



Canada Health Infoway

Pan-Canadian Service Directory Implementation Guide

August 8, 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
Services Supplier	<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>
Services Consumer	<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

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.

Agenda:

<https://simplifier.net/ca-csd>

- Queries / Capability Statements
- Terminology sets

Selected Use Cases

Search for Service (HealthcareService)

- a) Filter by:
 - i. Service
 - ii. Service Type
 - iii. Location (city, postal code, health region etc.)
 - iv. providedBy (Organization)
- b) Possible Elements to return
 - i. Service(s)*
 - ii. Location(s)
 - iii. Organization(s)
 - iv. Availability

Search for Service Provider (PractitionerRole)

- a) Filter by:
 - i. Provider details (name, qualifications)
 - ii. Service(s) offered
 - iii. Service Type
 - iv. Location (city, postal code, health region etc.)
 - v. Organization
 - vi. Provider Availability
- b) Possible Elements to return
 - i. Practitioner
 - ii. Qualifications
 - iii. Services Provided
 - iv. Associated Location(s)
 - v. Associated Organization(s)
 - vi. Availability

* mandatory

Requirement of Support

- The services supplier **SHALL** support the *:contains* and *:exact* (case-insensitive) modifiers in all of the string query parameters highlighted in the guide
- id, identifier, and lastUpdated search parameters **SHALL** be also be supported
- Currently the CA:CSD supports GET and POST functionalities with potential for expansion of capabilities (i.e. PUT) with future use cases

List of Queries + Parameters from mCSD by Resource

Resource	Parameters	Associated Elements	Requirement
HealthcareService	id	HealthcareService.id	SHALL
	identifier	HealthcareService.identifier	SHALL
	LastUpdated		SHALL
	service-type	HealthcareService.type	SHALL
	name	HealthcareService.name	SHALL
	name:contains	HealthcareService.name	SHOULD
	name:exact	HealthcareService.name	SHOULD
	active	HealthcareService.active	SHOULD
	service-category	HealthcareService.category	SHOULD
	location	HealthcareService.location	SHOULD
	organization	HealthcareService.providedBy	SHOULD

List of Queries + Parameters from mCSD by Resource

Resource	Parameters	Associated Elements	Requirement
Location + Location with Distance	Id	Location.id	SHALL
	identifier	Location.identifier	SHALL
	name	Location.name	SHOULD
	name:contains	Location.name	SHOULD
	name:exact	Location.name	SHOULD
	organization	Location.managingOrganization	SHOULD
	partof	Location.partOf	SHOULD
	type	Location.type	SHOULD
	status	Location.status	SHOULD
	address	Location.address	SHOULD
near	Location.position (In the location with distance profile)	SHOULD	

List of Queries + Parameters from mCSD by Resource

Resource	Parameters	Associated Elements	Requirement
Organization	Id	Organization.id	SHALL
	identifier	Organization.identifier	SHALL
	active	Organization.active	SHOULD
	name	Organization.name	SHOULD
	partof	Organization.partOf	SHOULD
	type	Organization.type	SHOULD
	_include=Organization.endpoint	Organization.endpoint	SHOULD
	_revInclude=Location:organization	Location.organization	SHOULD
	_revInclude=OrganizationAffiliation:participating-organization	Organization.participatingOrganization	SHOULD
	_revInclude=OrganizationAffiliation:primary-organization	Organization.organization	SHOULD
	_revInclude=HealthcareService.organization	HealthcareService.organization	SHOULD

List of Queries + Parameters from mCSD by Resource

Resource	Parameters	Associated Elements	Requirement
Practitioner	Id	Practitioner.id	SHALL
	identifier	Practitioner.identifier	SHALL
	active	Practitioner.active	SHOULD
	name	Practitioner.name	SHOULD
	given	Practitioner.name.given	SHOULD
	family	Practitioner.name.family	SHOULD

