

**VXU/ACK and QBP/RSP**  
**Internal testing cheat sheet**

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# Table of contents

|                                         |    |
|-----------------------------------------|----|
| Internal Testing cheat sheet .....      | 2  |
| VXU – MSH Segment .....                 | 2  |
| VXU – PID Segment.....                  | 3  |
| VXU – NK1 Segment .....                 | 4  |
| Administered VXU - RXA Segment .....    | 4  |
| VXU – RXR Segment.....                  | 5  |
| VXU – ORC Segment.....                  | 5  |
| VXU – OBX Segment.....                  | 5  |
| Historical Dose VXU – RXA Segment ..... | 6  |
| Error/Warning ACK – ERR Segment.....    | 6  |
| QBP – MSH Segment .....                 | 7  |
| QBP – QPD Segment.....                  | 8  |
| QBP – RCP Segment .....                 | 9  |
| QBP RSP Segment – No match .....        | 9  |
| QBP RSP Segment – Exact Match .....     | 9  |
| QBP RSP Segment – Multi match.....      | 11 |

## Internal Testing cheat sheet:

### 1.0 Introduction:

As part of internal testing, your organization will generate test cases and test the vaccination update (VXU/ACK) and Query/Response (QBP/RSP) transactions before beginning testing with the NCIR. Refer to the NCIR LIG for requirements and discuss with your organization's VFC clinical users to identify scenarios for testing. Once you complete internal testing, please complete and send this document.

### 1.1 Prerequisites:

1. Connectivity between EHR and the NCIR is established; you can send and receive transactions to/from the NCIR.
2. You are able to review acknowledgements (for VXU) and response (for QBP) messages returned from the NCIR.

### 2.0 VXU Internal Test:

Generate a VXU message and check if the segments have the following fields populated (as per NCIR VXU/ACK LIG) Note: Fix/correct all warning and error messages returned in the ACK. This may be an iterative step depending on error/warnings generated. Once all error and warning issues are fixed, please fill out the pass/fail column and return the document.

Pass – Mark pass if the HL7 field value is as per NCIR VXU/ACK LIG

Fail – Mark this if the HL7 field value does not match NCIR VXU/ACK LIG.

## VXU – MSH Segment

| HL7 fields                                       | Pass/Fail (P/F) | Notes : Document reason for failure, if any. |
|--------------------------------------------------|-----------------|----------------------------------------------|
| <b>Field Separator</b><br>VXU: MSH-1             |                 |                                              |
| <b>Encoding Characters</b><br>VXU: MSH-2         |                 |                                              |
| <b>Sending Facility</b><br>VXU: MSH-4            |                 |                                              |
| <b>Receiving Facility</b><br>VXU: MSH-6          |                 |                                              |
| <b>Date/Time Of Message</b><br>VXU: MSH-7        |                 |                                              |
| <b>Message Type</b><br>VXU: MSH-9                |                 |                                              |
| <b>Message Control ID</b><br>VXU: MSH-10         |                 |                                              |
| <b>Processing ID</b><br>VXU: MSH-11              |                 |                                              |
| <b>Version ID</b><br>VXU: MSH-12                 |                 |                                              |
| <b>Accept Acknowledgment Type</b><br>VXU: MSH-15 |                 |                                              |

