



Mode of Connectivity Quick Reference Guide

Transport of Immunization HL7 Messages via Secure HTTP (HTTPS)

HL7 messages are received by the MIIX (Mississippi Immunization Information Exchange) inbound interface and processed in a two-stage manner. The first stage is where the message content and validation is performed by an integration tool called Public Health Connection Hub (PHC-Hub™). The second stage applies MIIX business rules and updates the patient's immunization record. MIIX supports the user ID and password for security (HTTPS) to connect to PHC-Hub.

1. When transporting identifiable health information, the privacy of the information must be insured. The HTTPS protocol provides encryption and is recommended by the standard.
2. The interface will need to use the Internet public network for communication. The transaction must be encrypted using the HTTPS protocol.
 - PHC-Hub has a security certificate if needed
 - Please contact the MIIX program staff at (601)576-7751 for further information.
3. Health information messages state important facts about personal information. Because of this, it is necessary to provide assurance of the identity of the party asserting the personal information in these messages. Authentication provides such assurance.
4. Exchange Requirements:
 - Use HL7 Version 2.5.1 (Implementation Guide for Immunization Data Transactions Using Health Level Seven (HL7) Standard Version 2.5.1)
 - When the sending application sends MIIX an HL7 message via HTTPS POST command, it must have USERID, PASSWORD, MESSAGEDATA
 - Send your local patient identifier with all VXUs
 - Search (using a QBP) based on either an ID (state registry ID, local patient ID/medical record number, Social Security number, or Medicaid number) or the combination of patient first name, last name, and date of birth.
5. When using UserID/Password authentication, the EHR application initiates the HTTPS transaction to PHC-Hub with the following data fields that populate the message. These parameters are consistent in all three POST format options shown below.
 - USERID – Assigned by MIIX
 - PASSWORD – Assigned by MIIX
 - MESSAGEDATA – The HL7 message as ASCII text. The message must begin with the character using “MSH”.
6. The HttpPostForwarder (proxy) service forwards HTTP POST messages to the MIIX and returns the response back to the sender. The proxy service accepts POST messages in three different formats.
 - **Option 1:** for sending POST messages to the proxy service is a *multipart/form-data* POST with a boundary. Example HTTP POST message:

```
POST http://agen-dev-app:8702/HttpPostForwarder HTTP/1.1
Content-Type: multipart/form-data; boundary=-----
8cf28f71e050b80
Host: agen-dev-app:8702
Content-Length: 573
Expect: 100-continue
Connection: Keep-Alive

-----8cf28f71e050b80
Content-Disposition: form-data; name="UserID";

test_user
-----8cf28f71e050b80
Content-Disposition: form-data; name="Password";

test_password
-----8cf28f71e050b80
Content-Disposition: form-data; name="FacilityID";

MSH|^~\&|||||VXQ^V01|||2.4
QRD|||I||25^R|^special^ashane|VXI|SIIS
QRF|||~20010101

-----8cf28f71e050b80
```

- ```
POST http://agen-dev-app:8702/HttpPostForwarder HTTP/1.1
Content-Type: application/x-www-form-urlencoded
Host: agen-dev-app:8702
Content-Length: 235
Expect: 100-continue

MESSAGEDATA=MSH%7c%5e%7e%5c%26%7c%7c%7c%7c%7c%7cvXQ%5ev01%7c%7c%7c2.4%0aQRD%7c%7c%7ciE7%7c%7c%7c%7cz5%5eRk%7c%5especial%5eshane%7cvXI%7cSII%0aQRF%7c%7c%7c%7c%7ce200
10101%0aUSERID=test_userPASWORD=test_password
```

- ```
HTTP/1.1: app:8702/HttpPostForwarder/test_user/test_password HTTP/1.1
Content-Type: text/plain
Host: agen-dev-app:8702
Content-Length: 88
Expect: 100-continue
Connection: Keep-Alive
```
- ```
MSH ^~&|||VXQ^V01|||2.4
QRD |I||25^R|^special^shane|VXI|SIIS
QRF ||~20010101
```

- ## Transport Via SOAP

- | Parameter  | Input/Output | Data Type | Description                                                           |
|------------|--------------|-----------|-----------------------------------------------------------------------|
| username   | Input        | String    | IIS username                                                          |
| Password   | Input        | String    | IIS password                                                          |
| facilityID | Input        | String    | IIS Facility ID                                                       |
| hl7Message | Input        | String    | HL7 version 2.x message (e.g.: 2.3.1, 2.5.1, etc...) intended for IIS |
| Return     | Output       | String    | HL7 version 2.x response (e.g.: 2.3.1, 2.5.1, etc...) from IIS        |

<https://www.cdc.gov/vaccines/programs/iis/technical-guidance/SOAP/downloads/transport-specification.pdf>

- MIIX PHC-Hub Test for CDC WSDL:  
<https://test.MIIXhealthvms.org/phctst/soa/HL7Service.wsdl>
- MIIX PHC-Hub Production for CDC WSDL:  
<https://MIIXhealthvms.org/phc/soa/HL7Service.wsdl>

NOTE: if you are trying to use SOAP UI with Java 7, you will get an SSL handshake error. Java 8 will resolve this.

3. Once the message has been sent, the EHR should expect a standard acknowledgement (ACK) message in response. The ACK message is part of the single HTTP transaction and is returned over the same connection. Error messages with details on why the inbound HL7 message was not successfully processed are also returned.



**Questions?** Please contact us at (601)-576-7751.