

**VERSION: The version of this Message Mapping Guide is Version 1.01 dated January 6, 2010.**

**"This artifact is considered to be a technical document. Please contact PHINTech@cdc.gov, copying the NEDSS team at NEDSS@cdc.gov for assistance with this artifact."**

This Message Mapping Guide describes the content and message mapping specifications for the set of data elements used to communicate information to meet the requirements for Influenza Individual Case Notifications to CDC. The intended audiences for this document are the state/local and CDC programs and other public health related organizations interested in using the HL7 V2.5 Case Notification Message Specification for transmitting their data elements to CDC.

**References**

National Condition Reporting, Notifiable Events and Reporting Mechanisms for 2009, Division of Integrated Surveillance Systems and Services, National Center for Public Health Informatics, Centers for Disease Control and Prevention, June 2009.

National Notification Message Structure Specification version 2.0 is used to inform the mapping methodology for this guide. The ORU^R01 - Unsolicited Observation Message is the HL7 standard message used to pass the Nationally Notifiable Condition Report message. The National Notification message is used to convey a limited data set of investigation/surveillance information to meet national reporting requirements, where CDC is the only receiver. This document specifies the structure and methodology for the use of the Health Level 7 (HL7) Version 2.5 Unsolicited Result Message (ORU^R01) that supports the electronic interchange of any Nationally Notifiable Condition message from public health entities to the CDC.

| Column   | Description   |
|--|---|
| <b>Program Variables Column Headings</b>           |   |
| PHIN Variable ID                                   | PHIN data element identifier drawn from the coding system PH_PHINQuestions_CDC.   |
| Label  | Short name for the data element, which is passed in the message.  |
| Description  | Description of the data element. It may not match exactly with the description in PHIN Questions, because there may be local variations on the description that do not change the basic concept being mapped to the PHIN Question identifier.   |
| Data Type  | Data type for the variable response expected by the program area. Data Types are Coded, Numeric, Date or Date/time, and Text.   |
| CDC Priority                                       | Indicator whether the program specifies the field as:<br><br><b>R - Required</b> - Mandatory for sending the message. If data element is not present, the message will error out.<br><b>P - Preferred</b> - This is an optional variable and there is no requirement to send this information to CDC. However, if this variable is already being collected by the state/territory or if the state/territory is planning to collect this information because it is deemed important for your own programmatic needs, CDC would like this information sent. CDC preferred variables are the most important of the optional variables to be earmarked for CDC analysis/assessment, even if sent from a small group of states.<br><b>O - Optional</b> - This is an optional variable and there is no requirement to send this information to CDC. This variable is considered nice-to-know if the state/territory already collects this information or is planning to collect this information, but has a lower level of importance to CDC than the preferred classification of optional data elements. |
| May Repeat   | Indicator whether the response to the data element may repeat. "Y" in the field indicates that it may repeat. If the response does not repeat, the field is not populated or contains "N". Data elements that repeat require special processing.  |
| Value Set Name                                     | Name of the pre-coordinated value set in PHIN-VADS from which the response is drawn. The value sets and coding systems are accessible via the Public Health Information Network Vocabulary Access and Distribution Services. To obtain the valid code set and coding systems for the <b>Influenza Individual</b> implementation message mapping guide, complete the following steps:<br>1. Go to <a href="http://phinvads.cdc.gov">http://phinvads.cdc.gov</a> .<br>2. Click on the <b>Views</b> hyperlink<br>3. Enter <b>Influenza</b> in the lookup box and press the Search Views button.<br>4. Click on <b>Details</b> next to Influenza Case Notification to obtain the valid code set.  |
| Value Set Code                                     | Code for the pre-coordinated value set in PHIN-VADS from which the response is drawn. The value sets and coding systems are accessible via the Public Health Information Network Vocabulary Access and Distribution Services. To obtain the valid code set and coding systems for the <b>Influenza Individual</b> implementation message mapping guide, complete the following steps:<br>1. Go to <a href="http://phinvads.cdc.gov">http://phinvads.cdc.gov</a> .<br>2. Click on the <b>Views</b> hyperlink<br>3. Enter <b>Influenza</b> in the lookup box and press the Search Views button.<br>4. Click on <b>Details</b> next to Influenza Case Notification to obtain the valid code set.   |
| <b>Message Mapping Methodology Column Headings</b> |   |
| Message Context                                    | Specific HL7 segment and field mapping for the element.   |
| HL7 Data Type                                      | HL7 data type used by PHIN to express the variable. Datatypes expected are CWE, SN, TS, ST, TX, XPN, XTN, or XAD, depending on the type of data being passed.   |
| HL7 Optionality                                    | Indicates if the field is required, optional, or conditional in a segment. The only values that appear in the Message Mapping are:<br><br><b>R</b> – Required. Must always be populated<br><b>O</b> – Optional. May optionally be populated.  |
| Implementation Notes                               | Related implementation comments.  |