## VXU – PID Segment

| HL7 Fields                                                                                |                                                 | Pass/Fail (P/F) | Notes                            |
|-------------------------------------------------------------------------------------------|-------------------------------------------------|-----------------|----------------------------------|
| <b>NCIR Client id</b><br>VXU: PID-3 (SR)                                                  |                                                 | N/A             | Organization will not send this. |
| <b>Chart Number or Organization identifier for client.</b><br>[Identifier type code – PI] | Sub component 1:<br>Chart Number                |                 |                                  |
|                                                                                           | Identifier type = PI                            |                 |                                  |
| <b>Patient Name</b><br>VXU: PID-5                                                         | <b>Last, First and Middle Name</b><br>PID-5.1-3 |                 |                                  |
|                                                                                           | <b>Name type code</b><br>PID-5.7                |                 |                                  |
| <b>Mother's Maiden Last and First Name</b><br>VXU: PID-6                                  |                                                 |                 |                                  |
| <b>Date of birth</b><br>VXU: PID-7                                                        |                                                 |                 |                                  |
| <b>Gender</b><br>VXU: PID-8                                                               |                                                 |                 |                                  |
| <b>Race (test various values)</b><br>VXU: PID-10                                          |                                                 |                 | Test possible combinations.      |
| <b>Patient Address</b><br>VXU: PID-11                                                     | <b>Street address</b><br>PID-11.                |                 |                                  |
|                                                                                           | <b>City</b><br>PID-11.                          |                 |                                  |
|                                                                                           | <b>State</b><br>PID-11.4                        |                 |                                  |
|                                                                                           | <b>County</b><br>PID-11.9                       |                 |                                  |
|                                                                                           | <b>Zip code</b><br>PID-11.5                     |                 |                                  |
|                                                                                           | <b>Address type</b><br>PID-11.7<br>Use "M"      |                 |                                  |
| <b>Patient Phone Number</b><br>VXU: PID-13                                                | <b>Telecom use code</b><br>PID-13.2<br>Use PRN  |                 |                                  |
|                                                                                           | <b>Area code</b><br>PID-13.6                    |                 |                                  |
|                                                                                           | <b>Local number</b><br>PID13.7                  |                 |                                  |
| <b>Ethnic group</b><br>VXU: PID-22                                                        |                                                 |                 | Test various values.             |
| <b>Multiple birth indicator</b><br>VXU: PID-24                                            |                                                 |                 |                                  |
| <b>Death indicator</b><br>VXU: PID-30                                                     |                                                 |                 |                                  |

## VXU – NK1 Segment

| HL7 fields                                                  |                                                 | Pass/Fail (P/F) | Notes                                        |
|-------------------------------------------------------------|-------------------------------------------------|-----------------|----------------------------------------------|
| <b>Set ID – NK1</b><br>VXU: NK1-1                           |                                                 |                 | Check NK1 for less than 18 years old client. |
| <b>Responsible person First and Last Name</b><br>VXU: NK1-2 | <b>Last, First and Middle Name</b><br>NK1-2.1-3 |                 |                                              |
|                                                             | <b>Name type</b><br>NK1-2.7                     |                 |                                              |
| <b>Relationship to client</b><br>VXU: NK1-3                 |                                                 |                 | Test various values allowed                  |
| <b>Responsible person's phone number</b><br>VXU: NK1-5      | <b>Telecom use code</b><br>NK1-5.2<br>Use "PRN" |                 |                                              |
|                                                             | <b>Area code</b><br>NK1-5.5                     |                 |                                              |
|                                                             | <b>Local number</b><br>NK1-5.6                  |                 |                                              |
| <b>Responsible person's address</b><br>VXU: NK1-4           | <b>Street Address</b>                           |                 |                                              |
|                                                             | <b>City</b>                                     |                 |                                              |
|                                                             | <b>State</b>                                    |                 |                                              |
|                                                             | <b>County</b>                                   |                 |                                              |
|                                                             | <b>Zip code</b>                                 |                 |                                              |
|                                                             | <b>Address type</b><br>Use "M"                  |                 |                                              |
| <b>Responsible person's primary language</b><br>VXU: NK1-20 |                                                 |                 |                                              |

## Administered VXU - RXA Segment

Generate a VXU for Administered dose and refusal and document below.

| HL7 Fields                             |                                                       | Pass/Fail (P/F) | Notes                          |
|----------------------------------------|-------------------------------------------------------|-----------------|--------------------------------|
| <b>Dose date</b><br>VXU: RXA-3         |                                                       |                 |                                |
| <b>Administered code</b><br>VXU: RXA-5 | <b>CVX Code</b><br>(RXA-5, First Triplet)             |                 |                                |
|                                        | <b>NCIR Tradename Code</b><br>(RXA-5, Second Triplet) |                 | Try different trade name codes |

|                                                                 |  |                                                                              |
|-----------------------------------------------------------------|--|------------------------------------------------------------------------------|
| <b>Administered Amount (Dosage)</b><br>VXU: RXA-6 (dose amount) |  |                                                                              |
| <b>Administered Unit</b><br>RXA-7 (unit)                        |  |                                                                              |
| <b>Administered notes</b><br>VXU: RXA-9                         |  |                                                                              |
| <b>Administering provider or clinician</b><br>VXU: RXA-10       |  |                                                                              |
| <b>Administering location</b><br>VXU: RXA-11                    |  |                                                                              |
| <b>Lot Number</b><br>VXU: RXA-15                                |  |                                                                              |
| <b>Expiration Date</b><br>VXU: RXA-16                           |  |                                                                              |
| <b>Manufacturer Name</b><br>VXU: RXA-17                         |  |                                                                              |
| <b>Substance/treatment Refusal Reason</b><br>VXU: RXA-18        |  | In addition to administered dose, try out both types of refusals separately. |
| <b>Completion Status</b><br>VXU: RXA-20                         |  |                                                                              |

