of the business rules statements at the upcoming Tuesday working group call.

Nov 20, 2019 at 8:47 PM · Notified 2 people



Tim Berezny, CTO Caredove, Chair FHIR eReferral Specification Working Group

I've added a significant section called:

- Requisites / Multiple Connected Referrals

I've recorded what I recall to be correct from the latest meeting, but I could not find complete notes on this. Please review carefully and cross reference with your notes about the decisions made.

Nov 24, 2019 at 9:53 PM · Notified 2 people



Yaron Derman

Thanks for authoring these Tim. my 5 comments below - all minor:

Handling Clinical Resources & Unprofiled Data Elements

Otherwise, there are two options for handling data elements that are not mapped to an existing or newly developed profile:

1. Convert into a human-readable text format and included in the **ServiceRequest.note** annotation element.
2. Include the data in a **QuestionnaireResponse** resource, which will be included in the initial referral submission bundle, where `QuestionnaireResponse.basedOn` points to the referral.

COMMENT: are there more options e.g. using an attachment and/or a Composition resource?

~~~~~  
~~~~~

Routing Options (Extension)

New | Update

State: Draft | Ready for Review | Approved

i've edited the first paragraph below. Please let me know if it captures the same intent:

Some referral processes may asked the referrer to provide some data that impacts the receiver's automated referral processing rules. The rules for how a receiving system processes inbound referrals can be unique to each receiver using that system. Some examples include internal routing based on:

- The type of referrer (from the hospital, primary care, out of province, etc...)

To handle this, use the "Routing Options" extension <add hyperlink>. The requester should be presented with the list of routing options <how/where?>,

COMMENT: I understand the value of this statement, but is this something we should be including?

~~~~~  
~~~~~

Gender, Birth Sex and Gender Identity

[✓] New | [] Update

State: [] Draft | [✓] Ready for Review | [] Approved

Patient.gender is to be used to specify the observed patient gender at the time of the referral (regardless of the gender presentation at birth). This is also referred to as "administrative gender", which is the gender that the patient is considered to have for administration and record keeping purposes. This property is often used as an input to patient matching algorithms.

Due to its importance in patient matching algorithms, gender is a mandatory element. In the case where a referral does not need to know gender, set "Patient.gender" = "unknown"

Note that the FHIR Patient resource documentation discusses patient.gender in depth.

The gender field value set contains 4 values. To specify birth sex, use the [US Core birthSex extension](#). If more detailed gender values are required (i.e. for gender identity ()), use the FHIR [patient-genderIdentity extension](#).

2 COMMENTS:

- 1. i've suggested to renamthis section because it deals with more than just Gender (extension)
- 2. The text that appears in my comment (above) is an edit of the original text. Feel free to use whichever makes more sense to you

~~~~~  
~~~~

Requisitons / Multiple Connected Referrals

When multiple connected referrals are made simultaneously (e.g., 3 home care services after discharge from hospital to home, multiple lab tests in a single requisition, etc...),

COMMENT: are we including order requisitions (DI, Labs) in the scope at this point (DI pathway may be coming soon). If not, we may want to give a different example.

Nov 26, 2019 at 5:26 PM · Notified 3 people



Tim Berezny, CTO Caredove, Chair FHIR eReferral Specification Working Group

I've added a section to the business rules called "Tracking Tasks", which contains my thoughts on some use cases for the Tasks.

Please let me know your thoughts.

Nov 26, 2019 at 7:28 PM · Notified 3 people



Tim Berezny, CTO Caredove, Chair FHIR eReferral Specification Working Group
In response to Yaron's comments:

Handling Clinical Resources:

- Good point, attachment and communication would also be viable methods. We've shied away from using composition for various reasons (complexity, and it's meant for FHIR document mainly so not a great use case here).

√ UPDATED.

Routing Options:

√ Removed a sentence or two as per suggestion.

Gender:

√ Title updated as suggested

√ Body text updated as suggested

Requisition

X Lab comment - point well taken that it's not necessarily in scope. However, it's a fairly clear cut and unambiguous illustration of the concept even if it's out of scope - which I believe to be helpful. Also, I don't believe it's much of a stretch at all to apply this iGuide to lab requisitions (or to DI). Just need an extra value set somewhere...

Nov 26, 2019 at 10:29 PM · Notified 3 people



ion moraru

The Requisition concept was sourced from the need to have a common Identity for multiple service requests that were submitted as part of a single referral bundle.

This follows the model of Requisition forms with multiple service request in a Lab or DI setting.