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| PHIN Variable ID | Label/Short Name           | Description   | Data Type | CDC Priority | May Repeat | Value Set Name   | Value Set Code                                   | HL7 Message Context                                     | HL7 Data Type | HL7 Optionality | HL7 Implementation Notes  |
|------------------|----------------------------|---|-----------|--------------|------------|--|--|---|---------------|-----------------|---|
| NOT103           | Date First Submitted       | Date/time the notification was first sent to CDC. This value does not change after the original notification.   | Date/time | R            |            |  |  | OBR-7-Observation Date/time.                            | TS            | R               | The same value is used for each OBR segment, and the UID and label are not passed in the message.   |
| NOT106           | Date of Report             | Date/time this version of the notification was sent. It will be the same value as NOT103 for the original notification. For updates, this is the update/send date/time. | Date/time | R            |            |  |  | OBR-22-Result Report/Status Chg Date/time.              | TS            | R               | The same value is used for each OBR segment, and the UID and label are not passed in the message.   |
| INV169           | Condition Code             | Condition or event that constitutes the reason the notification is being sent.  | Coded     | R            |            | Nationally Notifiable Disease Surveillance System (NNDSS) and Other Conditions of Public Health Importance | PHVS_NotifiableEvent_Disease_Condition_CDC_NNDSS | OBR-31-Reason for Study.                                | CE            | R               | Default value in each OBR instance: '11063^Influenza Outbreak^NND'<br><br>The UID and label are not passed in the message.  |
| DEM115           | Birth Date                 | Date of birth in YYYYMMDD format  | Date      | P            |            |  |  | PID-7-Date/Time of Birth                                | TS            | O               | The UID and label are not passed in the message.  |
| DEM113           | Subject's Sex              | Subject's current sex.  | Coded     | P            |            | Sex (MFU)  | PHVS_Sex_MFU                                     | PID-8-Administrative Sex                                | IS            | O               | The UID and label are not passed in the message.  |
| DEM152           | Race Category              | Field containing one or more codes that broadly refer to the Subject's race(s).   | Coded     | P            | Y          | Race Category  | PHVS_RaceCategory_CDC                            | PID-10-Race   | CE            | O               | To send an "Unknown" because the application allows Unknown to be selected (that is, not as a default value): PID-10 would appear as  UNK^Unknown^NULLFL <br><br>The UID and label are not passed in the message. |
| DEM165           | Subject's Address County   | County of residence of the subject.   | Coded     | P            |            | County   | PHVS_County_FIPS_6-4                             | PID-11.9-Patient Address - County                       | IS            | O               | The entire address construct (PID-11) may repeat per HL7 but only expecting the first instance to be populated and parsed.  |
| DEM162           | Subject's Address State    | State of residence of the subject.  | Coded     | O            |            | State  | PHVS_State_FIPS_5-2                              | PID-11.4-Patient Address - State                        | ST            | O               | The entire address construct (PID-11) may repeat per HL7 but only expecting the first instance to be populated and parsed.  |
| DEM163           | Subject's Address Zip Code | ZIP Code of residence of the subject.   | Text      | O            |            |  |  | PID-11.5-Patient Address - Postal Code                  | ST            | O               | The entire address construct (PID-11) may repeat per HL7 but only expecting the first instance to be populated and parsed.  |
| DEM155           | Ethnic Group Code          | Ethnic origin or ethnicity is based on the individual's self-identity of the Subject as Hispanic or Latino.   | Coded     | P            |            | Ethnicity Group  | PHVS_EthnicityGroup_CDC                          | PID-22-Ethnic Group                                     | CE            | O               | To send an "Unknown" because the application allows Unknown to be selected (that is, not as a default value): PID-22 would appear as  UNK^Unknown^NULLFL <br><br>The UID and label are not passed in the message. |
| NOT109           | Reporting State            | State reporting the notification.   | Coded     | R            |            | State  | PHVS_State_FIPS_5-2                              | Observation/OBX Segment with this variable ID and label | CWE           | O               | Two digit numeric FIPS code   |
| NOT113           | Reporting County           | County reporting the notification.  | Coded     | R            |            | County   | PHVS_County_FIPS_6-4                             | Observation/OBX Segment with this variable ID and label | CWE           | O               | Five digit numeric FIPS code  |