## Administered VXU – RXR Segment

|                                                 |  |                                                          |
|-------------------------------------------------|--|----------------------------------------------------------|
| <b>Route of administration</b><br>VXU: RXR-1    |  | Check out different values possible for RXR-1 and RXR-2. |
| <b>Administration (body) Site</b><br>VXU: RXR-2 |  |                                                          |

## Administered VXU – ORC Segment

|                                          |  |  |
|------------------------------------------|--|--|
| <b>Order Control</b><br>VXU: ORC-1       |  |  |
| <b>Filler Order Number</b><br>VXU: ORC-3 |  |  |
| <b>Ordering Provider</b><br>VXU: ORC-12  |  |  |

## Administered VXU – OBX Segment

**Note:** OBX segments are used for providing observations and are used to provide a number of immunization related information. Refer to LIG for additional details and document below after verifying/testing different types of OBX segments relevant to the NCIR.

| HL7 Fields                                       | Pass/Fail (P/F) | Notes                                         |
|--------------------------------------------------|-----------------|-----------------------------------------------|
| <b>Set ID-OBX-1</b><br>VXU: OBX-1                |                 |                                               |
| <b>Value Type</b><br>VXU: OBX-2                  |                 |                                               |
| <b>Eligibility Code:</b><br>VXU OBX-3 and OBX-5  |                 | Try all NC eligibility codes                  |
| <b>Funding code</b><br>VXU: OBX-3/OBX-5          |                 | Try out different possible funding codes.     |
| <b>Contra indication</b><br>VXU: OBX-3 and OBX-5 |                 | Try out different types of contraindications. |
| <b>VIS presented date</b><br>VXU: OBX-3/OBX-5    |                 |                                               |
| <b>VIS published date</b><br>VXU: OBX-3/OBX-5    |                 |                                               |
| <b>Applies-To Date</b><br>VXU: OBX-14            |                 |                                               |
| <b>Observation Method</b><br>VXU: OBX-17         |                 |                                               |

Generate a VXU with historical dose and check if the following fields are populated as per NCIR VXU/ACK LIG.

### Historical Dose VXU - RXA Segment

| HL7 Fields                                   | Pass/Fail (P/F)                           | Notes                                    |
|----------------------------------------------|-------------------------------------------|------------------------------------------|
| <b>Dose date</b><br>VXU: RXA-3               |                                           |                                          |
| <b>Administered code</b><br>VXU: RXA-5       | <b>CVX Code</b><br>(RXA-5, First Triplet) |                                          |
| <b>Administered notes</b><br>VXU: RXA-9      |                                           |                                          |
| <b>Administering location</b><br>VXU: RXA-11 |                                           | This field is important to be populated. |

Correct all error/warnings that are generated; ERR fields are provided for reference.

### Error/Warning ACK - ERR Segment

| HL7 Fields                          | Pass/Fail (P/F) | Notes |
|-------------------------------------|-----------------|-------|
| <b>Error Location</b><br>VXU: ERR-2 |                 |       |
| <b>HL7 Code</b><br>VXU: ERR-3       |                 |       |

|                                             |  |  |
|---------------------------------------------|--|--|
| <b>Severity</b><br>VXU: ERR-4               |  |  |
| <b>Application Error Code</b><br>VXU: ERR-5 |  |  |
| <b>User Message</b><br>VXU: ERR-8           |  |  |

**Copy and paste one administered VXU and one historical dose VXU below for reference.**

**Generate a QBP message and check if the segments have the following fields populated as per NCIR QBP-RSP/ACK LIG.**

### QBP – MSH Segment

| HL7 Field                            | Pass/Fail (P/F) | Notes |
|--------------------------------------|-----------------|-------|
| <b>Sending Application</b><br>MSH-3  |                 |       |
| <b>Sending Facility</b><br>MSH-4     |                 |       |
| <b>Receiving Facility</b><br>MSH-6   |                 |       |
| <b>Date/Time of message</b><br>MSH-7 |                 |       |
| <b>Message Type</b><br>MSH-9         |                 |       |
| <b>Message Control ID</b><br>MSH-10  |                 |       |
| <b>Processing ID</b><br>MSH-11       |                 |       |



|                                              |  |  |
|----------------------------------------------|--|--|
| <b>Version ID</b><br>MSH-12                  |  |  |
| <b>Accept Acknowledgement Type</b><br>MSH-15 |  |  |
| <b>Message Profiler Identifier</b><br>MSH-21 |  |  |

