



EMR Integration with ImpactSIIS (Ohio's Statewide Immunization Information System at the Ohio Department of Health)

Version 1.5

**Last Updated: 12/29/2017
(Updated terminology and process to reflect recent transition to new registry platform)**

EMR Integration with ImpactSIIS

(Step by Step Processes)

I. Data Exchange Type

1. Batch files or real time for Inbound/VXU
2. Outbound/Bi-directional in real-time
3. Outbound/Bi-directional for HL7 version 2.5.1

II. Frequency

4. Recommendation is no less frequent than weekly for most organizations, but it is up to the sender. Most send either messages in real-time or daily batches.

III. Connectivity

5. The mode of connectivity between the sender and ODH must be determined. Please refer to our “Mode of Connectivity” [document](#).
6. We suggest testing the connectivity.
 - a. In this process the sender will send testing file / data through newly established connectivity
 - b. ODH will verify and confirm receipt.

IV. ImpactSIIS Facility Identification

7. We uniquely identify each facility, or location where immunizations are administered in the Immunization Registry. This is because in ImpactSIIS every patient, shot, and provider will be associated with a facility that oversees the data and its accuracy and is considered the owner for reporting.

Facility registration also allows ImpactSIIS staff to train and support on-site users in a practice who will have access to add / edit / view immunization data of all patients in the system.

 - a. ODH will ask the sender to send information about all the locations with providers who might order immunizations before any data exchange begins.
 - b. If a facility is not in ImpactSIIS, ODH will initiate the following process:
 - i. Request that the facility [register online](#) and submit a Security Agreement from the practice with an original signature
 - ii. Create a Facility Profile in ImpactSIIS and offer to train employees at that facility.
 - iii. If desired, also train users in that facility to load providers so that the ordering and administering providers of shots can be recorded in the Immunization Registry.
 - c. If a facility is already an ImpactSIIS user, then ODH is ready to offer requested training about ImpactSIIS.

V. Message Types

Vocabulary

8. The following are the possible message types which can be sent between Sender and ODH
 - a. VXU
 - b. QBP
 - c. RSP
 - d. ACK

To create and send HL7 Messages, refer to our implementation guides for HL7 messages, segments and fields listing.

- a. For our preferred method, [HL7 version 2.5.1](#), refer to the CDC guide.

File Name Convention

9. Sender should follow the following file naming convention while forwarding data to ODH Immunization Registry.
 - a. File name should be unique. A date/time stamp can be used in the filename to make it unique; a sequence number/MSH-10 can also be used as an alternate to date/time stamp.
 - b. Do not rename the file after sending / placing the file to ODH network, since ODH will start processing the sent file immediately and re-naming will lead to conflicting errors after processing.
 - c. File extension should be either .txt or .hl7

Practice / Provider Identification

10. ODH Immunization Registry shall identify these through sending facility, Provider NPI and Clinic NPI fields.
 - a. **Sending Facility:** Sender / ODH shall pass the state generated ID in MSH-4 segment to uniquely identify the sending facility. Vaccine inventory will only be affected at the practice identified in MSH-4.
 - b. **Provider NPI (National Provider Identifier) as provider identifier:** Sender / ODH shall pass Provider NPI in the RXA-10.1 segment, to identify the ordering provider of the shot. The word "NPI" shall be passed in RXA 10.13 as identifier type code. The same information could also be included in ORC 12.1 and ORC 12.13, which is the expectation for HL7 version 2.5.1.

Validation / Field Verification

11. VXU messages can be validated online through a web-based engine. This requires registration at [our online format evaluation tool](#) and then upload of a file. The tool will supply feedback for format about each field submitted. ODH insists that no live data be submitted here. Files submitted and the feedback will be purged.
12. Fields that shall be validated for data correctness include:
 - a. **Administered Code:** The Immunization Registry accepts CPT, CVX, and sale

NDC Codes for vaccines administered.

- i. Submitting only the CPT code: |^^^90700^DTaP^CPT|
 - ii. Submitting only the CVX code: |20^DTaP^CVX|
 - iii. Submitting both CPT and CVX codes: |20^DTaP^CVX^90700^DTaP^CPT|
 - iv. Submitting Sale NDC code: |00358160810114^DTaP^NDC|
- b. **PID Segment:** PID -3 Patient Identifier list should be unique for the patient within your organization and is required. Our preference for type is 'MR'.
 - c. **Phone Format:** The phone numbers should be formatted as (614)567-8910 or 614 in PID 13.6 and 5678910 in PID 13.7.
 - d. **RXA Segment:** In RXA-15, Lot number should not be combined with Manufacturer code or any other numbers. It should be the lot number on the external package.
 - e. **PV1 Segment:** PV1 segment is used to determine if the Patient is VFC eligible at the visit level. At the dose level, this information can be sent in an OBX segment, which is the expectation for HL7 version 2.5.1.
 - f. **Blank Spaces:** Leading and trailing spaces should be trimmed out before constructing HL7 messages in all segments.

VI. Testing with Data - Sender

- 13. Sender shall create test scenarios for each message type (VXU, QBP) they will send to ODH.
 - a. Sender should also test scenarios for Immunization Delete messages.
 - b. Sender shall construct the message with sample data and send it to ODH to be loaded in the ImpactSIIS test environment.

VII. Testing with Data - ODH

- 14. ODH Immunization Registry shall do the following testing / validation once it receives the Message from the sender before loading
 - a. Is Valid HL7 Message
 - b. HL7 Code set validation
 - i. Sex
 - ii. Ethnicity
 - iii. Race
 - iv. Language
 - v. Country
 - vi. Relationship
 - vii. VFC Eligibility
 - viii. CVX
 - ix. MVX
 - x. CPT
 - xi. Body Site
 - xii. Route
 - xiii. Identifier Type
 - xiv. Action Code for Add / Delete Immunization.

VIII. Results / Output

15. ODH will load data, including the first week's production data that is sent, into a Testing Environment.
 - a. Immunization Registry staff can load the data from VXU messages upon notification of file(s) being sent.
 - i. File should contain all immunizations entered in a defined time period.
 - ii. ODH will review results and assist clinical staff in doing the same.
 - iii. Clinical staff should validate that all immunizations on all patients are found with the correct product names and VFC eligibility, if applicable, is recorded properly.
 - b. Immunization Registry HL7 message handler will read the query (QBP) and create RSP messages as output.

16. ODH will provide access to sender to open the Web application and see the uploaded file status and review the data. We strongly recommend that clinical staff review the data to give feedback and understand how transmitting electronic data will affect their use of the registry.