This concept applies to HCC pathways in which the referrer can include multiple service requests under one Requisition Identity for the entire submission.

At the same time, since it models after the Lab/DI requisition process, it can be re-used at any time for DI/Lab referrals.

Nov 28, 2019 at 1:51 PM · Notified 3 people



ion moraru

Agreed with the **Task.code** usage to indicate type of action.

The Task is a call to action for a Practitioner, an Organization, a Group, a Patient, or a Related Person in the context of referral fulfillment. From this perspective, the value set for the Task.code should be representative of the type of action: **process-request**, **rfi** are the only obvious ones in the context of referral workflow.

I do not believe we need to include the direction of the action as a coded value: *rfi-for-requester*, or *rfi-for-provider*. This can be deduced from any combination of:

businessStatus, requester, performerType or owner.

Another scenario that needs to be covered by a Task (an associated type) is data correction. We often find that some HIS have poor data quality on patient demographic record. We could use a '**data-correction**' task value to notify the sender that some records are more recent (or of a better quality) in a target/recipient system.

general - value - not quite sure of its usage, but agree there could be a catch all.

Nov 28, 2019 at 3:05 PM · Notified 3 people



ion moraru

More comments with regards to Task usage:

- I am assuming Tasks are not required in every message bundle. For example: if Practitioner needs to "communicate", about the referral or about the patient (outside of a referral context), there is no need to include a Task in the bundle as long as there are resources conveying the information from one party to the other. A Communication resource would be sufficient in this case to wrap up the content, if there are no business dependencies on the delivery of this message.
- In a fulfillment scenario the Requester may have an expectation of fulfillment from the Performer that requires to confirm the acceptance or the receipt of the Task. For example: a referral recipient must inform the referral issuer of a long wait time for processing the request, before the referral is accepted. The Referral issuer would need to confirm the receipt of this information back to the referral Performer. Two option for implementation:
 - If two tasks are used (one by the Performer and another by Issuer) they need to be related. Outbound task is related to Inbound task.
 - If the using the same Task resource (shared inbound and outbound) it needs to contain both the initial request (i.e using Task.input) and the subsequent response (i.e. using Task.output)

Nov 28, 2019 at 4:14 PM · Notified 3 people



Tim Berezny, CTO Caredove, Chair FHIR eReferral Specification Working Group

Some of my comments on Ion's comments:

- Reducing rfi-for-requester + rfi-for-provider - true it could possible be determined by evaluating other fields, If I try to think of edge cases though I think I can find ways to break that paradigm for each case. However, even so I'm ok to use just RFI for now - as that may even be mean EXCLUSIVELY to mean the requester should provide the info, and in the other direction that could be called something different in the future (for example in eConsult I think it's called a request for clarification, screenshot:

<https://www.screencast.com/t/ERO4V16SvY9>)

- data-correction sounds like a useful idea, I would be in support of that.

- “Tasks not required for every message” - yes correct, you only use it when you want to computationally imply an action needs to be taken. In fact, you could do a “soft RFI” without including the RFI Task simply by describing it in the content of a communication... it would just be less computable, but still quite functional.

- In the “fulfillment scenario” - process wise, it sounds similar if not the same to the fundamentals of an RFI process. i.e.: the requester is being asked to provide information (that they are ok with the long waitlist), with some kind of communication (either online or offline) indicating their approval/disapproval. Is there a key difference here that instead of asking for a general communication, the provider is looking for a binary yes/no response?

Nov 28, 2019 at 8:47 PM · Notified 3 people



ion moraru

This scenario can be handled by ad-hoc/general communications, in the end the patient file will contain a dated sequence of communication. However the events traced in the file are not necessarily related from a system perspective.

This scenario also applies to the RFI process.

In both cases (RFI and the one above) I am concerned about Task tracking aspect. Should there be one Task resource being shared back and forth with the evidence that the recipient party populated their feedback into the initial task?

OR, Each party should provide a task, with the performer (the party providing the response) having the obligation to include a reference to the initial Task? OR, Should there be just tasks unrelated to each other?

Is there a need to systematically associate the tasks for request/response in a sequences of exchanges?

Nov 29, 2019 at 2:00 PM · Notified 5 people



Tim Berezny, CTO Caredove, Chair FHIR eReferral Specification Working Group

I have updated the remaining Business rules (except for Health Card Number):

- Tracking Tasks
- ServiceRequest Identifier Handling
- Specifying a Service

Please review and provide feedback if these can be moved to "approved" state.

Nov 29, 2019 at 8:29 PM · Notified 5 people