



**Canada Health Infoway**

# **Pan-Canadian Service Directory Implementation Guide**

July 18, 2024

**Background**

**Agenda**

# Code of Conduct

- Members to share their opinions on the content presented
- Co-chairs to actively listen and consolidate the opinions and ideas shared during the WG sessions and shared through notes post meeting
- All ideas are welcome; however, priority will be given to content related to the current version of the guide
- Coming to a consensus that everyone “can live with”
  - If all avenues are exhausted through discussion and consensus has not been reached, an online poll (during the WG call and on forums) will be used to reach majority consensus

# Service Directory – Summary

## Definition

The service directory specification harmonizes how data regarding healthcare services and providers is structured and provides standardized interactions with that information (e.g., Querying service/provider information). This directory would also store relationships between the service, service providers and their roles, organizations, and associated locations, as well as details on how to contact them. This standardization will enable users (regardless of jurisdiction) to search for, locate, and communicate with healthcare providers, and help them search, plan, and choose the right health services for their patient(s) needs.

## Out-of-Scope

The initial version of the implementation guide will not cover:

- A directory of instances and its subsequent such use,
- Federated services/functionality,
- Inclusion of actors outside the scope defined within this implementation guide. This is done to avoid complex processes that are outside of the current defined processes of a service directory.
- Security and access considerations

# MustSupport Definition

The *supplier (sender)* of the service directory information

- **SHALL** populate any elements with the MustSupport flag set to true if the information is available and is appropriate to provide

The consumer (**receiver**) of the service directory information

- **SHALL** be capable of receiving any resource instances containing elements with the MustSupport flag set to true without generating an error or causing the application to fail.
- Elements without a MustSupport flag in a FHIR response **SHOULD** still be received without generating an error or causing the application to fail.

# Use Cases

## 1. Search for Service

Service Consumer looks up specialist within the patient's city that speaks the same language

**Query:** Search for location that has a specific city and an associated specialist service and the specified language and return the location and associated practitioners that provide that service

**Alternative:** Health region queries all locations within the region to update its central repositories information

**Query:** Search for all locations within a specific organization that have been updated since the last update, and include in the results all practitioners associated with each location

## 2. Search for Service Provider

Patient asks their general practitioner additional information on their diagnosis which only the specialist they saw can provide additional information on

**Query:** Search for a practitioner based on their name and specific specialty and include locations and contact information in the response

# Types of Actors – Roles and Definition (Pan-Canadian)

Actors	Description
<b>Services Supplier</b>	<p>Is an actor that accepts the query request and produces a list of matching resources that it sends as a response.</p> <p>Some examples of this actor are: Jurisdiction, Health Region, Hospital, Community Clinic</p>
<b>Services Consumer</b>	<p>Requests a list of resources from the SD Services Supplier based on the query parameters selected.</p> <p>Some examples of this actor are: Registered Care Providers (Physician, Nurse, etc.), Front Desk Staff, Health Region, Community Clinic, Patient*</p>

\* Patient access to the service is not in scope for the first MVP release

# Process for Creation and Review of Profiles

1. Profiles are created by Infoway and put on Github (auto-linkage with the Simplifier project - Public)
2. Profiles were published to simplifier on Wednesday, 10AM ET for WG review
3. WG members review the profiles together on Thursday, 1PM ET
4. Changes to the profiles and the pages are gathered and the updates made before the next session

# Approach for Extensions & Valuesets

- Derived from the original IG
- The canonical URLs are updated to ensure that there aren't any dependencies on the IG that they are adopted from
  - These new extensions and valuesets are maintained by Infoway
- Valuesets to be hosted on terminology gateway by Infoway

# Agenda:

Simplifier Project page: <https://simplifier.net/ca-csd>

- Feedback on last week's resources:
  - HealthcareService (<https://simplifier.net/ca-csd/healthcareservice>)
  - Location (<https://simplifier.net/ca-csd/location>)
- First look at resources
  - Endpoint (<https://simplifier.net/ca-csd/endpoint>)
  - Practitioner (<https://simplifier.net/ca-csd/practitioner>)
  - PractitionerRole (<https://simplifier.net/ca-csd/practitionerrole>)

# CA:CSD Base Profiles

We are using the IHE mCSD version 3.8.0 as the basis for our profiles, and are deriving from them to ensure that we remain in line with it.

Should we identify something in the future that does not allow us to continue to derive from mCSD we can easily switch to using base FHIR r4.

