HEALTH INFORMATION STANDARDS COMMITTEE FOR ALBERTA

ALBERTA PROVINCIAL PROVIDER REGISTRY HL7 V3 ACTIVE
INTEGRATION MESSAGING SPECIFICATION

MESSAGE STANDARD SUMMARY

Status: Accepted in Draft
Version: 0.3
Status Date: 2013-Jun-11

Revision History

Version	Revision Date	Summary of Changes
0.1	23 May 2012	Initial Draft
0.2	11 Jun 2012	Draft for Review
0.3	11 Jun 2013	Accepted in Draft

Contact Information

Documents may be requested from HISCA@gov.ab.ca by sending the title and filename requested. Large files or requests may be sent as multiple archive files to the requestor.

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Background

Alberta Provincial Provider Registry (PPR) is a foundational component of the Electronic Health Record (EHR) that provides a trusted and centralized source of regulated health service provider information to authorized custodians.

PPR effectively provides a means for regulatory bodies, such as the College of Physicians and Surgeons of Alberta (CPSA) and other "source" systems to make their information available to trusted subscribers.

The Registry supports the verification of health service provider licensing and identity information, as well as referral services by allowing authorized custodians to look up Practitioner Identifiers. Point-of-Service (POS) systems need to be able to query the PPR to retrieve provider license and demographic information.

Each provider recorded in the PPR is assigned a Health Service Provider Identifier (HSPID). The HSPID is a public, unique, and static identifier assigned, by Alberta Health, to each regulated health service provider practicing in the Province.

The purpose of the identifier is not to replace College License Numbers or Billing Numbers, but rather to facilitate the transfer of electronic health information by providing a common public identifier across organizations and applications.

The HSPID can be used to identify a provider playing a role in the health system (Ex. Medical Doctor, Pharmacist, Registered Nurse) and retrieve their licensing information from the PPR by Provider Active Integration Message through three Provider Domain interactions.

The Provider Domain interactions presented here are based on the pan-Canadian Specification version R02.04.03 (MR2009).

Objectives

This document outlines Provider Domain Active Integration Messaging - three Provider Domain Interactions that authorized subscribers use to interact with the Provider Registry:

A list of key objectives:

- Active Integration provides a set of query and response messages that will allow authorized subscribers to retrieve timely information on regulated health service providers, such as latest demographic and licensing information.
- Each trusted / authorized subscriber will need to complete a Privacy Impact Assessment before gaining authorization to access the service.
- Active Integration will allow Physician Office Systems electronic medical records to retrieve Practitioner Identifiers in support of referral processes.

Scope

In Scope

The scope of this guide includes the message specifications for the Provider Active Integration HL7 v3 interactions with the PPR solution. The scope includes the complete documentation list required to successfully implement Provider query/response interactions with the PPR solution.

The interactions are based on the pan-Canadian HL7 v3 Provider Registry Domain message specification published by Canada Health Infoway.

Out of Scope

The scope of the guide does not include:

- Details of messaging internal to the PPR solution (e.g. the guide does not cover eXtensible Markup Languange (XML) schemas and transformations used within Provider Registry System (PRS) to convert from PRS XML to HL7 messages).
- Implementation details for consumer systems once an interaction with the PPR is completed; consumer systems are responsible for defining how they handle the messages once received (e.g. the Provincial Health Information Exchange (pHIE) defines the message validation, parsing and routing based on their requirements. This is the concern of the pHIE service).
- Implementation specific details, configuration of PRS system, pHIE or Enterprise Master Patient Index (EMPI) systems.
- Authenticating the incoming message, performing the schema check, generating the response is the responsibility of the Health Information Access Layer (HIAL).

