Query and Response Profile (QBP/RSP)

Rhode Island supports the query and response profile for HL7 Version 2.5.1: Implementation Guide for Immunization Messaging, Release 1.5, including the Addendum (hereafter referred to as “CDC Implementation Guide”). The CDC Implementation Guide and Addendum can be found in combined format on the American Immunization Registry Association (AIRA) web site: <https://repository.immregistries.org/files/resources/5bef530428317/hl7_2_5_1_release_1_5__2018_update.pdf>

Please refer to this document for implementation guidance, considering the Rhode Island exceptions and implementation decisions defined below.

Query/Response is accessed utilizing the same transport and URL as are used for sending HL7 2.5.1 VXU messages to the Registry. To utilize Query/Response Senders must be authorized by Registry staff. Contact Interface Development at [RIDOH.RICAIROnboarding@health.ri.gov](mailto:RIDOH.RICAIROnboarding@health.ri.gov)

Please note Rhode Island will return R and RE data elements that are stored in the Registry. However, in some instances, messages will have missing R-Required data elements that are not available in the data base.

## **Supported Profiles**

Rhode Island supports:

Z34 Request a complete immunization history

Z32 Return a complete immunization history – response to Z34

Z33 Return an acknowledgement with no person records - response to Z34 and Z44

Z31 Return a list of candidates - response to Z34

Z44 Request evaluated immunization history and forecast

Z42 Return evaluated history and forecast - response to Z44

## **Local Implementation Details by Profile**

The CDC Implementation Guide describes all segments and elements in the supported profiles. In Rhode Island’s Response profiles, the following segments have special rules or implementation details that are worth noting.

### **Profile Z34 - Request a Complete Immunization History**

Per the CDC Implementation Guide, patient demographic information supplied in the QPD segment is subject to local search and matching rules. Rhode Island’s matching rules are described below:

* Minimum requirements for a search: QPD-5: Patient Name (Last Name & First Name required, Middle Name optional), QPD-7: Patient DOB, and QPD-8: Patient Sex; otherwise, no match (Z33) will be returned.
* Rhode Island's Query/Response service can utilize KIDSNET/RICAIR IDs in the QPD-3 for matching purposes if the Identifier Type Code: "**SR**" (State Registry) and Assigning Authority: "**RIA**" is present. The KIDSNET/ RICAIR ID may serve as a tiebreaker to narrow a search to one specific child.
* Searching implementation: Rhode Island currently executes a deterministic search strategy, followed by a probabilistic strategy if no exact match can be found. If multiple matches are found, in response to Z34, the Registry returns a list of candidate matches (Z31).
* When a query is for a patient whose information has a protection indicator or sharing restrictions, Rhode Island will return a Z33, indicating no match

### **Profile Z44 - Request Evaluated Immunization History and Forecast**

The Registry’s-specific rules for the Z44 profile are the same as specified for the Z34 profile (above), except in the case of multiple matches, the Z44 profile does not return a list of candidate matches (Z31); instead, it returns no match (Z33).

**Profile Z31 – Return a List of Candidates**

The Registry will return no more than 4 potential matching candidates.

**Profile Z32 – Return Complete Immunization History**

ORC-17.1 (Entering Organization) Rhode Island will return the Provider Id sent to the Registry when the immunizations were submitted.

The ORC segment has limited data for immunizations submitted prior to 2014.

PD1-16 This is the Rhode Island’s Registry Status. It does not indicate whether the individual is active with the Provider but reflects their status with the Registry.

PID-3.1 contains the KIDSNET / RICAIR ID, PID-3.4 Rhode Island (RIA) is the assigning authority, and PID-3.5 indicates that it is the State Registry ID (SR)

**Profile Z33 – Return an Acknowledgement with No Person Records**

The Registry will return a Z33:

* For queries that do not contain QPD-5: Patient Name (Last Name & First Name required), QPD-7: Patient DOB, and QPD-8: Patient Sex
* For queries for individuals with a protection indicator or sharing restrictions
* For any query where there are no high-quality matches
* In response to a Z44 where there is more than 1 high-quality match

**Profile Z42 – Return Evaluated History and Forecast**

A Z42 is returned when there is a single high-quality match in response to a Z44. The Registry specific rules for the Z42 profile are the same as specified for the Z32 profile, except for Evaluated Immunizations and Immunization Forecasts which are returned in the Z42 and not in the Z32.

Please Contact Interface Development at [RIDOH.RICAIROnboarding@health.ri.gov](mailto:RIDOH.RICAIROnboarding@health.ri.gov)