# Initial Resources

Priority	Resource	Represents
1	✓ <b>HealthcareService</b>	Service offered
2	✓ <b>Location</b>	Location of service. Generally associated with an address/geo location
3	<b>EndPoint</b>	How to connect to the associated resource within the Service
4	<b>PractitionerRole</b>	Relationship between person and location or organization. Includes the role played when representing that location/organization
5	<b>Practitioner</b>	Person providing the service
6	<b>Organization</b>	Department, health region, jurisdiction etc.
7	<b>OrganizationAffiliation</b>	How two organizations relate to each other or to a location

Different from base FHIR  
 Different from CA:CSD  
 Profile instance being compared

# HealthcareService Comparison

Element	CA:CSD	mCSD (3.8.0)	CA:eRec	CA Baseline
Single Profile	HealthcareService	HealthcareService	N/A	N/A
identifier	MS = <b>True</b> , 0..*	0..*		
providedBy	MS = <b>True</b> , 0..1 Reference to the Organization profile in CA:CSD	0..1		
type	MS = <b>True</b> , 1..*	1..*		
location	MS = <b>True</b> , 0..* Reference to the Location profile in CA:CSD	0..*		
name	MS = <b>True</b> , 1..1	1..1		

Different from base FHIR  
 Different from CA:CSD  
 Profile instance being compared

# Location Comparison

Element	CA:CSD	mCSD (3.8.0)	CA:eRec	CA Baseline
Multiple Profiles	Location	<b>Location</b> Location for Facilities Location for Jurisdictions Location with Distance	Location	Location
identifier	MS = <b>True</b> , 0..*	0..*	In alignment	In alignment
status	MS = <b>True</b> , 1..1	1..1	MS = True, <b>0</b> ..1	MS= <b>N/A</b> , <b>0</b> ..1
name	MS = <b>True</b> , 1..1	1..1	MS = True, <b>0</b> ..1	MS = True, <b>0</b> ..1
type	MS = True, <b>1</b> ..*	1..*	MS = <b>N/A</b> , <b>0</b> ..*	MS= <b>N/A</b> , <b>0</b> ..*
telecom	MS = <b>True</b> , 0..*	0..*	In alignment	In alignment
physicalType	MS = <b>True</b> , 1..1	1..1	MS = <b>N/A</b> , <b>0</b> ..1	MS = <b>N/A</b> , <b>0</b> ..1
partOf	MS = N/A, 0..1 Reference to the Location profile in CA:CSD	0..1	In alignment	In alignment

# Endpoint – Updates

Different from base FHIR  
Different from CA:CSD  
Profile instance being compared

Element	Update Description	Reason
Endpoint.status	<ul style="list-style-type: none"><li>Inclusion of mustSupport element</li></ul>	<ul style="list-style-type: none"><li>mustSupport element identified within the IHE's mCSD endpoint profile</li></ul>
Endpoint.managingOrganization	<ul style="list-style-type: none"><li>Inclusion of mustSupport element</li></ul>	<ul style="list-style-type: none"><li>Allows the search to return the organization without having to go through the practitionerRole resource</li></ul>
Endpoint.period	<ul style="list-style-type: none"><li>Inclusion of mustSupport element</li></ul>	<ul style="list-style-type: none"><li>mustSupport element identified within the IHE's mCSD endpoint profile</li></ul>

# Endpoint – Extensions

Extension	IG Source Derieved from	Rationale
Endpoint.extension:purpose-of-use	Using the extension from mCSD	<ul style="list-style-type: none"><li>• Proposed to be relevant to the Service Directory Endpoint profile</li><li>• Adopted from mCSD to define purpose of use for organization and endpoint resources</li></ul>

# EndPoint Comparison

Different from base FHIR  
Different from CA:CSD  
Profile instance being compared

Element	CA:CSD	mCSD (3.8.0)	CA:eRec	CA Baseline
Multiple Profiles	Endpoint	Endpoint Endpoint for Document Sharing	N/A	N/A
status	MS = True, 1..1	1..1		
managingOrganization	MS = True, 1..1 Reference to the Organization profile in CA:CSD	1..1		
period	MS = True, 0..1	0..1		

# Practitioner – Updates

Element	Update Description	Reason
Practitioner.identifier	<ul style="list-style-type: none"><li>Inclusion of mustSupport element</li></ul>	<ul style="list-style-type: none"><li>Identified as a requirement and mustSupport element from the CA baseline</li></ul>
Practitioner.name	<ul style="list-style-type: none"><li>Inclusion of mustSupport element</li><li>Minimum cardinality of 1</li></ul>	<ul style="list-style-type: none"><li>mCSD set cardinality to a minimum of 1</li><li>All minimum cardinalities of 1 have an added MS to it</li></ul>

# Practitioner – Extensions

Extension	IG Source Derived from	Rationale
N/A	N/A	N/A

# Practitioner Comparison

Different from base FHIR  
Different from CA:CSD  
Profile instance being compared

Element	CA:CSD	mCSD (3.8.0)	CA:eRec	CA Baseline
Single Profile	Practitioner	Practitioner	Practitioner	Practitioner
identifier	MS = True, 0..*	0..*	In Alignment	In Alignment
name	MS = True, 1..*	1..*	MS = True, 0..*	MS = True, 0..*

