

Provider Registry

Standards Selection Guide

Standards Selection Guide

Represents a collection of the recommended Standards, Resources, Implementation Guides created to satisfy a specific set of Clinical Requirement *at a moment in time*, following the discovery process presented in the [guidance](#) section of this site.

Maturity Level

☒ Under Development

- ☐ Pilot
- ☐ Draft For Use
- ☐ Normative
- ☐ Superseded (by...)
- ☐ Retired

Market Guidance

WIP

Guide Status:

- ☒ Draft
- ☐ Published

Effective Date

TBD

Table of Contents

- [Standards Selection Guide](#)
 - [Key Contributors](#)
 - [Purpose](#)
 - [Business Context](#)
 - [Typical Use Cases](#)
 - [Evaluated Standards](#)
 - [Recommended Standards](#)
 - [Implementation Resources](#)
 - [Existing Implementations](#)

Maturity	Under development
Status	Draft
Standards	HL7® FHIR
Domain	Provider Registry
Jurisdiction	Alberta, BC, Ontario

Key Contributors

The following individuals/organizations contributed to the creation of this resource:

Name	Title	Organization	Contact Information
Shamil Nizamov		British Columbia - Ministry of Health	
Yaron Derman	Manager, Standards & Data Exchange	eHealth Ontario	
Mihir Patel		Alberta Health	
Kris Lewis	Technology Principal	Sierra Systems	
Gavin Tong	Associate Managing Partner - Architecture & Standards	Gevity Consulting	

*Please note that the actual FHIR artifacts associated with this guide are being developed through the [FHIR® Implementations](#) Working Group on InfoCentral.

Purpose

This document provides an overview of available standards and a recommended approach to support the requirements identified below. The intent is to simplify standards selection decisions in future projects and, in turn, to promote standardization of solutions across projects by providing useful information to support decision making in a readily consumable format.

Business Context

The Provider Registry (PR) is a foundational component of the Electronic Health Record (EHR) which provides a trusted and centralized source of regulated health service provider information to authorized consumers. Health Service Provider Identifiers (HSPID) within the PR enable unique identification of individual health care providers across the systems participating in the EHR. Demographic and licensing information for all providers is stored within the PR for validation and/or retrieval by source and consumer systems and organizations.

The guide is concerned with extending information exchange with existing, provincial Provider Registries to support contribution and consumption use cases including those that enable consumer applications. The guide is proposing the development of FHIR artefacts (e.g. implementation guides, profiles, extensions, valuesets, etc.) that reflect and interact with Canadian content in a standardized manner.

Typical Use Cases

The use cases outlined below are intended to provide context and frame which the standard must meet.

The use cases identify different activities related to a provider registry:

Table of Contents

- [UC-1 Maintain provider information](#)
- [UC-2 Logically delete provider record](#)
- [UC-3 Merge provider records](#)
- [UC-4 Notify consumer of information updates \(passive\)](#)
- [UC-5 Consumer search for provider information \(active\)](#)
- [UC-6 Request transaction history](#)



Source Systems

Sources systems - examples



Consumer Systems

Consumer systems - examples

UC-1 Maintain provider information

Data received from source systems is used to add or update provider information within the registry, including secondary identifiers and licensing information.

Multiple business events relate to provider maintenance including:

- Addition of a new provider
- Update of provider demographic information
- Association of a license with a provider
- Nullification of a license with a provider

Information updates in the registry then trigger notifications to distribute updated provider information to client systems UC-4.

UC-2 Logically delete provider record

Identify and logically delete a provider added to the registry in error.

Information updates in the registry then trigger notifications to distribute updated provider information to consumer systems UC-4.

UC-3 Merge provider records

Two provider records are combined in the registry.

Information updates in the registry then trigger notifications to distribute updated provider information to consumer systems UC-4.

UC-4 Notify consumer of information updates (passive)

Events in the PR trigger notification messages which are distributed to subscribing applications.

- Add provider
- Update provider
- Merge provider
- Nullify license

UC-5 Consumer search for provider information (active)

A consumer system sends a query to the provider registry:

- Get provider details using HSPID
- Get provider details using License and Role
- Identify provider using License when HSPID role isn't known
- Find candidate providers matching a set of search criteria

If the request is authorized, the PR responds with the requested information.

UC-6 Request transaction history

A source system requests a history of provider record changes by date range or other criteria.

If the request is authorized, the PR responds with the requested information.

Evaluated Standards

This guide focuses on establishing a new set of HL7 FHIR interfaces to existing EHR resources. Provider Registries have been implemented in various provinces and are mostly employing HL7 v3 messaging standards with sporadic HL7 v2. This guide is proposing extensions of interfaces to these systems using HL7 FHIR and reusing these in a broader, Canadian context.

- Consumer messaging
- Source messaging

Consumer messaging

A primary role of the Provider Registry is to enable provider identification within consumer systems contributing data to or consuming data from provincial EHR solutions. The predominant means for exchanging data with the EHR is HL7 version 3 messaging.

Standard	Fit for Purpose			Stewardship		Quality		
	Fits Requirements	Implementation Type	Vendor Support	Canadian Steward	SDO Maintained	Complexity	Standard Maturity	Training, Support and Tooling
HL7 FHIR	<div><div></div></div>	Under Development	<div><div></div></div>	Yes	Yes	<div><div></div></div>	Draft	<div><div></div></div>
AB MR2009 (HL7 v3)	<div><div></div></div>	Production in Canada	<div><div></div></div>	Yes (AB)	Localized	<div><div></div></div>	High	<div><div></div></div>
pan-Canadian MR2009 (HL7 v3)	<div><div></div></div>	Production in Canada	<div><div></div></div>	Yes	Localized	<div><div></div></div>	High	<div><div></div></div>
ON (v3, v2)								
BC (v3)								
Architectural Constraints and Considerations				Secondary Benefits				
Use of HL7v3 conforms with the architectural design of Canada's digital health blueprint. AB MR2009 extends the Canadian specification with the ability to merge and logically delete providers. BC has an implementation that should be described here Ontario has an implementation that should be described here HL7v3 messaging does not provide the means to transmit a the history of changes to a provider records. The PRS XML Messaging specification is proprietary to the registry solution but is shared across several provinces.				Standardizing on new FHIR interfaces across EHR applications reduces complexity within the infostructure and for implementers by minimizing variability in models and vocabulary.				
Recommendation				Supporting Rationale				
HL7 FHIR				Identify FHIR resources required to implement new interfaces to existing provincial assets to accelerate and ease adoption of content in these Provider Registries.				

Recommended Standards

The following standards and related specifications were identified as the recommended approach to support the in-scope requirements. The table lists the summary with the rationale.

Standardization Requirement	Options	Choice	Rationale
Extending EHR PR assets with FHIR interfaces	FHIR assets	X	

Implementation Resources

Community Pages

Matters related to Provider Registry messaging in Canada are handled through the following Community on InfoCentral.

InfoCentral - Community Page
Health Level Seven International (HL7) - Community Site Link to the new FHIR Working Group to be added here

Implementation Guides and Specifications

Placeholder for linking in newly created FHIR content (profiles, extensions, valuesets, etc.)

Technical Resources

Any and every relevant tooling that might be of use to developers and implementers will be listed here.

Existing Implementations

The following organizations have been or are involved in implementing the solution outlined in this Guide:

Implementing Organization	Contact Information	Notes