### QBP – QPD Segment

| HL7 Fields                                                                                          |                                                 | Pass/Fail (P/F) | Notes                     |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------|-----------------|---------------------------|
| <b>NCIR Client id</b><br>QBP: QPD-3 (SR)                                                            |                                                 | N/A             | Not provided by provider. |
| <b>Chart Number or Organization identifier for client.</b><br>QBP:QPD-3 [Identifier type code – PI] |                                                 |                 |                           |
| <b>Patient Name</b><br>QBP: QPD-4                                                                   | <b>Last, First and Middle Name</b><br>QPD-4.1-3 |                 |                           |
|                                                                                                     | <b>Name type code</b><br>QPD-4.7                |                 |                           |
| <b>Mother's Maiden Last and First Name</b><br>QBP: QPD-5                                            |                                                 |                 |                           |
| <b>Date of birth</b><br>QBP: QPD-6                                                                  |                                                 |                 |                           |
| <b>Gender</b><br>QBP: QPD-7                                                                         |                                                 |                 |                           |
| <b>Patient Address</b><br>QPD: QPD-8                                                                | <b>Street address</b><br>QPD-8.                 |                 |                           |
|                                                                                                     | <b>City</b><br>QPD-8.                           |                 |                           |
|                                                                                                     | <b>State</b><br>QPD-.4                          |                 |                           |
|                                                                                                     | <b>County</b><br>QPD-8.9                        |                 |                           |
|                                                                                                     | <b>Zip code</b><br>QPD-8.5                      |                 |                           |
|                                                                                                     | <b>Address type</b><br>QPD-8.7                  |                 |                           |

|                                                |                                    |  |  |
|------------------------------------------------|------------------------------------|--|--|
| <b>Patient Phone Number</b><br>QPD: QPD-9      | <b>Telecom use code</b><br>QPD-9.2 |  |  |
|                                                | <b>Area code</b><br>QPD-9.6        |  |  |
|                                                | <b>Local number</b><br>QPD9.7      |  |  |
| <b>Multiple birth indicator</b><br>QPD: QPD-10 |                                    |  |  |
| <b>Multiple birth order</b><br>QPD: QPD-11     |                                    |  |  |

## QBP - RCP Segment

| HL7 Fields                                   | Pass/Fail (P/F) | Notes |
|----------------------------------------------|-----------------|-------|
| <b>Query Priority</b><br>QBP:RCP-1           |                 |       |
| <b>Quantity Limited Request</b><br>QBP:RCP-2 |                 |       |
| <b>Response Modality</b><br>QBP:RCP-3        |                 |       |

## QBP RSP Segment - No match

Submit a query for a patient with no match. Search for a dummy name to assure no match is returned.

| HL7 Fields                                                       | Pass/Fail (P/F) | Notes                  |
|------------------------------------------------------------------|-----------------|------------------------|
| <b>Message Profile Identifier</b><br>QBP:MSH-21<br>Z33^CDCPHINVS |                 |                        |
| <b>Query Response Status</b><br>RSP: QAK-2                       |                 | values: NF - Not Found |

## QBP RSP Segment - Exact Match

Submit a query for a patient that results in an exact match.

| HL7 Fields                                                       | Pass/Fail (P/F) | Notes                                                                  |
|------------------------------------------------------------------|-----------------|------------------------------------------------------------------------|
| <b>Message Profile Identifier</b><br>RSP:MSH-21<br>Z32^CDCPHINVS |                 | Do you accept value corresponding to exact match returned and process? |
| <b>Query Response</b><br>RSP:MSA-1                               |                 | Values: AA, AR, AE. Do you accept values returned and process?         |
| <b>Query Response Status</b><br>RSP: QAK-2                       |                 | values: OK, AE, AR. Do you accept all values and process?              |
| <b>QPD segment (as is)</b><br>RSP: QPD                           |                 |                                                                        |

|                                                             |  |                               |
|-------------------------------------------------------------|--|-------------------------------|
| <b>Patient Identifier</b><br>RSP: PID Segment from the NCIR |  | Do you accept value returned? |
| <b>Responsible person First and Last Name</b><br>RSP: NK1-2 |  |                               |
| <b>Address</b><br>RSP: NK1-5                                |  |                               |
| <b>Phone</b><br>RSP: NK1-6                                  |  |                               |
| <b>Filler Order Number</b><br>RSP:ORC-3                     |  |                               |
| <b>Ordering authority</b><br>RSP:ORC-12                     |  |                               |