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| PHIN Variable ID | Label/Short Name  | Description   | Data Type | CDC Priority | May Repeat | Value Set Name                  | Value Set Code                         | HL7 Message Context                                     | HL7 Data Type | HL7 Optionality | HL7 Implementation Notes  |
|------------------|---|---|-----------|--------------|------------|---------------------------------|--|---|---------------|-----------------|---|
| NOT116           | National Reporting Jurisdiction                         | National jurisdiction reporting the notification to CDC.  | Coded     | R            |            | National Reporting Jurisdiction | PHVS_NationalReportingJurisdiction_NND | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| INV107           | Jurisdiction Code                                       | Identifier for the physical site from which the notification is being submitted.  | Coded     | P            |            |                                 |  | Observation/OBX Segment with this variable ID and label | CWE           | O               | Jurisdiction Code is expected in the fifth component of the CWE datatype.                           |
| INV109           | Case Investigation Status Code                          | Status of the investigation. For example, <i>open</i> or <i>closed</i> .  | Coded     | O            |            | Case Investigation Status       | PHVS_CaseInvestigationStatus_NND       | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| INV110           | Investigation Date Assigned                             | Date the investigator was assigned to this investigation.   | Date      | O            |            |                                 |  | Observation/OBX Segment with this variable ID and label | TS            | O               |   |
| INV111           | Date of Report/Referral                                 | Date the event or illness was first reported by the reporting source (physician or lab reported to the local/county/state health department). | Date      | P            |            |                                 |  | Observation/OBX Segment with this variable ID and label | TS            | O               |   |
| INV112           | Reporting Source Type Code                              | Type of facility or provider associated with the source of information sent to Public Health.   | Coded     | O            |            | Reporting Source Type           | PHVS_ReportingSourceType_NND           | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| INV118           | Reporting Source Zip Code                               | Zip Code of the reporting source for this case.   | Text      | O            |            |                                 |  | Observation/OBX Segment with this variable ID and label | ST            | O               |   |
| INV120           | Earliest Date Reported to County                        | Earliest date reported to county public health system   | Date      | O            |            |                                 |  | Observation/OBX Segment with this variable ID and label | TS            | O               |   |
| INV121           | Earliest Date Reported to State                         | Earliest date reported to state public health system  | Date      | P            |            |                                 |  | Observation/OBX Segment with this variable ID and label | TS            | O               |   |
| INV128           | Was the patient hospitalized as a result of this event? | Was patient hospitalized as a result of this event?   | Coded     | O            |            | Yes, No, Unknown (YNU)          | PHVS_YesNoUnknown_CDC                  | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| INV132           | Admission Date  | Subject's admission date to the hospital for the condition covered by the investigation   | Date      | O            |            |                                 |  | Observation/OBX Segment with this variable ID and label | TS            | O               |   |
| INV133           | Discharge Date  | Subject's discharge date from the hospital for the condition covered by the investigation   | Date      | O            |            |                                 |  | Observation/OBX Segment with this variable ID and label | TS            | O               |   |
| INV134           | Duration of Hospital Stay in Days                       | Subject's duration of stay at the hospital for the condition covered by the investigation   | Numeric   | O            |            |                                 |  | Observation/OBX Segment with this variable ID and label | SN            | O               |   |
| INV136           | Diagnosis Date  | Date of diagnosis of condition being reported to public health system   | Date      | P            |            |                                 |  | Observation/OBX Segment with this variable ID and label | TS            | O               |   |
| INV137           | Date of Illness Onset                                   | Date of the beginning of the illness. Reported date of the onset of symptoms of the condition being reported to the public health system      | Date      | P            |            |                                 |  | Observation/OBX Segment with this variable ID and label | TS            | O               |   |
| INV138           | Illness End Date  | Time at which the disease or condition ends.  | Date      | O            |            |                                 |  | Observation/OBX Segment with this variable ID and label | TS            | O               |   |
| INV139           | Illness Duration  | Length of time this person had this disease or condition.   | Numeric   | O            |            |                                 |  | Observation/OBX Segment with this variable ID and label | SN            | O               |   |
| INV140           | Illness Duration Units                                  | Unit of time used to describe the length of the illness or condition.   | Coded     | O            |            | Age unit                        | PHVS_AgeUnit_UCUM                      | OBX-6-Units   | CE            | O               | Part of the INV139 Observation/OBX Segment.<br><br>The UID and label are not passed in the message. |

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| PHIN Variable ID | Label/Short Name                       | Description  | Data Type | CDC Priority | May Repeat | Value Set Name                | Value Set Code                       | HL7 Message Context                                     | HL7 Data Type | HL7 Optionality | HL7 Implementation Notes   |
|------------------|--|--|-----------|--------------|------------|-------------------------------|--------------------------------------|---|---------------|-----------------|--|
| INV145           | Did the patient die from this illness? | Did the patient die from this illness or complications of this illness?  | Coded     | P            |            | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC                | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| INV146           | Deceased Date                          | If the patient died from this illness or complications associated with this illness, indicate the date of death  | Date      | P            |            |                               |                                      | Observation/OBX Segment with this variable ID and label | TS            | O               |  |
| INV147           | Investigation Start Date               | The date the case investigation was initiated  | Date      | O            |            |                               |                                      | Observation/OBX Segment with this variable ID and label | TS            | O               |  |
| INV150           | Case Outbreak Indicator                | Denotes whether the reported case was associated with an identified outbreak   | Coded     | P            |            | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC                | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| INV151           | Case Outbreak Name                     | A state-assigned name for an indentified outbreak  | Coded     | P            |            |                               |                                      | Observation/OBX Segment with this variable ID and label | CWE           | O               | Case Outbreak Name is expected in the fifth component of the CWE datatype. |
| INV152           | Case Disease Imported Code             | Indication of where the disease/condition was likely acquired.   | Coded     | P            |            | Disease Acquired Jurisdiction | PHVS_DiseaseAcquiredJurisdiction_NND | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| INV153           | Imported Country                       | If the disease or condition was imported, indicates the country in which the disease was likely acquired.  | Coded     | P            |            | Country                       | PHVS_Country_ISO_3166-1              | Observation/OBX Segment with this variable ID and label | CWE           | O               | Three letter country code  |
| INV154           | Imported State                         | If the disease or condition was imported, indicates the state in which the disease was likely acquired.  | Coded     | P            |            | State                         | PHVS_State_FIPS_5-2                  | Observation/OBX Segment with this variable ID and label | CWE           | O               | Two digit numeric FIPS code  |
| INV155           | Imported City                          | If the disease or condition was imported, indicates the city in which the disease was likely acquired.   | Coded     | P            |            | City                          | PHVS_City_USGS_GNIS                  | Observation/OBX Segment with this variable ID and label | CWE           | O               | One to ten digit numeric GNIS Feature ID                                   |
| INV156           | Imported County                        | If the disease or condition was imported, contains the county of origin of the disease or condition.   | Coded     | O            |            | County                        | PHVS_County_FIPS_6-4                 | Observation/OBX Segment with this variable ID and label | CWE           | O               | Five digit numeric FIPS code   |
| INV157           | Transmission Mode                      | Code for the mechanism by which disease or condition was acquired by the subject of the investigation.   | Coded     | O            |            | Case Transmission Mode        | PHVS_CaseTransmissionMode_NND        | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| INV161           | Confirmation Method                    | Code for the mechanism by which the case was classified, providing information about how the case classification status was derived. More than one confirmation method may be indicated. | Coded     | O            | Y          | Case Confirmation Method      | PHVS_CaseConfirmationMethod_NND      | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| INV162           | Confirmation Date                      | If an investigation is confirmed as a case, the confirmation date is entered.  | Date      | O            |            |                               |                                      | Observation/OBX Segment with this variable ID and label | TS            | O               |  |
| INV163           | Case Class Status Code                 | Status of the case/event as suspect, probable, confirmed, or not a case per CSTE/CDC/ surveillance case definitions.   | Coded     | R            |            | Case Classification Status    | PHVS_CaseClassStatus_NND             | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| INV165           | MMWR Week                              | MMWR Week for which case information is to be counted for MMWR publication.  | Numeric   | R            |            |                               |                                      | Observation/OBX Segment with this variable ID and label | SN            | O               |  |
| INV166           | MMWR Year                              | MMWR Year (YYYY) for which case information is to be counted for MMWR publication.   | Date      | R            |            |                               |                                      | Observation/OBX Segment with this variable ID and label | TS            | O               |  |
| INV173           | State Case ID                          | States use this field to link NEDSS investigations back to their own state investigations.   | Text      | O            |            |                               |                                      | Observation/OBX Segment with this variable ID and label | ST            | O               |  |
| INV176           | Date of First Report to CDC            | Date the case was first reported to the CDC  | Date      | P            |            |                               |                                      | Observation/OBX Segment with this variable ID and label | TS            | O               |  |
| INV177           | Date First Reported PHD                | Earliest date the case was reported to the public health department whether at the local, county, or state public health level   | Date      | P            |            |                               |                                      | Observation/OBX Segment with this variable ID and label | TS            | O               |  |

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| PHIN Variable ID     | Label/Short Name                       | Description  | Data Type | CDC Priority | May Repeat | Value Set Name         | Value Set Code            | HL7 Message Context                                     | HL7 Data Type | HL7 Optionality | HL7 Implementation Notes  |
|----------------------|--|--|-----------|--------------|------------|------------------------|---------------------------|---|---------------|-----------------|---|
| INV178               | Pregnancy status                       | Indicates whether the patient was pregnant at the time of the event  | Coded     | O            |            | Yes No Unknown (YNU)   | PHVS_YesNoUnknown_CDC     | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| INV233               | Gestation Age                          | If the subject is pregnant, specify the gestational age  | Numeric   | O            |            |                        |                           | Observation/OBX Segment with this variable ID and label | SN            | O               |   |
| INV234               | Gestation Age Units                    | If the subject is pregnant, define the gestational age units   | Coded     | O            |            | Age unit               | PHVS_AgeUnit_UCUM         | OBX-6-Units   | CE            | O               | Part of the INV233 Observation/OBX Segment.<br><br>The UID and label are not passed in the message.   |
| INV190               | Person Reporting to CDC - Name         | Name of the Person who is reporting the case to the CDC  | Text      | O            |            |                        |                           | Observation/OBX Segment with this variable ID and label | XPN           | O               | Expected format:<br>' <Last Name>^<First Name> '  |
| INV191               | Person Reporting to CDC - Phone Number | Phone Number of the Person who is reporting the case to the CDC  | Text      | O            |            |                        |                           | Observation/OBX Segment with this variable ID and label | XTN           | O               | <b>Expected format:</b><br><i>Work Telephone Number :</i><br>' ^WPN^PH^^734^677777 '  |
| INV192               | Person Reporting to CDC - Fax Number   | Fax Number of the Person who is reporting the case to the CDC  | Text      | O            |            |                        |                           | Observation/OBX Segment with this variable ID and label | XTN           | O               | <b>Expected format:</b><br><i>Work Fax Number :</i><br>' ^WPN^FX^^734^6777778 '   |
| INV193               | Person Reporting to CDC - Email        | Email Address of the person reporting the case to the CDC  | Text      | O            |            |                        |                           | Observation/OBX Segment with this variable ID and label | XTN           | O               | <b>Expected format:</b><br><i>Work Email Address:</i><br>' ^WPN^Internet^someone@some where.com '   |
| INV200               | Legacy Case ID                         | CDC uses this field to link current case notifications to case notifications submitted by a previous system (NETSS, STD-MIS, etc.) | Text      | P            |            |                        |                           | Observation/OBX Segment with this variable ID and label | CWE           | O               | Legacy Case ID is expected in the fifth component of the CWE datatype.<br><br>For a NETSS case ID, please use the following format:<br>Case ID(6) - State(2) - Site(3) - Year(4)<br>ex: Caseld01LAB2009 |
| INV2001              | Age at case investigation              | Subject age at time of case investigation.   | Numeric   | P            |            |                        |                           | Observation/OBX Segment with this variable ID and label | SN            | O               |   |
| INV2002              | Age units at case investigation        | Subject age units at time of case investigation  | Coded     | P            |            | Age unit               | PHVS_AgeUnit_UCUM         | OBX-6-Units   | CE            | O               | Part of the INV2001 Observation/OBX Segment.<br><br>The UID and label are not passed in the message.  |
| <b>Clinical Data</b> |  |  |           |              |            |                        |                           |   |               |                 |   |
| INV272               | Signs and Symptoms                     | Listing of signs and symptoms indicative of the condition/illness.   | Coded     | P            | Y/20       | Flu Signs and Symptoms | PHVS_SignsSymptoms_Flu    | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| INV202               | Highest Measured Temperature           | What was the person's highest measured temperature during this condition/illness?  | Numeric   | P            |            |                        |                           | Observation/OBX Segment with this variable ID and label | SN            | O               |   |
| INV2003              | Temperature units                      | The units of measure of the highest measured temperature. This would be either Fahrenheit or Celsius.                              | Coded     | P            |            | Temperature Unit       | PHVS_TemperatureUnit_UCUM | OBX-6-Units   | CE            | O               | Part of the INV202 Observation/OBX Segment.<br><br>The UID and label are not passed in the message.   |



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| PHIN Variable ID  | Label/Short Name   | Description   | Data Type | CDC Priority | May Repeat | Value Set Name                  | Value Set Code                          | HL7 Message Context                                     | HL7 Data Type | HL7 Optionality | HL7 Implementation Notes   |
|---|--|---|-----------|--------------|------------|---------------------------------|---|---|---------------|-----------------|--|
| INV229  | ICU Admission  | If the subject was hospitalized, was the subject admitted to the intensive care unit?   | Coded     | P            |            | Yes No Unknown (YNU)            | PHVS_YesNoUnknown_CDC                   | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| INV230  | Mechanical Ventilation                                       | If the subject was hospitalized, did the subject require mechanical ventilation?  | Coded     | P            |            | Yes No Unknown (YNU)            | PHVS_YesNoUnknown_CDC                   | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| <b>Medical History</b>  |  |   |           |              |            |                                 |   |   |               |                 |  |
| VAC122  | Seasonal Influenza Vaccine                                   | Was the patient vaccinated for seasonal influenza for the current flu season beginning in August?   | Coded     | P            |            | Yes No Unknown (YNU)            | PHVS_YesNoUnknown_CDC                   | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| VAC125  | H1N1 Vaccine   | Was the patient vaccinated for novel influenza A (H1N1) for the current flu season beginning in September?                                    | Coded     | P            |            | Yes No Unknown (YNU)            | PHVS_YesNoUnknown_CDC                   | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| <b>Repeating Vaccine Questions (Max repetition of 4 repeating groups)</b> |  |   |           |              |            |                                 |   |   |               |                 |  |
| VAC101  | Vaccine Administered   | Specify influenza vaccine received before illness onset.  | Coded     | P            |            | Vaccines Administered (Flu)     | PHVS_VaccinesAdministered_Flu           | Observation/OBX Segment with this variable ID and label | CWE           | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc. |
| VAC107  | Vaccine Manufacturer   | Manufacturer of the vaccine.  | Coded     | P            |            | Manufacturers of vaccines (MVX) | PHVS_ManufacturersOfVaccinesMVX_CDC_NIP | Observation/OBX Segment with this variable ID and label | CWE           | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc. |
| VAC108  | Vaccine Lot Number   | The vaccine lot number of the vaccine administered.   | Text      | O            |            |                                 |   | Observation/OBX Segment with this variable ID and label | ST            | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc. |
| VAC120  | Vaccine Dose Number  | The vaccine dose number in series of vaccination for this condition/illness.  | Numeric   | P            |            |                                 |   | Observation/OBX Segment with this variable ID and label | SN            | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc. |
| VAC103  | Vaccine Administered Date                                    | The date that the vaccine was administered.   | Date      | P            |            |                                 |   | Observation/OBX Segment with this variable ID and label | TS            | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc. |
| <b>End of Repeating Vaccine Questions</b>                                 |  |   |           |              |            |                                 |   |   |               |                 |  |
| <b>Underlying Conditions</b>  |  |   |           |              |            |                                 |   |   |               |                 |  |
| INV237  | Asthma (Underlying Conditions)                               | Did the subject have Asthma?  | Coded     | P            |            | Yes No Unknown (YNU)            | PHVS_YesNoUnknown_CDC                   | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| INV238  | Other chronic lung disease (Underlying Conditions)           | Did the subject have a chronic lung disease other than those listed?  | Coded     | P            |            | Yes No Unknown (YNU)            | PHVS_YesNoUnknown_CDC                   | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| INV239  | Chronic Heart or circulatory disease (Underlying Conditions) | Did the subject have Chronic Heart or circulatory disease?  | Coded     | P            |            | Yes No Unknown (YNU)            | PHVS_YesNoUnknown_CDC                   | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| INV240  | Metabolic disease (Underlying Conditions)                    | Did the subject have Metabolic disease, (include diabetes mellitus)?  | Coded     | P            |            | Yes No Unknown (YNU)            | PHVS_YesNoUnknown_CDC                   | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| INV241  | Kidney disease (Underlying Conditions)                       | Did the subject have kidney disease?  | Coded     | P            |            | Yes No Unknown (YNU)            | PHVS_YesNoUnknown_CDC                   | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| INV242  | Cancer in the last 12 months (Underlying Conditions)         | Did the subject have cancer in the last 12 months?  | Coded     | P            |            | Yes No Unknown (YNU)            | PHVS_YesNoUnknown_CDC                   | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |
| INV243  | Immunosuppressive condition (Underlying Conditions)          | Did the subject have an Immunosuppressive condition (including HIV infection, chronic corticosteroid therapy, or organ transplant recipient)? | Coded     | P            |            | Yes No Unknown (YNU)            | PHVS_YesNoUnknown_CDC                   | Observation/OBX Segment with this variable ID and label | CWE           | O               |  |

