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Information and instructions included in this reference guide periodically change with system updates and are subject to annual review. Please be advised: Images and directions may no longer replicate current system function.
MCIR HL7 MESSAGE VIEWER

What is the HL7 Message Viewer?

The HL7 Message Viewer is a data quality tool for reviewing Health Level-7 (HL7) Unsolicited Vaccine Record Update (VXU) messages submitted to MCIR's HL7 interface for Onboarding (OBRD) or Production (PROD).

You can use this tool to locate HL7 VXU messages, and view details about what was submitted to MCIR and how MCIR responded. The HL7 Viewer displays each HL7 VXU message submitted to MCIR by an authorized provider site, including information from the original message, the ACK that was returned, the HL7 Transfer Report data on a message and the timestamp for when each message was received.

HL7 Message Viewer Benefits

- makes HL7 messages easily readable.
- assists in finding data quality issues (troubleshooting).
- assists in determining the required data correction measures.

ACCESSING THE VIEWER

Site Access: Any site with an approved HL7 interface will have access to the Viewer.

User Access: Users with access to multiple sites will only have access to the Viewer for those sites with an approved HL7 interface.

MCIR Landing Page Access

From the MCIR Landing Page ("home screen"), click on the HL7 Message Viewer link, found under the Import/Export section of the screen.
Alternate HL7 Viewer Access

A Provider Administrator can access the Viewer from the MCIR Landing Page or from the Edit My Site screen. To access from the Edit My Site screen:

Step 1: Click on the Edit My Site link, under the My Site section of the MCIR Landing Page.

Step 2: From the Site Information screen, click on the Transfer Interfaces tab.

Step 3: Click on your site Name.

Step 4: From the Transfer Interface Edit screen, click on your site’s PIN number.

Step 5: The Viewer should open.
NAVIGATING THE HL7 VIEWER

Site Search

Once logged into the Viewer, users connected to only one HL7 provider site will be directed to the site’s Recent Activity screen (next section of this reference guide).

Users with access to multiple HL7 provider sites will be required to perform a Site Search before being directed to the site’s Recent Activity screen. A site search can be performed by using either the site’s name or HL7 Pin. When searching by pin, be sure to include all 8 digits with hyphens (Ex: XXXX-XX-XX).

Recent Activity

The Recent Activity screen provides a calendar summary for a site’s past two years of messages. Hovering your mouse over a date will display the total number of messages sent on that day. The darker the green, the higher the message count. Dates in white have “No Activity.”

Note: Calendar dates appear in chronological order, reading up to down, left to right. It may be necessary to decrease the display of your computer screen to see the entire year at a glance.
**Date Specific Messages Detail View**

Double-clicking a date on the **Recent Activity** screen will display a summary of all messages sent on the selected date.

A single day’s HL7 message activity:
- is displayed in order of the **Message Received Date** timestamp.
- can be navigated by using the **page numbers**, **Prev** and **Next** at the far bottom of the screen.
- filtered by a text search and/or the message’s ACK status (defined on pg. 8).
- viewed and filtered by MCIR HL7 Transfer Report Statistics (defined on pg. 10).
- viewed and filtered by a single Message Control ID.

Each of these features defined and explained above is outlined in greater detail on pages 8-11 of this reference guide.
Message Received Date:

All messages, for a single date, are displayed in order of the Message Received Date’s timestamp.

To change the activity date for the messages you are viewing, toggle the arrows to the right and left of the date currently being displayed (upper right corner of your screen). Note: The dates will only toggle between days where activity (a message count) was recorded.

Example: If HL7 VXU messages were submitted on January 23rd and not again until January 25th, the calendar date’s arrows (image below) will take you directly from January 23rd to January 25th. The calendar will skip January 24th because “No Activity” was recorded for that date.

To change the year of the activity you are viewing, click the large arrows to the left of the calendar year currently displayed on your screen.

Navigating a Specified Date’s Message Activity:

From the very bottom of the page, you can browse all messages for a specific day by clicking on the Prev, Next or a page number.
**Filtering a Specified Date’s Messages:**

To filter message details for a selected date, click on the **Filter** button in the upper left corner of the screen, directly beneath your site’s name.

![Filter button](image)

From the **Message Filter** screen, choose your filters and click **OK**.

You can choose up to a total of 4 filters:
1 Full Text Search and one, two or all three ACK Statuses (AA, AR and AE).

When an ACK Status Filter is unselected, it will appear white. The default Message Filter is automatically set to include all three ACK Statuses. You must click to **unflag** any ACK status(es) you do not wish to include in your search (i.e., filter).

