

## Test HL7 Messages

Generally, test HL7 messages are sent when the HL7 interface is created and when the provider begins to send data. PHC Hub provides a sandbox where HL7 developers can validate the format and content of their HL7 messages. These sandbox items are located in the Test menu category.

### Code Tables

When testing HL7 messages, review the internal STC tables to understand how the STC HL7 API interprets the standard code values, as defined by HL7 and the CDC.

1. Click the **Test > Code Tables** menu link.
2. Click the table name link (in the left column) to view the table's contents.

|         |   |
|---------|---|
| HL70001 | User-defined Table 0001 - Sex                   |
| HL70005 | User-defined Table 0005 - Race                  |
| HL70008 | HL7-defined Table 0008 - Acknowledgment code    |
| HL70038 | HL7-defined Table HL70038 - Order status        |
| HL70048 | HL7-defined Table HL70048 - What subject filter |
| HL70063 | User-defined Table 0063 - Relationship          |

### Message Constructor

The Message Constructor allows users to rapidly create sample messages based on the STC HL7 API. Messages contain transactions. For example, VXU is an Unsolicited Update transaction.

1. Click the **Test > Message Constructor** menu link.
2. Select a Transaction from the drop-down list.
3. Select if the message is making a Request or providing a Response in the Message drop-down list.
4. For the Segments field, click **Add**.

1. **Transaction** Unsolicited Vaccination Update (VXU) Transaction

2. **Message** REQUEST: Unsolicited Vaccination Update (VXU) Message

3. **Segments** MSH : Message Header Segment Add

5. Review all of the fields in each segment, enter the required information, and click **Continue**.
6. Add additional segments as needed until the message is complete.

### Quick View

Quick View displays an HL7 message broken down into its segments, fields, repeats, and sub-components. Use this view instead of counting pipe delimiters.

1. Click the **Test > Quick View** menu link.
2. Copy and paste the message into the message content box, then click **Submit**.
3. Hover the mouse pointer over a field to see a tooltip describing the field value.

| Message 1 |   | Sending facility         |              |                          |   |       |          |   |     |     |
|-----------|---|--------------------------|--------------|--------------------------|---|-------|----------|---|-----|-----|
| MSH       | 1 | 2                        | 3            | 4                        | 5 | 6     | 7        | 8 | 9   | 10  |
|           |   | SPIC                     | SIICLIENTS10 | LINDAS TEST ORGANIZATION |   |       |          |   | VXU | V04 |
| PID       | 1 | 2                        | 3            | 4                        | 5 | 6     | 7        | 8 | 9   | 10  |
|           |   | E46749                   | MR           | DOE, JOHN C JR           | L | SMITH | 20140515 |   |     |     |
| PD1       | 1 | 2                        | 3            | 4                        | 5 | 6     | 7        | 8 | 9   | 10  |
|           |   | LINDAS TEST ORGANIZATION | SIICLIENTS10 |                          |   |       |          |   |     |     |

### Request Debug

Request Debug allows a test message to be processed through the STC HL7 API and displays the grammar and validation checks performed inline, with comments from the documentation.

1. Click the **Test > Request Debug** menu link.
2. Type or paste a sample HL7 message in the top section and click **Submit**.
3. Review the Grammar Check section and verify that the segment passed all grammar checks.

| Grammar Check      |  |
|--------------------|--|
| Grammars           | MSH [PID [PD1]]  |
|                    | MSH [EVN] PID [PDI] [SP] [(NCL)] [PVI[PV2] [(NCL)]] [(INI)]  |
|                    | MSH PID [PDI] [SP] [(NCL)] [PVI[PV2]] [(I1) [I2] [I3]] [[[ORC] [RGA] [RDR] [NTR]]] [SPV] [(ORC) [(NTR)]]]]]] |
| Result             | Passed   |
| Validation results |  |
| Error count        | 0  |
| Warning count      | 35   |
| Warning            | -0 patient address street2 is missing  |
| Warning            | -0 patient address county is missing   |

### Transaction Handler

Transaction Handlers also provide a view of the HL7 message structure, but without any test data comparison.