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| PHIN Variable ID  | Label/Short Name                              | Description  | Data Type | CDC Priority | May Repeat | Value Set Name                | Value Set Code                 | HL7 Message Context                                     | HL7 Data Type | HL7 Optionality | HL7 Implementation Notes  |
|---|---|--|-----------|--------------|------------|-------------------------------|--------------------------------|---|---------------|-----------------|---|
| INV244  | Obesity (Underlying Conditions)               | Was the subject obese?   | Coded     | P            |            | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC          | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| INV245  | Obesity Degree (Underlying Conditions)        | Indicates the degree of obesity: obese (BMI of 30.0-39.9) or morbidly obese (BMI ≥ 40)?                      | Coded     | P            |            | Obesity Severity (Flu)        | PHVS_ObesitySeverity_Flu       | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| INV246  | Neurological disease (Underlying Conditions)  | Did the subject have a neurological disease?   | Coded     | P            |            | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC          | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| INV247  | Other chronic disease (Underlying Conditions) | Did the subject have a chronic disease other than those listed?  | Coded     | P            |            | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC          | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| <b>Diagnostic Tests</b>   |   |  |           |              |            |                               |                                |   |               |                 |   |
| INV251  | Chest X-ray Result                            | Results of the subject's chest x-ray   | Coded     | P            |            | Chest XRay Result             | PHVS_ChestXRayResult_CDC       | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| INV253  | Chest CT scan Result                          | Results of the subject's chest computed tomography scan  | Coded     | P            |            | Chest XRay Result             | PHVS_ChestXRayResult_CDC       | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| INV254  | Evidence of Pneumonia                         | If the Chest X-ray Result (INV251) or Chest CT scan (INV253) is "Abnormal", was there evidence of pneumonia? | Coded     | P            |            | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC          | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| INV255  | Acute Respiratory Distress Syndrome           | Did the subject have Acute Respiratory Distress Syndrome?  | Coded     | P            |            | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC          | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| <b>Specimen Related</b>   |   |  |           |              |            |                               |                                |   |               |                 |   |
| <b>Repeating Lab Questions (Max repetition of 2 repeating groups)</b> |   |  |           |              |            |                               |                                |   |               |                 |   |
| LAB202  | Specimen ID                                   | A laboratory generated number that identifies the test/order instance.                                       | Text      | P            |            |                               |                                | Observation/OBX Segment with this variable ID and label | ST            | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.  |
| LAB163  | Date Collected                                | Date of specimen collection  | Date      | P            |            |                               |                                | Observation/OBX Segment with this variable ID and label | TS            | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.  |
| LAB203  | Specimen Type                                 | Indicated the type of Specimen used in testing the Resulted Lab Test (LAB101).                               | Coded     | P            |            | Specimen (Flu)                | PHVS_Specimen_Flu              | Observation/OBX Segment with this variable ID and label | CWE           | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.  |
| INV290  | Test Type                                     | Epidemiologic interpretation of the type of test(s) performed for this case.                                 | Coded     | P            |            | Lab Test Procedure (Flu)      | PHVS_LabTestProcedure_Flu      | Observation/OBX Segment with this variable ID and label | CWE           | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.<br><br>To send an "Other" Test, populate the 1st 3 components of the CWE with the standard code defined in PHIN VADs, and also populate the 9th component with the specified test. |
| INV291  | Test Result                                   | Epidemiologic interpretation of the results of the tests performed for this case.                            | Coded     | P            |            | Lab Test Interpretation (Flu) | PHVS_LabTestInterpretation_Flu | Observation/OBX Segment with this variable ID and label | CWE           | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.  |



