HEALTH INFORMATION STANDARDS COMMITTEE FOR ALBERTA

ALBERTA PROVINCIAL CLIENT REGISTRY HL7 V3

ACTIVE INTEGRATION MESSAGING SPECIFICATION MESSAGE
STANDARD SUMMARY

Status: Accepted in Draft
Version: 2.0
Status Date: 2011-May-17
Revision History

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date</th>
<th>Summary of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 05, 2010</td>
<td>First Release</td>
</tr>
</tbody>
</table>
| 1.2     | Jun 01, 2010  | 1) Minor wording changes to prepare document for distribution to Physician EMR vendors.  
2) Changed page 46 and enabled A_IssueEventDetected-basic to return business level errors.  
3) Section 6.2.1 – clarified communication vs. business level errors. |
| 1.3     | Jan 23, 2011  | 1) Updated document to reflect modification requests # 9, #10 and #11 for AHW February 2011 release change. Modification request #10 returns Alternate IDs for the physician community. Request #11 returns Secondary/Associated ULIs when a Primary ULI is entered as a search. Request #9 handles the conformance check for the version of the HL7 message specifications to which a vendor is conformed against. |
| 2.0     | Apr 04, 2011  | 1) Added Section 4.3 and updated Section 4.8 to comply with the message schema MR2007 V02R02.0. |
| 2.0     | May 17, 2011  | Endorsed by HISCA as Accepted in Draft |

Contact Information

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Background

Alberta Provincial Client Registry (PCR) is a trusted and effective client identification system built to link diverse information sources within and across health organizations and jurisdictions. It is a centralized repository where stakeholders are able to easily share demographic information.

Contributors to this repository currently are:
- Alberta Cancer Board
- Alberta Health (AH)
- Capital Health
- Calgary Health and
- Rural Regions.

As of April 2009, Alberta Cancer Board, Capital Health, Calgary Health and Rural Regions are governed under Alberta Health Services (AHS). For the purpose of clarity, AHS and the region's former names will be referenced throughout the document.

By leveraging existing investments from AH, Health Regions/Boards, and other health care providers/stakeholders to date, PCR provides several benefits:
- Accurate, consistent, timely identification of clients within and across health jurisdictions;
- Enhanced privacy and confidentiality of person information;
- Acceleration of stakeholder adoption and development of the Electronic Health Record (EHR);
- Reduced costs and risks associated with person misidentification;
- Improved health care delivery to the client at the point of care; and
- Alignment to the Canada Health Infoway vision of a Pan-Canadian Electronic Health Record.

PCR will ultimately provide the foundation for a province-wide EHR.

HL7 v3 messages are used for health information exchange for client identification in the PCR application.

Objectives

The objective of this document is to brief the readers of specifications developed by Alberta Health to support the requirements of the Provincial Client Registry (PCR). The PCR HL7 specification references the Infoway's Message Specification for Client Registry but tailored to Alberta's implementation. All documents necessary to implement developed Message Specifications are listed at the end.

Scope

In Scope

The scope of this summary includes information required to query the PCR using the HL7 v3 pan-Canadian query messages v02R02.0 as well as information necessary to understand the specification and how it should be implemented. The query messages and the responses in scope are:

Get Person Demographics Query
Get Demographics Query Response
Find Candidates Query
Find Candidates Response

The Get Person Demographics Query message sends a query to PCR using an Identifier, specifically a Unique Lifetime Identifier (ULI) requesting demographic information for a specific person identifier. The Find Candidates Query message sends a query to PCR requesting a list of candidates that match a particular set of person demographics such as name, Date of Birth (DOB) or gender. The response may also include a score indicating the probability of match for each candidate.

**Out of Scope**

- Changes required to the Physician Office System (POS) system in order to send Client Domain messages to the Client Registry (CR) system is the responsibility of the respective POS system.
- Authenticating the incoming message, performing the schema check, generating the response is the responsibility of the Health Information Architecture Layer (HIAL).

**Business Context**

**Active Integration**

Active Integration is a patient identification interface between the Registration application, in this case, a Pharmacy Management System (PMS) and the Provincial Client Registry (PCR). The PMS searches PCR during the registration process to access a list of potential candidates selected through a probabilistic algorithm. It delivers as current as possible patient demographic data and validates the Identifier ULI. The solution helps reduce the number of duplicates created during the registration process, eliminates redundant data entry and improves the registration process flow.

The diagram below represents the business model for client identity resolution activities within the pharmacy community. Note: The same concept could also apply to other communities.