Business Context

The business model represents the major business functions that a registration administrator or healthcare professional may perform during provider registration or the maintaining of provider data that are in the context of the PPR solution and its requirements to interact with external systems. Figure 1 illustrates the major components that implement the business model.
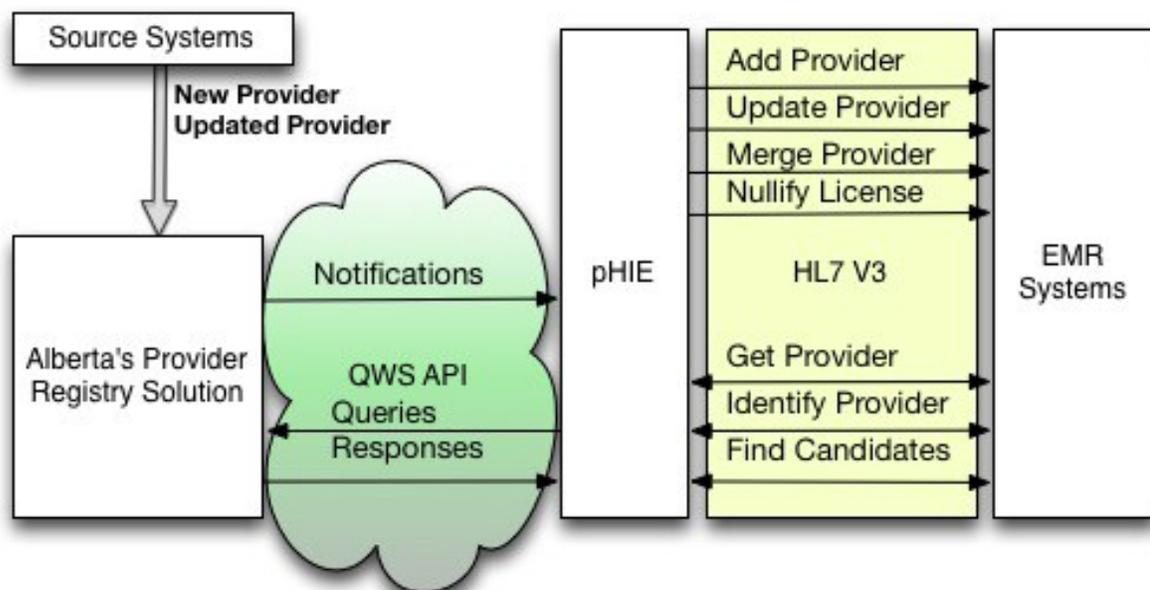

Figure 1 - Business Model for PPR Solution

- Provider data is received from source systems (i.e. source provider data). An example source system is the Alberta College of Physicians and Surgeons.
- The PPR solution is responsible for receiving the data, assigning the provider's record a unique Healthcare Provider identifier (if one does not exist), uniquely identifying the provider's record, and creating or updating the provider's record.
- Events in the PPR Solution trigger notification messages (i.e. new provider notification, update provider notification, merge provider notification, and nullify provider license notification)
- The PPR solution publishes the notification message to the Provincial Health Information Exchange (pHIE). pHIE will return acknowledgement messages to signify that the message was successfully received.
- The pHIE is responsible for distribution of notification messages to interested clients (i.e. POS Systems).
- The PPR solution provides services to process query messages from authorized consumer systems and return provider details and identifier lists.

Standards Alignment

Summary of Interactions

Currently, Canada Health Infoway's (CHI) pan-Canadian MR2009 Provider message specification supports two query interactions:

- Get Provider Details
- Find Associated Identifiers (not currently used in Alberta)

To meet jurisdictional requirements, Alberta has pre-adopted a number of changes to the message specification and proposed two new query / response interactions:

- Identify Provider
- Find Provider Candidates

Eventually, three query interactions have been adopted and adapted and all of them use the same payload and return the same response payload. This method was chosen rather than creating exact constrained models so as to maintain consistency with the pan-Canadian specifications

Business Name	Description
Get Provider Details (existing pan-Canadian Provider Query)	• A targeted query that retrieves specific provider details from PPR • The query parameters supported are a professional license number and a role of Health Service Provider Identifier (HSPID)
Identify Provider (pre-adopted Query defined by Alberta)	• An ad-hoc query for provider details when a role is unknown • The response might contain multiple provider records that share a common provider identity

Business Name	Description
Find Provider Candidates (pre-adopted Query defined by Alberta)	• A query that uses known provider information to return a list of potential provider matches • The intent is that the client would select the best match based on the score or confidence indicator returned in the response

A list of suggested changes to pan-Canadian Models is:

Changes	Description
Separate Credentials and Expertise	• PPR is required to differentiate between the concepts of Credentials and Expertise within the Registry and when communicating with trusted subscribers – Example: A regulated health service provider achieved their Medical Degree (Credential) from the University of Alberta and may be recognized by the CPSA to have a Specialty (Expertise) in Internal Medicine • The current pan-Canadian Standard groups Credentials and Expertise together as a single concept. • Alberta and Ontario have collaborated to propose and pre-adopt an approved change that would separate Credentials and Expertise
Add Status Change Reason and Dates	• PPR is required to provide a Date and a Reason for when the regulatory College changes the provider's licensing status, when communicating with trusted subscribers – Example: A provider changes from a Status of 'Active' with a reason of 'Practicing' to a Status of 'Suspended' (Inactive) with a reason of 'Retired' on January 1st, 2013 • The current pan-Canadian Standard does not support the communication of this information. • Alberta has proposed and pre-adopted an approved change that would allow the communication of a Status Change Reason and Date.
Add Equivalency Indicator for Credentials and Expertise	• PPR is required to indicate the concept of Equivalency in relation to Credentials and Expertise – Example: A provider arriving from another jurisdiction (or country) will register with the regulatory College in order to be granted a license to practice in Alberta. As part of the process, the College may be required to confirm that the provider's declared Credential or Expertise is equivalent to those recognized within the jurisdiction • For instance; A Masters Degree in Nursing from a credential granting institution in the United Kingdom may be recognized to be equivalent to a Masters Degree in Nursing from a credential granting institution in Canada • The current pan-Canadian Standard does not support the communication of this information. • Alberta has proposed and pre-adopted an approved change that would allow the communication of the concept of Equivalency.

Changes	Description
Add a Registry Recorded Date	• PPR is required to differentiate between when a credential was recorded in the college registration system and when the credential was granted by the credential granting institution – Example: A provider graduated from the University of Alberta with a Medical Degree in 1998, but it was not entered into the CPSA registration system until May 7th, 2009 • The current pan-Canadian Standard only supports a single date for credentials, and does not specify whether it is the date the credential was achieved or recorded within the college registration system. • Alberta has proposed and pre-adopted a change that would allow the communication of a Registry Recorded Date for when provider information is entered within the College registration system.
Add a Confidence Value in the Response	• PPR is required to return a Confidence Value for each record returned in the Find Provider Candidates query. • The Confidence Value is a number that reflects the score returned from the PPR Enterprise Master Patient Index's matching algorithm and is attached to each provider returned in the Candidates List. • The intent of the value is to provide trusted subscribers with supporting information to allow them to make an informed decision when selecting a match to their query. • Alberta has proposed and pre-adopted an approved change, based on the established MR2009 Client Find Candidates query, that would allow the communication of a Confidence Value.

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Stakeholder Engagement

The PPR Messaging Specification project team has worked with following stakeholders:

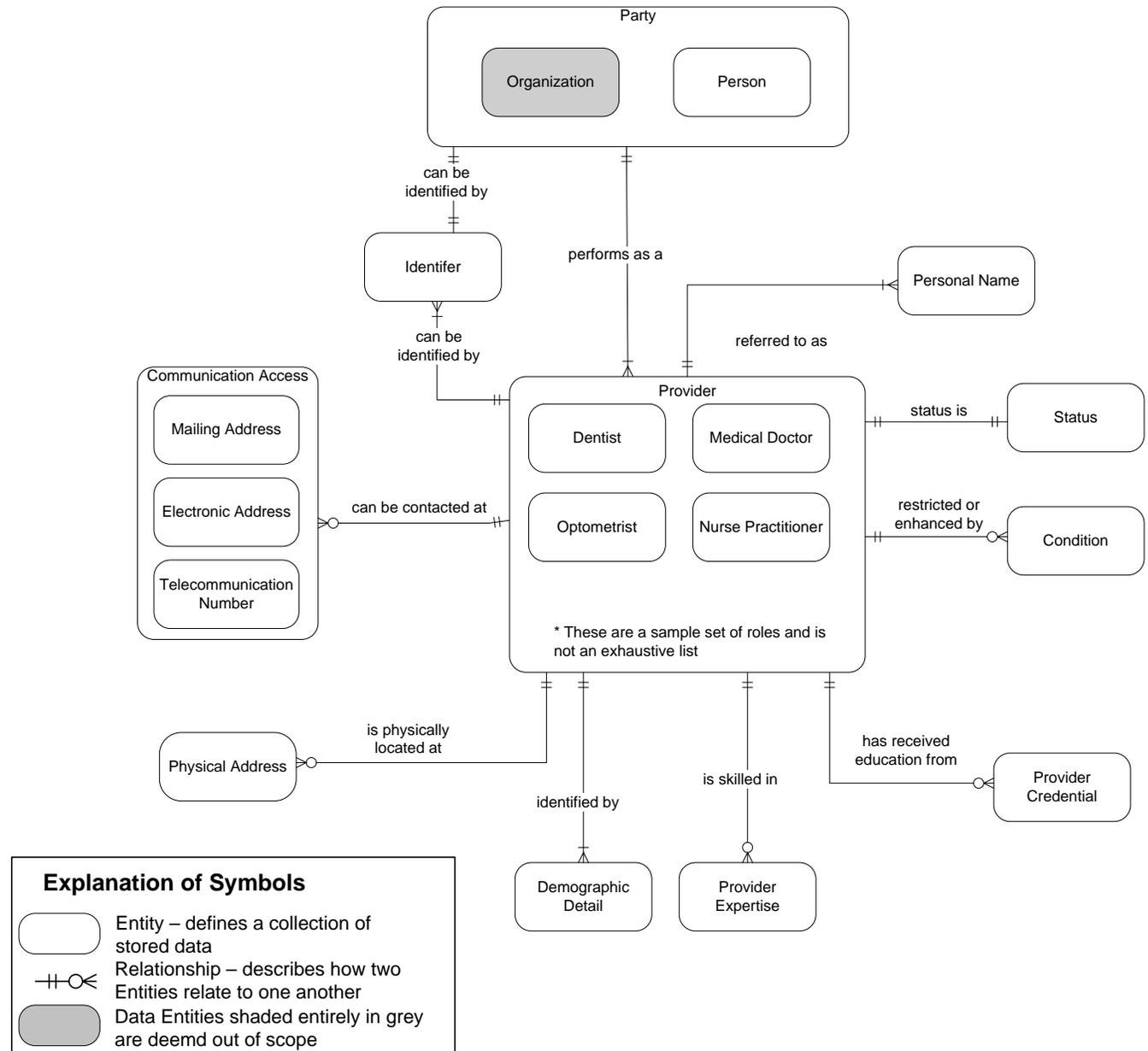CHI Standards Collaborative Working Group for the Non-Clinical Registries (SCWG7)
Partnership Conferences
Alberta Health (AH)

Implementing Systems

The PPR Messaging standard has been deployed in the Alberta Provincial Provider Registry Application.

Conceptual Data Model[1]

Explanation of Symbols

Entity – defines a collection of stored data

Relationship – describes how two Entities relate to one another

Data Entities shaded entirely in grey are deemd out of scope

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[1] The Conceptual Data Model is copied from STAKEHOLDER PROVIDER DATA SET v1.4, which is dated on March 1, 2012.

Specification Documents

This section summarizes the various files that are part of the specification.

Title	File Name (Without version / date suffix)	Comments
External Detailed Functional Requirements for Provider Active Messaging	Provider Domain External Detailed Functional Requirements.pdf	
HL7 V3 Implementation Guide for Provider Active Messaging	Provider Domain Implementation Guide.pdf	
HL7 V3 Technical Message Definition for Provider Domain	Provider Domain Technical Message Definitions.pdf	
HL7 V3 Technical Artifacts	Provider Registry Schemas.zip	
Samples of 6 Active integration Transactions	Sample Messages.zip	
Pan-Canadian Message Specification SC-0000-EN - Schema	Volume 1 Infrastructure - XML Schemas.zip	These files are listed solely for convenience. Copies should be obtained from Canada Infoway https://ic.infoway-inforoute.ca/en/

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