![Message Filter](image)

In the below example, “Alyce” is being searched, along with the AA and AR ACK Statuses. The AE ACK Status has been removed from the search:

![Full Text Search](image)

![Ack Status](image)
The filters you have chosen will appear at the top of the screen. To remove a filter, click on the “X” preceding the filter.

Ack Messages Defined

**AA** Application Accept  Message was accepted without error.

**AE** Application Error  Message was processed and errors are being reported. AE is sent whenever an error is detected. This may range from data that are ignored because they are not wanted to rejection of the entire message.

**AR** Application Reject  Message was rejected because one of the following occurred:
- Unsupported Message Type
- Unsupported Event Code
- Unsupported Processing ID
- Unable to process for reasons unrelated to format or content.
View & Filter by MCIR HL7 Transfer Report Statistics:

Along with the ability to filter by text and/or ACK Status, you can also choose to filter by a single HL7 Transfer Report Statistics option. The filter you choose will turn green. Changing an HL7 Transfer Report Statistics filter option will overwrite the previously selected HL7 Transfer Report Statistics filter.

View & Filter a Single Message by Message Control ID

To view details of a specific message, click on the Message Control ID. The Viewer will navigate to the Message Information screen.

To return to the full list of messages by date, click on the Return to List link in the upper left corner of the Message Information screen.
To filter data submitted in a single message, enter the **Value, Segment, Location, Field Repetition** or **Location Description** into the search bar.

<table>
<thead>
<tr>
<th>Value</th>
<th>Segment</th>
<th>Location</th>
<th>Field Repetition</th>
<th>Location Description</th>
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<tbody>
<tr>
<td>^~&amp;</td>
<td>0</td>
<td>MSH-2</td>
<td>1</td>
<td>Encoding Characters</td>
</tr>
<tr>
<td>1366-70-91</td>
<td>0</td>
<td>MSH-4-1</td>
<td>1</td>
<td>Sending Facility - Namespace ID</td>
</tr>
<tr>
<td>MCIR</td>
<td>0</td>
<td>MSH-5-1</td>
<td>1</td>
<td>Receiving Application - Namespace ID</td>
</tr>
<tr>
<td>MDCH</td>
<td>0</td>
<td>MSH-6-1</td>
<td>1</td>
<td>Receiving Facility - Namespace ID</td>
</tr>
<tr>
<td>2017011112634</td>
<td>0</td>
<td>MSH-7-1</td>
<td>1</td>
<td>Date/Time Of Message - Time</td>
</tr>
<tr>
<td>ML345191</td>
<td>0</td>
<td>MSH-8</td>
<td>1</td>
<td>Security</td>
</tr>
<tr>
<td>VXU</td>
<td>0</td>
<td>MSH-9-1</td>
<td>1</td>
<td>Message Type - Message Code</td>
</tr>
<tr>
<td>V04</td>
<td>0</td>
<td>MSH-9-2</td>
<td>1</td>
<td>Message Type - Trigger Event</td>
</tr>
<tr>
<td>VXU_V04</td>
<td>0</td>
<td>MSH-9-3</td>
<td>1</td>
<td>Message Type - Message Structure</td>
</tr>
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**USING THE MCIR HL7 TRANSFER REPORT WITH THE VIEWER**

The HL7 Message Viewer can be used in conjunction with the MCIR HL7 Transfer Report. If a system or user error is identified on the HL7 Transfer Report, the HL7 Message Viewer can be accessed to retrieve the raw data that was sent to MCIR.

Here are some examples:

**Examples 1:** The HL7 Transfer Report indicates no data was submitted during a specified time frame.
In this case, the HL7 Message Viewer would show detail for Historical or Patient Refusal Doses that were reported.

**Example 2:** The HL7 Transfer Report indicates that an MVX (Manufacturer) code does not match the type of vaccine that was administered.
The raw data string in the HL7 Message Viewer shows the exact data that was sent from the electronic health record (EHR) to MCIR and may indicate the MFR coding requires correcting by the vendor.

**Example 3:** Data from multiple clinics are being sent via HL7 under one MCIR site ID.
The raw data in the HL7 Message Viewer provides the name of the physician that ordered the vaccine. This information is often necessary if the HL7 Transfer Report indicates the lot number reported for an administered vaccine does not match the lot number in the inventory.
SWITCHING SITES FOR USERS WITH ACCESS TO MORE THAN ONE SITE

Users with access to multiple, approved HL7 sites can change sites without being required to log out of and back into the Viewer.

From the screen displaying a site’s most recent two years’ calendar summary, enter the new site into the search bar and hit Enter (on your keyboard).

From the screen displaying a site’s specific day/activity, click the Select Site hyperlink from the upper left corner of your screen.