The business model represents the major processes and business functions that a registration administrator within the pharmacy community may perform during the registration of a client or when maintaining client demographic data within the pharmacy.
The key components in the business model include:

Pharmacy Administrators who may or may not be responsible for maintaining client demographic data in the PMS will access the PMS, and register a client prior to prescribing.

The scenario below outlines the key processes illustrated by the business model:

A client presents at a pharmacy, and the pharmacy administrator performs a client search in the PMS. If not found, the pharmacy administrator will then perform a search in the PCR. If the client is found, the administrator will validate that the demographic data is correct and proceed with registration and prescribing. If there is a discrepancy, the administrator will request the client, if an Alberta resident, to update their demographic information at AH. The client can do this by submitting a completed form to AH, or by contacting an Authorized Registry office.

Once the demographic information is updated, the information will be corrected in PCR and should match the information in the pharmacy administrator’s PMS.
Standards Alignment

HL7 v3 pan-Canadian query messages MR2007 v02R02.0 have been used as-is to create PCR HL7 V3 Query/Response Messages.

Get Person Demographics Query
–occurs whenever a query is created for submission to the Provincial Client Registry whose only criteria is a Client Identifier

Get Demographics Query Response
–returns one client record with corresponding client information, such as address

Find Candidates Query
–occurs whenever a query is created for search in Provincial Client Registry whose criteria consists of various combinations of client demographic field values such as, first name, last name, date of birth, gender etc.

Find Candidates Response
–This interaction returns a list of candidates from a Client Registry that match a particular set of person demographics. The response will also include a score indicating the probability of match for each candidate.

Stakeholder Engagement

PCR HL7 V3 stakeholders
The PCR Messaging Specification project team has worked with following stakeholders:
Alberta Health (AH)
Health Information Standards Committee for Alberta (HISCA)

PCR HL7 V3 Query Message Users
AHW Pharmaceutical Information Network
Pharmacy Vendor Systems
Alberta Electronic Medical Record QSP systems

Implementing Systems
PCR Messaging has been deployed in Alberta Provincial Client Registry system.
Conceptual data model

Business Model: Stakeholder - Client Core Data Set

<table>
<thead>
<tr>
<th>Stakeholder Client – Core Data Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholder Identification</td>
</tr>
<tr>
<td>Person Name</td>
</tr>
<tr>
<td>Birth Date</td>
</tr>
<tr>
<td>Administrative Gender</td>
</tr>
<tr>
<td>Eligibility</td>
</tr>
<tr>
<td>Death Date</td>
</tr>
<tr>
<td>Language</td>
</tr>
<tr>
<td>Signature</td>
</tr>
<tr>
<td>Electronic Photograph</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Address</td>
</tr>
<tr>
<td>Canadian Address Label</td>
</tr>
<tr>
<td>Canadian Civic Address Label</td>
</tr>
<tr>
<td>Canadian Delivery Installation Address Label</td>
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<tr>
<td>Foreign Address Label</td>
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<tr>
<td>Communication</td>
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<tr>
<td>International Telecom</td>
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<tr>
<td>North American Telecom</td>
</tr>
<tr>
<td>E-mail</td>
</tr>
</tbody>
</table>
**Business Model: Stakeholder - Client Minimum Data Set**

<table>
<thead>
<tr>
<th>Stakeholder Client – Minimum Data Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person Name</td>
</tr>
</tbody>
</table>
## Specification Documents

### Specification Documents List

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

<table>
<thead>
<tr>
<th>Title</th>
<th>File Name (Without version / date suffix)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pan Canadian v3.0 V02R02.0</td>
<td></td>
<td>These files are not listed here. Please go to Canada Infoway to obtain copy <a href="https://ic.infoway-inforoute.ca/en/">https://ic.infoway-inforoute.ca/en/</a></td>
</tr>
<tr>
<td>Client Domain External Detailed Functional Requirements.pdf</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client Domain Implementation Guide.pdf</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client Domain Technical Message Definitions.pdf</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client Domain Terminology Supplement.pdf</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client Sample Messages.zip</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client Registry Schemas.zip</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client Domain Business field to HL7 v3 field mapping.xls</td>
<td></td>
<td>This document is to assist POS vendors to map their GUI/data fields to HL7v3 message fields. To generalize the names of GUI/data fields across vendor applications, we use the Data Element Names from the Alberta HISCA Stakeholder - Client Data Standard documentation</td>
</tr>
</tbody>
</table>

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