

IZ Profiles

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# Introduction

The Connecticut Immunization Registry and Tracking System (CIRTS) is the Connecticut statewide immunization registry established in July 1998 by legislative mandate and maintained by the Connecticut Department of Public Health Immunization Program. The purpose of CIRTS is to assure that children remain uptodate with their immunizations and that their records are available when needed.

The registry focuses on enrollment of children from birth up to first grade, but once a child is enrolled in the registry providers can continue to add immunization records indefinitely.

In April 2012, the original registry was replaced by a webenabled system that has been further updated to be able to receive immunization data electronically. As of the initial publication of this document, CIRTS was in preproduction for pilot testing of an electronic immunization message interface with provider electronic health record systems (EHR).

## Purpose

## Audience

The target audience for this Local IG is technical personnel supporting immunization information systems (IIS) and EHR-S that must implement these guidelines. The reader of this Local IG should have a solid HL7 foundation and be very familiar with the contents of the CDC IIS Functional Standards as well as the CDC IG.

## Referenced profiles - antecedents

## Scope

### In Scope

This Local IG is intended to facilitate the exchange of immunization records between external Health Systems and CIRTS, including:

* sending and receiving immunization histories for individuals
* requesting immunization histories for individuals
* requesting an evaluated history and forecast for individuals
* responding to requests for immunization histories by returning immunization histories
* responding to requests for evaluated history and forecast
* acknowledging receipt of immunization histories and requests for immunization histories
* reporting errors in the messaging process
* Sending observations about an immunization event (this may include patient eligibility for a funding program, reactions, forecasts and evaluations).

### Out of Scope

This Local IG is not intended to:

* Be a guide to enroll or register providers for Meaningful Use. That information can be found on the Connecticut Department of Public Health (CT DPH) Meaningful Use web page at www.ct.gov/dph/.
* Define message transport options. That information will be provided on request when eligible providers or their EHRs vendors enroll with CT DPH.

# Use Case

**Use Case Descriptions**

**Use Case 1"Send Immunization History**

**Goal:** To send an immunization history for an individual client from one system to another. In addition to EHR-S and IIS, other systems such as vital records systems or billing systems could use this message to send immunization histories. This goal includes receiving the immunization history. **Supporting HL7 version 2.5.1 Message Type: VXU " Profile Z22**

**Precondition:**A user or other actor requests that the sending system send an immunization history.

**Post-condition:** The receiving system has accepted the immunization history.

**Use Case 2"Request Complete Immunization History**

***Goal:*** The goal of this use case is to request and receive a complete immunization history from another system.

**Supporting HL7 Version 2.5.1 Message Type: QBP "Profile Z34 and RSP "Profile Z32.**

**Precondition:**A user or other actor requests that the sending system send a request for an immunization history using demographic information and/or other identifiers.

**Post-condition:**The requesting system receives an immunization history. Note that if no matches are found or there are errors, no immunization history will be returned.

There are 5 possible results:

* One client matches exactly the criteria sent
* One or more clients match the criteria sent (inexact match)
* No clients match the criteria sent
* An exact match is found but they have requested that their data not be shared
* There were errors or other problems

Note that systems must deal with the situation where a Client has indicated that his/her records must be protected. (Only the owning provider may view) This should be clearly documented.

**Use Case 3"Request Evaluated History and Forecast**

***Goal:*** The goal of this use case is to request and receive an evaluated immunization history and forecast of next doses due from another system.

**Supporting HL7 Version 2.5.1 Message Type: QBP "Profile Z44 and RSP "Profile Z42.**

**Precondition:**A user or other actor requests that the sending system send a request for an evaluated history using demographic information and/or other identifiers.

**Post-condition:**The requesting system receives an evaluated immunization history and forecast. Note that if no matches are found or there are errors, no immunization history will be returned. Typically, this is presented to the person who requested the evaluated history and forecast.

There are 5 possible results:

* One client matches exactly the criteria sent
* One or more clients match the criteria sent (inexact match)
* No clients match the criteria sent
* An exact match is found but they have requested that their data not be shared.
* There were errors or other problems

Note that systems must deal with the situation where a Client has indicated that his/her records must be protected. (Only the owning provider may view) This should be clearly documented.

**Use Case 4"Send Demographic Data**

**Goal:** The goal of this use case is to send demographic data about a person. It may be an update or a new record. This use case does not have responsibility for the processing of the message.

**Precondition:**A user or other actor requests that the sending system send demographic data.

**Post-Condition:** The receiving system processes and accepts the demographic data.

Demographic data may be sent in VXU messages (for example , the Z22 profile defined in this Implementation Guide can be used to carry demographic only data) or ADT messages. Profiles for ADT are not included in this Implementation Guide. Refer to the HL7 Standard and to profiles published by groups such as IHE.

**Use Case 5--Acknowledge Receipt**

**Goal**:

The goal of this use case is to acknowledge receipt of a message. This can be an immunization history, request for immunization history, demographic update, observation report or request for personal id. It may indicate success or failure. It may include error messages. One example occurs when a query is wellformed, but finds no candidates. In this case the acknowledgement reports this fact.

**Supporting HL7 Version 2.5.1 Message Type: ACK "Profile Z23 and RSP " Profile Z33.**

**Use Case 6"Report Error**

**Goal:**

The goal of this use case is to send error messages related to messages. These errors could result in rejection of the message or parts of the message.

**Supporting HL7 Version 2.5.1 Message Type: ACK "Profile Z23 and RSP " Profile Z33.**

[[1] The definition of exact is a local business rule and should be documented locally.](#_ftnref1)

[[2] If more than one client has a high-confidence match with the query parameters, this is an inexact match.](#_ftnref2)

[[3] The definition of exact is a local business rule and should be documented locally.](#_ftnref3)

[[4] If more than one client has a high-confidence match with the query parameters, this is an inexact match.](#_ftnref4)

## Actors

There are a number of primary actors involved in data exchange. These include:

* Immunization Information System (IIS).
* Electronic Health Record Systems (EHR-S) and other systems
* An actor with a supporting role may be a Master Person Index (MPI).
* An actor with a supporting role may be a Health Information Exchange (HIE)

## Use case assumptions

### Pre Conditions

### Post Condition

### Functional Requirements

## Sequence diagram

**Immunization Messaging Use Cases**

[MISSING IMAGE: , ]

### Error Handling

The goal of this use case is to send error messages related to messages. These errors could result in rejection of the message or parts of the message.

**Supporting HL7 Version 2.5.1 Message Type: ACK "Profile Z23 and RSP " Profile Z33.**

### Acknowledgement

**Acknowledge Receipt**

**Goal**:

The goal of this use case is to acknowledge receipt of a message. This can be an immunization history, request for immunization history, demographic update, observation report or request for personal id. It may indicate success or failure. It may include error messages. One example occurs when a query is well formed, but finds no candidates. In this case the acknowledgement reports this fact.

**Supporting HL7 Version 2.5.1 Message Type: ACK "Profile Z23 and RSP " Profile Z33.**

# Use Cases

## Actors

## General Assumptions

### Assumptions

### Pre-conditions

### Post-conditions

## Use Case

### User Story

### Context

### Scenario

### Interaction Model

### Functional Requirements

# Message Infrastructure

## Conformance Profiles

## Segments and Field Descriptions

## Datatypes

## Value Sets