Provider Registry

Standards Selection Guide

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Maturity	Normative
Status	Published
Standar ds	HL7® v3, PRS XML Messaging
Domain	Provider Registry
Jurisdicti on	Alberta
Clinical	N/A
Business	Business Requirements
Technic al	Specifications

Key Contributors

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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.

Content in this guide was generated using information from the Alberta Provider Domain Implementation Guide (R020403.AB.PM.01) and PRS HL7 Messaging Implementation Guide - AB MR2009.

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.

This Guide relates to the messaging standards used to provide and maintain the information in the Provider Registry as well as those used to access it from consumer applications.

Typical Use Cases

The use cases outlined below are intended to provide context and frame the needs that the candidate standards must meet.

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

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- 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, such as the Alberta College of Physicians and Surgeons, provide information to the registry.



Consumer Systems

Consumer systems, such as electronic medical records systems used at the point of care, receive and consume information from the registry, either as notifications or in response to a query.

UC-1 Maintain provider information

Data received from source systems (such as information from the Alberta College of Physicians and Surgeons) 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 the selection of messaging standards to support the in scope use cases. Due to differences in business requirements, the standards evaluation is broken into two sets of standardization requirements:

- 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	Implem entation Type	Vendor Support	Canadian Steward	SDO Maintained	Complexity	Standard Maturity	Training, Support and Tooling
AB MR2009 (HL7 v3)		Product ion in Canada		Yes (AB)	Localized		High	
pan-Canadian MR2009 (HL7 v3)		Product ion in Canada		Yes	Localized		High	
PRS XML Messaging		Product ion in Canada		Yes	No		High	
Archite	ectural Constraints	and Consid	erations	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. 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.					HR applications reduces com lity in models and vocabulary.		nfostructure and for	
Recommendation			Supporting Rationale					
AB MR2009 (HL7 v3)			with the archite		designed to meet the in-scope ada's digital health blueprint. I providers.			

Source messaging

Source messaging provides the means to transmit information from systems used at various licensing agencies, professional colleges, etc. to the Provider Registry.

Standard	Fi	Fit for Purpose			ardship	Quality		
	Fits Requirements	Implem entation Type	Vendor Support	Canadian Steward	SDO Maintained	Complexity	Standard Maturity	Training, Support and Tooling
PRS XML Messaging		Producti on in Canada		Yes	No		High	
AB MR2009 (HL7 v3)		Producti on in Canada		Yes (AB)	Localized		High	
pan-Canadian MR2009 (HL7 v3)		Producti on in Canada		Yes	Localized		High	
Architectural Constraints and Considerations					Secondary Benefit	s		

Source systems are not typically EHR consumer systems.	
HLTv3 messaging does not provide the means to transmit a the history of changes to a provider records. (UC-6)	
The PRS XML Messaging specification is proprietary to the registry solution but is shared across several provinces.	
Recommendation	Supporting Rationale

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.

Standardizatio n Requirement	Options	C h oi ce	Rationale
Consume	AB MR2009 (HL7 v3)	х	The AB MR2009 specification was designed to meet the in-scope use cases for PRS consumers and conforms with the architectural design of Canada's digital health blueprint. It extends the Canadian specification with the ability to merge and
Messaging	pan- Canadian MR2009 (HL7 v3)		logically delete providers.
	PRS XML Messaging		
Consume	PRS XML Messaging	х	The PRS XML specification was designed to meet the in-scope use cases for PRS source systems. Although the specification is proprietary to the specific provider registry solution used in Alberta it is relatively straightforward to implement.
Messaging	AB MR2009 (HL7 v3)		
	pan- Canadian MR2009 (HL7 v3)		

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	

Implementation Guides and Specifications

The PRS HL7 Messaging Implementation Guide - AB MR2009 is available to organizations using the PRS solution.

The HL7 Explorer structural specifications for the AB MR2009 HL7v3 messages referenced in this document are available in the for Alberta R02.04.03 specification. This web-friendly documentation is very useful for those familiar with HL7v3 messaging.

Technical Resources

Infoway Message Builder allows developers to focus on their business problem by providing APIs that fosters quick and easy creation, population and access to HLTv3 requests and responses.

Developers of clients for the PRS HL7 Interface can use Message Builder API which fosters quick and easy creation, population, validation, and access to HL7v3 requests and responses that are conformed to the jurisdictional specification. Further details can be found in the Message Builder section on InfoCentral (https://infocentral.infoway-inforoute.ca/3_Tools_and_solutions/Message_Builder).

For further technical support please contact project teams listed in the header section or seek support through the community site.

Existing Implementations

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

Information	
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