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| PHIN Variable ID  | Label/Short Name                      | Description   | Data Type | CDC Priority | May Repeat | Value Set Name                | Value Set Code                         | HL7 Message Context                                     | HL7 Data Type | HL7 Optionality | HL7 Implementation Notes  |
|---|---------------------------------------|---|-----------|--------------|------------|-------------------------------|--|---|---------------|-----------------|---|
| LAB101  | Resulted Test Name                    | Name of the test to be resulted in Coded Lab Test Results (LAB192).               | Coded     | P            |            | Microbiology Test Result Name | PHVS_MicrobiologyLabTestResultName_CDC | Observation/OBX Segment with this variable ID and label | CWE           | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.  |
| LAB192  | Coded Lab Test Results                | Coded Results of Resulted Test Name (LAB101)                                      | Coded     | P            |            | Microorganism                 | PHVS_Microorganism_CDC                 | Observation/OBX Segment with this variable ID and label | CWE           | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.  |
| <b>End of Repeating Lab Questions</b>   |                                       |   |           |              |            |                               |  |   |               |                 |   |
| <b>Antiviral Medications</b>  |                                       |   |           |              |            |                               |  |   |               |                 |   |
| INV256  | Antiviral Medication                  | Did the subject receive antiviral medication for this condition?                  | Coded     | P            |            | Yes No Unknown (YNU)          | PHVS_YesNoUnknown_CDC                  | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| <b>Repeating Antiviral Medications Questions (Max repetition of 5 repeating groups)</b> |                                       |   |           |              |            |                               |  |   |               |                 |   |
| INV257  | Treatment Drug (Name of Medication)   | The name of antiviral drug the subject received                                   | Text      | P            |            | Medication Treatment (Flu)    | PHVS_MedicationTreatment_Flu           | Observation/OBX Segment with this variable ID and label | CWE           | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.<br><br>To send an "Other" Medication, populate the 1st 3 components of the CWE with the standard code defined defined in PHIN VADs, and also populate the 9th component with the specified medication. |
| INV258  | Treatment Start Date (Date Initiated) | Date the antiviral medication treatment was initiated                             | Date      | P            |            |                               |  | Observation/OBX Segment with this variable ID and label | TS            | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.  |
| INV259  | Treatment End Date (Date Stopped)     | Date the antiviral medication treatment was discontinued.                         | Date      | P            |            |                               |  | Observation/OBX Segment with this variable ID and label | TS            | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.  |
| INV260  | Treatment Dosage/Strength             | Dosage of the antiviral medication the subject received                           | Numeric   | P            |            |                               |  | Observation/OBX Segment with this variable ID and label | SN            | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.  |
| INV261  | Treatment Dosage/Strength Unit        | Dosage units of the antiviral medication the subject received                     | Coded     | P            |            | Units of Measure              | PHVS_UnitsOfMeasure_CDC                | OBX-6-Units   | CE            | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.<br><br>Part of the INV260 Observation/OBX Segment.<br><br>The UID and label are not passed in the message.   |
| <b>End of Repeating Antiviral Medications Questions</b>                                 |                                       |   |           |              |            |                               |  |   |               |                 |   |
| <b>Risk Factors</b>   |                                       |   |           |              |            |                               |  |   |               |                 |   |
| NIA107  | Employment at time of hospitalization | Type of work at the time of hospitalization within 7 days prior to illness onset? | Coded     | P            |            | Employment Status (Flu)       | PHVS_EmploymentStatus_Flu              | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |

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| PHIN Variable ID   | Label/Short Name  | Description   | Data Type | CDC Priority | May Repeat | Value Set Name       | Value Set Code           | HL7 Message Context                                     | HL7 Data Type | HL7 Optionality | HL7 Implementation Notes  |
|--|---|---|-----------|--------------|------------|----------------------|--------------------------|---|---------------|-----------------|---|
| NIA108   | Type of Industry  | If the answer to Employment at time of hospitalization (NIA107) was <b>Employed</b> or <b>Self-employed</b> , what kind of business or industry was the subject employed in (e.g.: education, public transportation, construction, restaurant/entertainment, grocery store, health care)? | Coded     | P            |            | Industry (NAICS)     | PHVS_Industry_NAICS_2007 | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| NIA109   | Type of work  | If the answer to Employment at time of hospitalization (NIA107) was <b>Employed</b> or <b>Self-employed</b> , what kind of work did the subject do (e.g. teacher, nurse, farmer, mail clerk, cashier, computer specialist, waitress, bus driver) ?  | Coded     | P            |            | Occupation           | PHVS_Occupation_CDC      | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| NIA100   | Health care facility worker   | If the answer to Employment at time of hospitalization (NIA107) was <b>Employed</b> or <b>Self-employed</b> , did the subject work in a health care facility/setting within 7 days prior to illness onset?  | Coded     | P            |            | Yes No Unknown (YNU) | PHVS_YesNoUnknown_CDC    | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| NIA102   | Family members/ close contacts with pneumonia or influenza-like illness | Has the subject had family members or close contacts with pneumonia or influenza-like illness within 7 days prior to illness onset?   | Coded     | P            |            | Yes No Unknown (YNU) | PHVS_YesNoUnknown_CDC    | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| NIA103   | Travel prior to illness onset   | Did the subject travel within 7 days prior to illness onset?  | Coded     | P            |            | Yes No Unknown (YNU) | PHVS_YesNoUnknown_CDC    | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| NIA104   | Ill while traveling   | If the subject did travel within 7 days prior to illness onset (NIA103), was the subject ill when traveling?  | Coded     | P            |            | Yes No Unknown (YNU) | PHVS_YesNoUnknown_CDC    | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| NIA105   | Health Care while traveling   | If the subject did travel while ill within 7 days prior to illness onset (NIA104), did the subject seek health care?  | Coded     | P            |            | Yes No Unknown (YNU) | PHVS_YesNoUnknown_CDC    | Observation/OBX Segment with this variable ID and label | CWE           | O               |   |
| NIA106   | Type of health care received while traveling                            | If the subject did travel while ill within 7 days prior to illness onset (NIA105), specify the type of health care received when traveling?   | Text      | P            |            |                      |                          | Observation/OBX Segment with this variable ID and label | TX            | O               |   |
| <b>Contact Transmission</b>  |   |   |           |              |            |                      |                          |   |               |                 |   |
| INV271   | Number of contacts (including subject)                                  | Total number of contacts, including the subject, i.e., a contact is anyone who stayed overnight in the household, with the subject, 7 days before to 7 days after the subject's illness onset date.   | Numeric   | P            |            |                      |                          | Observation/OBX Segment with this variable ID and label | SN            | O               |   |
| <b>Repeating Contact Questions (Max repetition of 10 repeating groups)</b> |   |   |           |              |            |                      |                          |   |               |                 |   |
| INV282   | Contact Case ID   | Unique case identifier of the contact. This would be the same as INV168 (Case Local ID) sent in the Influenza Individual Case Notification for the contact.   | Text      | P            |            |                      |                          | Observation/OBX Segment with this variable ID and label | ST            | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.  |
| INV266   | Contact Relationship to Subject   | Relationship of contact, i.e., a contact is anyone who stayed overnight in the household, with the subject, 7 days before to 7 days after the subject's illness onset date.   | Coded     | P            |            | Relationship (Flu)   | PHVS_Relationship_Flu    | Observation/OBX Segment with this variable ID and label | CWE           | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.<br><br>To send an "Other" relationship, populate the 1st 3 components of the CWE with the standard code defined defined in PHIN VADs, and also populate the 9th component with the specified relationship. |

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| PHIN Variable ID                          | Label/Short Name           | Description  | Data Type | CDC Priority | May Repeat | Value Set Name                        | Value Set Code                    | HL7 Message Context                                     | HL7 Data Type | HL7 Optionality | HL7 Implementation Notes  |
|---|----------------------------|--|-----------|--------------|------------|---------------------------------------|-----------------------------------|---|---------------|-----------------|---|
| INV267                                    | Contact Age                | Age of contact, i.e., a contact is anyone who stayed overnight in the household, with the subject, 7 days before to 7 days after the subject's illness onset date.                                 | Numeric   | P            |            |                                       |                                   | Observation/OBX Segment with this variable ID and label | SN            | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.  |
| INV268                                    | Contact Age Units          | Units of age of contact, including the subject, i.e., a contact is anyone who stayed overnight in the household, with the subject, 7 days before to 7 days after the subject's illness onset date. | Numeric   | P            |            | Age unit                              | PHVS_AgeUnit_UCUM                 | OBX-6-Units   | CE            | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.<br><br>Part of the INV267 Observation/OBX Segment.<br><br>The UID and label are not passed in the message. |
| INV269                                    | Contact Signs and Symptoms | Flu signs and symptoms of contact, i.e., a contact is anyone who stayed overnight in the household, with the subject, 7 days before to 7 days after the subject's illness onset date.              | Coded     | P            | Y/20       | Case Contact Signs and Symptoms (Flu) | PHVS_CaseContactSignsSymptoms_Flu | Observation/OBX Segment with this variable ID and label | CWE           | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.  |
| INV270                                    | Contact Illness Onset Date | Onset date of signs/symptoms of contact, i.e., a contact is anyone who stayed overnight in the household, with the subject, 7 days before to 7 days after the subject's illness onset date.        | Date      | P            |            |                                       |                                   | Observation/OBX Segment with this variable ID and label | TS            | O               | component of repeating block - first group OBX-4='1', second group OBX-4='2', etc.  |
| <b>End of Repeating contact Questions</b> |                            |  |           |              |            |                                       |                                   |   |               |                 |   |

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| Date     | Version | Description  |
|----------|---------|--|
| 1/6/2010 | 1.01    | INV173 (State Case ID) was incorrectly listed as a CWE datatype. The correct listing is a ST datatype.   |
| 1/6/2010 | 1.01    | Corrected date for reference: National Condition Reporting Notifiable Events and Reporting Mechanisms for 2009, to correspond with posted reference. |