List of Queries + Parameters from mCSD by Resource

Resource	Parameters	Associated Elements	Requirement
PractitionerRole	Id	PractitionerRole.id	SHALL
	active	PractitionerRole.active	SHOULD
	location	PractitionerRole.location	SHOULD
	organization	PractitionerRole.organization	SHOULD
	practitioner	PractitionerRole.practitioner	SHOULD
	role	PractitionerRole.code	SHOULD
	service	PractitionerRole.healthcareService	SHOULD
	specialty	PractitionerRole.specialty	SHOULD
	_include=PractitionerRole:practitioner	PractitionerRole.practitioner	SHOULD

List of Queries + Parameters from mCSD by Resource

Resource	Parameters	Associated Elements	Requirement
OrganizationAffiliation	Id	OrganizationAffiliation.id	SHALL
	identifier	OrganizationAffiliation.identifier	SHALL
	active	OrganizationAffiliation.active	SHOULD
	date	OrganizationAffiliation.period	SHOULD
	participating-organization	OrganizationAffiliation.participating Organization	SHOULD
	primary-organization	OrganizationAffiliation.organization	SHOULD
	role	OrganizationAffiliation.code	SHOULD
	_include=OrganizationAffiliation.endpoint	OrganizationAffiliation.endpoint	SHOULD

List of Queries + Parameters from mCSD by Resource

Resource	Parameters	Associated Elements	Requirement
Endpoint	Id	Endpoint.id	SHALL
	identifier	Endpoint.identifier	SHALL
	organization	Endpoint.organization	SHOULD
	status	Endpoint.status	SHOULD

Terminology Sets in CA:CSD

CA:CSD has 47 valueSets referenced in the profiles:

- 1 example (organization)
- 7 extensibles (4 location, 3 organization)
- 2 fixed-example (1 facility-organization, 1 jurisdiction-organization)
- 21 preferred (3 practitionerRole, 2 practitioner, 3 organization, 2 organizationAffiliation, 8 location, 3 healthcareService)
- 16 required (3 practitionerRole, 1 practitioner, 12 location)
 - All 16 from HL7 FHIR base

Next Week (August 15th)

- Continue discussion on queries and Capability Statements
- Review the CA:CSD iGuide on Simplifier



Canada Health Infoway

Thank you!

Contact Information

VISIT OUR WEBSITE
infoway-inforoute.ca

VISIT OUR SURVEY WEBSITE
insights.infoway-inforoute.ca/

LET'S CONNECT ON LINKEDIN
linkedin.com/company/canada-health-infoway/

LET'S CONNECT ON TWITTER
[@infoway](https://twitter.com/infoway)

Queries

Search Parameter	Example Query	Associated Elements	Comments
Search for List of all HealthcareServices	GET [base]/HealthcareService?	N/A	N/A
Search for Service Type	GET [base]/HealthcareService?service-type=http://terminology.hl7.org/CodeSystem/service-type 124	HealthcareService.type	Additional queries are needed to return practitioner, location or organization if they are needed
Get a list of HealthCareService resources that are type of "General Practice", and associated organizations and locations	GET [base]/HealthcareService?service_type=http://terminology.hl7.org/CodeSystem/service-type 124&_include=HealthcareService:organization&_include=HealthcareService:location	HealthcareService.type HealthcareService.organization HealthcareService.location	All associated Organizations and HealthCareServices will be included in the Bundle response
Search for nearby Hospital	GET [base]/Location?type=http://terminology.hl7.org/CodeSystem/v3-RoleCode HOSP&_pretty=true	Location.type Location.physicalType Location.position	N/A
Search for Organization	GET [base]/OrganizationAffiliation?primary-organization AND/OR GET [base]/OrganizationAffiliation?participating-organization	OrganizationAffiliation.organization OrganizationAffiliation.participating Organization	N/A
Search for Active Provider and their availability based on X service provided at Y organization	GET [base]PractitionerRole?_include=PractitionerRole:location&_include=PractitionerRole:organization&_include=PractitionerRole:service&_pretty=true	PractitionerRole.practitioner PractitionerRole.organization PractitionerRole.code PractitionerRole.location PractitionerRole.healthcareService	<ul style="list-style-type: none"> Filter results to exclude any active practitioners Filter based on service provided