

**VERSION: The version of this Message Mapping Guide is Version 0.96 dated October 26, 2009.**

**"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, May 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:  <b>R - Required</b> - Mandatory for sending the message. If data element is not present, the message will error out. <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. <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: 1. Go to <a href="http://phinvads.cdc.gov">http://phinvads.cdc.gov</a> . 2. Click on the <b>Views</b> hyperlink 3. Enter <b>Influenza</b> in the lookup box and press the Search Views button. 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: 1. Go to <a href="http://phinvads.cdc.gov">http://phinvads.cdc.gov</a> . 2. Click on the <b>Views</b> hyperlink 3. Enter <b>Influenza</b> in the lookup box and press the Search Views button. 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:  <b>R</b> – Required. Must always be populated <b>O</b> – Optional. May optionally be populated.
Implementation Notes	Related implementation comments.

Influenza Case Notification Message Mapping Guide

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
NOT108	Notification ID	The unique identifier for the notification record.	Text	R				MSH-10-Message Control ID.	ST	R	If notification ID is not unique, a timestamp may be appended. No UID or label is passed in the message.
NOT114	Receiving Application	CDC's PHIN Common Data Store (CDS) is the Receiving Application for this message.	OID	R				MSH-5-Receiving Application.	HD	R	Literal Value: 'PHINCDS^2.16.840.1.114222.4.3.2.10^ISO'
NOT115	Message Profile ID	First instance is the reference to the structural specification used to validate the message. Second instance is the reference to the PHIN Message Mapping Guide from which the content is derived.	Text	R	Y/2			MSH-21-Message Profile ID.	EI	R	First instance literal value: 'NND_ORU_v2.0^PHINProfileID^2.16.840.1.114222.4.10.3^ISO'  Second instance literal value: 'NIA_Case_Map_v1.0^PHINMsgMapID^2.16.840.1.114222.4.10.4^ISO'
DEM197	Local Subject ID	The local ID of the Subject/Entity.	Text	R				PID-3-Patient Identifier List	CX	R	PID-3.1-ID Number is the local Subject ID from the sending system's internally assigned Subject id;  PID-3.4-Assigning Authority format <localID&OID&ISO>  Does not pass Variable ID or label.
DEM100	Subject Name Type	Name is not requested by the program, but the Patient Name field is required to be populated for the HL7 message to be valid. Have adopted the HL7 convention for processing a field where the name has been removed for de-identification purposes.	Coded	R	Y/2	Name Type (HL7)	PHVS_NameType_HL7_2x	PID-5.7-Patient Name Type	XPN	R	Literal value: [~^M^S]  Patient Name Type is passed in the second instance as HL7 reserves the first instance of the name field for Legal Name.
INV168	Local Record ID	Sending system-assigned local ID of the case investigation with which the Subject is associated.	Text	R				OBR-3-Filler Order Number	EI	R	OBR-3.1 is the internally assigned case/investigation ID.  OBR-3.3 is the OID for sending application as assigning authority.  OBR-3.4 is the literal value: 'ISO'.  The same value is used for each OBR segment, and the UID and label are not passed in the message.
NOT099	Subject Type	Type of subject for the notification. "Person", "Place/location", or "Non-Person Living Subject" are the appropriate subject types for Notifications to CDC.	Coded	R		Notification Section Header	PHVS_NotificationSectionHeader_CDC	First OBR Segment-OBR-4-Universal Service ID.	CE	R	Literal value: 'PERSUBJ^Person Subject^CDCPHINVS'
NOT101	Notification Type	Type of notification. Notification types are "Individual Case", "Environmental", "Summary", and "Laboratory Report".	Coded	R		Notification Section Header	PHVS_NotificationSectionHeader_CDC	Second OBR Segment-OBR-4-Universal Service ID.	CE	R	Literal Value: 'NOTF^Individual Case Notification^CDCPHINVS'  No UID or label is passed in the message.

Influenza Case Notification Message Mapping Guide

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'  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]  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]  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

Influenza Case Notification Message Mapping Guide

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.  The UID and label are not passed in the message.

Influenza Case Notification Message Mapping Guide

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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	CWE	O	State Case ID is expected in the fifth component of the CWE datatype.
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	

Influenza Case Notification Message Mapping Guide

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.  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: " <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> <i>Work Telephone Number :</i> " ^WPN^PH^^734^6777777 "
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> <i>Work Fax Number :</i> " ^WPN^FX^^734^67777778 "
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> <i>Work Email Address:</i> " ^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.  For a NETSS case ID, please use the following format: Case ID(6) - State(2) - Site(3) - Year(4) ex: CaseId01LAB2009
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.  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.  The UID and label are not passed in the message.

Influenza Case Notification Message Mapping Guide

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	

Influenza Case Notification Message Mapping Guide

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.  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.



Influenza Case Notification Message Mapping Guide

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.  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.  Part of the INV260 Observation/OBX Segment.  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	

Influenza Case Notification Message Mapping Guide

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.  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.

Influenza Case Notification Message Mapping Guide

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.  Part of the INV267 Observation/OBX Segment.  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>											