### QBP RSP - Exact Match Inventory Dose

| HL7 Fields                                               |                                              | Pass/Fail (P/F) | Notes                                                             |
|----------------------------------------------------------|----------------------------------------------|-----------------|-------------------------------------------------------------------|
| <b>Date/Time Start of Administration</b><br>RSP: RXA-3   |                                              |                 |                                                                   |
| <b>Administered code</b><br>RSP: RXA-5                   | <b>CVX Code</b><br>RSP: RXA-5(First Triplet) |                 |                                                                   |
| <b>Administered Amount</b><br>RSP: RXA 6,7               | <b>Dose</b><br>RSP:RXA-6                     |                 |                                                                   |
|                                                          | <b>Unit</b><br>RSP:RXA-7                     |                 |                                                                   |
| <b>Administered notes</b><br>RSP:RXA-9                   |                                              |                 |                                                                   |
| <b>Administering provider or clinician</b><br>RSP:RXA-10 |                                              |                 |                                                                   |
| <b>Administering location</b><br>RSP:RXA-11              |                                              |                 |                                                                   |
| <b>Lot Number</b><br>RSP:RXA-15                          |                                              |                 |                                                                   |
| <b>Expiration Date</b><br>RSP:RXA-16                     |                                              |                 |                                                                   |
| <b>Manufacturer Name</b><br>RSP:RXA-17                   |                                              |                 |                                                                   |
| <b>Substance/treatment Refusal Reason</b><br>RSP:RXA-18  |                                              |                 |                                                                   |
| <b>Completion Status</b><br>RSP:RXA-20                   |                                              |                 | Values: CP, NA, PA, RE, DE. Do you accept all values and process? |
| <b>Route</b><br>RSP: RXR-1                               |                                              |                 |                                                                   |
| <b>Administration Site</b><br>RSP: RXR-2                 |                                              |                 |                                                                   |
| <b>VIS Date Presented</b><br>RSP: OBX-5                  |                                              |                 |                                                                   |

|                                                    |  |  |
|----------------------------------------------------|--|--|
| <b>VIS Date Published</b><br>RSP: OBX-5            |  |  |
| <b>Date/Time of the Observation</b><br>RSP: OBX-14 |  |  |

### QBP RSP - Exact Match Historical Dose

| HL7 Fields                                             |                                              | Pass/Fail (P/F) | Notes |
|--------------------------------------------------------|----------------------------------------------|-----------------|-------|
| <b>Date/Time Start of Administration</b><br>RSP: RXA-3 |                                              |                 |       |
| <b>Administered code</b><br>RSP: RXA-5                 | <b>CVX Code</b><br>RSP: RXA-5(First Triplet) |                 |       |
| <b>Administered notes</b><br>RSP:RXA-9                 |                                              |                 |       |
| <b>Administering location</b><br>RSP:RXA-11            |                                              |                 |       |

### QBP RSP Segment – Multi match

Submit a query for a patient that will result in multiple matches. For this step, you may need duplicate test patients with similar names – Contact NCIR for duplicate patient names.

| HL7 Fields                                                                    |  | Pass/Fail (P/F) | Notes                                                    |
|-------------------------------------------------------------------------------|--|-----------------|----------------------------------------------------------|
| <b>Message Profile Identifier</b><br>RSP:MSH-21<br>Z31^CDCPHINVS              |  |                 |                                                          |
| <b>Query Response</b><br>RSP:MSA-1                                            |  |                 |                                                          |
| <b>Acknowledgement</b><br>RSP:QAK-2                                           |  |                 |                                                          |
| <b>Patient Identifier (multi)</b><br>RSP: PID Segment 1                       |  |                 | Do you accept multiple PID segments and display/process? |
| <b>Patient Identifier (multi)</b><br>RSP: PID Segment 2                       |  |                 |                                                          |
| <b>Responsible person First and Last Name (multi)</b><br>RSP: NK1-2 Segment 1 |  |                 |                                                          |
| <b>Responsible person First and Last Name Multi</b><br>RSP: NK1-2 Segment 2   |  |                 |                                                          |

Cut and paste a sample QBP: