



Indiana Department of Health
Division of Immunizations
Query and Response Checklist



Complete this checklist to see if your organization is ready to electronically query CHIRP, Indiana's statewide Immunization Information System (IIS) immunization from your Electronic Health Record (EHR) using HL7 messaging message type QBP. You will also find QBP Message Structure Specifications.

To enter the HL7 Onboarding Registration Queue for Query/Response, you must meet all the requirements below:

- Our organization/facility administers immunizations, and we have a facility ID for all facilities that will be querying through the interface.
- Our software supports SOAP Web Services using the CDC WSDL. Click on the link below to see details:
 - [CDC Transport \(SOAP\)](#)
- Our software meets the requirements of the IN-Implementation Guide for HL7 2.5.1 Immunization Messaging for bi-directional data exchange (QBP/RSP).
- Our clinic was approved by CHIRP for sending VXU messages.
- Our organization and EHR vendor are ready and prepared to provide staff time and other resources necessary for efforts to develop, test, configure, and implement a bi-directional interface with CHIRP.
- Other recommendations:
 - Become familiar with the CDC HL7 2.5.1 requirements for queries in the [CDC Implementation Guide for Immunization Messaging](#).
 - Consider asking your vendor for a demonstration of the query/response functionality. If given, consider inviting our interoperability representative to join you.
- Test messages; below you will find a test QBP Message, RSP Message with exact match, RSP Message with multiple matches and RSP Message with forecast information.

*Query and response deduplication refers to the process of identifying and removing duplicate queries and their corresponding responses within the system, essentially ensuring that only unique data is stored and processed, thereby improving query performance by eliminating redundant data. This process can typically have a turnaround time of 24-48 hours.

QBP Message Structure Specifications

Segment Group

To return an exact match, PHC Hub requires these segments to always be submitted in a QBP message:

QBP^Q11^QBP_Q11			Query Grammar: QBP Message	Usage
MSH	Message Header Segment			R
QPD	Query Parameter Definition			R
RCP	Response Control Parameter			R

Source: Table 7-3: Z34 Request Complete Immunization History, from the HL7 Version 2.5.1 Implementation Guide: Immunization Messaging (Release 1.5) 10/1/2014, p. 141.

Example:

```
MSH|
QPD|
RCP|
```

MSH Segment

To return an exact match, the MSH segment must have the following fields valued.

SEQ	LEN	Data Type	Cardinality	Value set	Element Name	Usage	Constraint
1	1	ST	[1..1]		Field Separator	R	The MSH.1 field shall be
2	4	ST	[1..1]		Encoding Characters	R	The MSH.2 field shall be ^~\&
4		HD	[0..1]	362	Sending Facility	C(R/O)	If MSH.22 is not valued
9	15	MSG	[1..1]		Message Type	R	QBP^Q11^QBP_Q11
21		EI	[1..*]		Message Profile Identifier	R	Z44^CDCPHINVS
22		XON	[0..1]	362	Sending Responsible Organization	RE	

Source: Table 7-4: MSH Specification for Request Complete Immunization History Query, from the HL7 Version 2.5.1 Implementation Guide: Immunization Messaging (Release 1.5) 10/1/2014, p. 142.

Modification: MSH-4 has been altered and no longer matches the original source.

Note: If you are expecting a Z42 response, the MSH-21 field must contain a Z44 value. If MSH-21 is left blank, it performs like Z34. If Z44 is sent in, it returns forecasting information regardless of the Import Profile Query Settings > Return Vaccination Forecast setting (see Import Profile Query Settings).

Example:

```
MSH|^~\&||MHM^1346250057||||QBP^Q11^QBP_Q11|||||||MHM^1346250057
```

QPD Segment

To return an exact match, the QPD segment must have the following fields valued, using one of the two following examples.

QPD-3.1, QPD-3.5

Field Seq (Query ID=Z34)	Name	Key/Search	Sort	LEN	TYPE	Usage	Rep	Match Op	TBL	Segment Field Name	Service Identifier Code	Element Name or Value
3	PatientList				CX	RE	Y			PID.3		PID-3: Patient Identifier List

Source: Table 7-5: QPD Input Parameter Specification, from the HL7 Version 2.5.1 Implementation Guide: Immunization Messaging (Release 1.5) 10/1/2014, p. 145.

SEQ	Component Name	Data Type	Usage	LEN	Conditional Predicate	Value Set	Comments
1	ID Number	ST	R	15			
5	Identifier Type	ID	R	2.5		HL70203	

Source: Table 4-6: Extended Composite ID with Check Digit (CX), from the HL7 Version 2.5.1 Implementation Guide: Immunization Messaging (Release 1.5) 10/1/2014, p. 36.

Example:

QPD|||123456789^^^^MR

QPD-4.1, QPD-4.2, QPD-6.1

Field Seq (Query ID=Z34)	Name	Key/ Search	Sort	LEN	TYPE	Usage	Rep	Match Op	TBL	Segment Field Name	Service Identifier Code	Element Name or Value
4	PatientName				XPN	RE				PID.5		PID-5: Patient Name
6	Patient Date of Birth			26	TS_NZ	RE				PID.7		PID-7: Patient date of birth

Source: Table 7-5: QPD Input Parameter Specification, from the HL7 Version 2.5.1 Implementation Guide: Immunization Messaging (Release 1.5) 10/1/2014, p. 145.

SEQ	Component Name	Data Type	Usage	LEN	Conditional Predicate	Value Sets	Comments
1	Family Name	FN	R				
2	Given Name	ST	R	30			

Source: Table 4-31: Extended Person Name (XPN), from the HL7 Version 2.5.1 Implementation Guide: Immunization Messaging (Release 1.5) 10/1/2014, p. 61.

SEQ	Component Name	Data Type	Usage	LEN	Conditional Predicate	Value Set	Comments
1	Time	DTM	R				

Source: Table 4-25: Time Stamp No Time Zone (TS_NZ), from the HL7 Version 2.5.1 Implementation Guide: Immunization Messaging (Release 1.5) 10/1/2014, p. 52.

Example:

QPD|||SMITH^JOHN||20150122

RCP Segment

Although an RCP segment is a required segment group, there are no fields in this segment that must be provided.

Example:

RCP|

Completed Examples

The following are completed examples:

MSH|^~\&|||||QBP^Q11^QBP_Q11 Or MSH|^~\&|||||QBP^Q11^QBP_Q11
 QPD|||123456789^^^^MR QPD|||SMITH^JOHN||20150122
 RCP| RCP|

CONTACT US

The state of Indiana mandates the use of the registry for certain providers. For more information about the CHIRP requirements, please contact the CHIRP Help Desk at 888-227-4439 or chirp@health.in.gov.