# PractitionerRole – Updates

Element	Update Description	Reason
PractitionerRole.practitioner	<ul style="list-style-type: none"> <li>Inclusion of mustSupport element</li> <li>Reference to the practitioner profile in CA:CSD</li> </ul>	<ul style="list-style-type: none"> <li>mCSD references their own Practitioner profile created for the project</li> </ul>
PractitionerRole.organization	<ul style="list-style-type: none"> <li>Inclusion of mustSupport element</li> <li>Reference to the organization profile in CA:CSD</li> </ul>	<ul style="list-style-type: none"> <li>mCSD references their own Organization profile created for the project</li> </ul>
PractitionerRole.code	<ul style="list-style-type: none"> <li>Inclusion of mustSupport element</li> <li>Minimum cardinality of 1</li> <li>Reference to "<a href="#">healthcare provider role type</a>" valueset</li> </ul>	<ul style="list-style-type: none"> <li>ValueSet binding preferred in CA Baseline</li> <li>mCSD set cardinality to a minimum of 1</li> <li>All minimum cardinalities of 1 have an added MS to it</li> </ul>
PractitionerRole.specialty	<ul style="list-style-type: none"> <li>Inclusion of mustSupport element</li> <li>Reference to "<a href="#">practitioner specialty</a>" valueset</li> </ul>	<ul style="list-style-type: none"> <li>Included MS as seen in CA:eReC and CA Baseline</li> <li>ValueSet binding preferred in CA Baseline</li> </ul>
PractitionerRole.telecom	<ul style="list-style-type: none"> <li>Inclusion of mustSupport element</li> </ul>	<ul style="list-style-type: none"> <li>Included MS as seen in CA:eReC and CA Baseline</li> </ul>
PractitionerRole.telecom.system	<ul style="list-style-type: none"> <li>Inclusion of mustSupport element</li> </ul>	<ul style="list-style-type: none"> <li>Included MS as seen in CA:eReC and CA Baseline</li> </ul>
PractitionerRole.location	<ul style="list-style-type: none"> <li>Inclusion of mustSupport element</li> <li>Reference to the location profile in CA:CSD</li> </ul>	<ul style="list-style-type: none"> <li>mCSD references their own Location profile created for the project</li> </ul>
PractitionerRole.healthcareService	<ul style="list-style-type: none"> <li>Inclusion of mustSupport element</li> <li>Reference to the healthcareService profile in CA:CSD</li> </ul>	<ul style="list-style-type: none"> <li>mCSD references their own HealthcareService profile created for the project</li> </ul>

# PractitionerRole Comparison

Different from base FHIR  
 Different from CA:CSD  
 Profile instance being compared

Element	CA:CSD	mCSD (3.8.0)	CA:eRec	CA Baseline
Single Profile	PractitionerRole	<b>PractitionerRole</b>	PractitionerRole	PractitionerRole
practitioner	MS = <b>True</b> , 0..1 Reference to the Practitioner profile in CA:CSD	0..1	In Alignment	MS = <b>True</b> , 1..1
organization	MS = <b>True</b> , 0..1 Reference to the Organization profile in CA:CSD	0..1	In Alignment	MS = <b>N/A</b> , 0..1
code	MS = <b>True</b> , 1..* Reference to CA <u>healthcare provider role type</u> valueset	1..* <b>Use FHIR base valueset</b>	MS = <b>True</b> , 0..* <b>Use FHIR base valueset</b>	MS = <b>N/A</b> , 0..* Reference to CA <u>healthcare provider role type</u> valueset
specialty	MS = <b>True</b> , 0..* Reference to CA <u>practitioner specialty</u> valueset	0..* <b>Use FHIR base valueset</b>	In Alignment <b>Use FHIR base valueset</b>	In Alignment
telecom	MS = <b>True</b> , 0..*	0..*	In Alignment	In Alignment
telecom.system	MS = <b>True</b> , 0..*	N/A	In Alignment	In Alignment
location	MS = <b>True</b> , 0..* Reference to the Location profile in CA:CSD	0..*	In Alignment	MS = <b>N/A</b> , 0..*
healthcareService	MS = <b>True</b> , 0..* Reference to the HealthcareService profile in CA:CSD	0..*	MS = <b>N/A</b> , 0..*	MS = <b>N/A</b> , 0..*

# PractitionerRole – Extensions

Extension	IG Source Derieved from	Rationale
N/A	N/A	N/A

# Next Week (July 25<sup>th</sup>)

- Feedback review and updates for the following profiles:
  - Practitioner
  - PractitionerRole
  - Endpoint
- Next set of profiles to be created
  - Organization
  - OrganizationAffiliation
  - Remaining Location and Endpoint profiles



**Canada Health Infoway**

# Thank you!

## Contact Information

**VISIT OUR WEBSITE**  
[infoway-inforoute.ca](http://infoway-inforoute.ca)

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