



KDHE Infectious Disease Implementation Guide

ADT MESSAGES A03 and A08
HL7 Version 2.5.1

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Revision History

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1. Introduction

1.1. Background

The Infectious Disease Epidemiology and Response conducts infectious disease surveillance and outbreak investigations, and provides subject matter expertise to local health departments, physicians, veterinarians, and the general public.

Infectious disease surveillance is a process of collecting, summarizing, and analyzing data to provide public health assurance. Routine disease monitoring, disease outbreak and other public health emergencies all rely on surveillance and data management.

This document is a guide for electronic communication of reportable diseases using HL7 Version 2.5.1. It specifies the electronic messaging standard required to submit administrative and clinical data for disease surveillance.

Health Level Seven (HL7) is a nationally recognized standard for electronic data exchange between systems housing health care data. The HL7 standard defines the syntax and vocabulary for formulating the messages that carry this information.

1.2. Intended Audience

This guide is intended for:

1. Providers that wish to begin reporting their infectious disease data to KDHE using the HL7 format.
2. Eligible Providers, Eligible Hospitals, and Labs to use toward meeting the requirements for Meaningful Use Stages 2 and 3.

1.2.1. Assumptions

This guide makes the following assumptions:

1. Infrastructure between sending and receiving systems is in place to allow accurate and secure information exchange;
2. Knowledge of SOAP and/or HTTPS POST transport methods;
3. Knowledge of HL7 and HL7 ADT events is well understood; and
4. If a meaningful use incentive seeker, that ONC certified electronic health record technology is in place

1.3. Contacts

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2. KDHE Message Transport Methods

KDHE utilizes both SOAP and HTTPS POST as transport methods for submitting electronic data to the infectious disease registry. To begin submitting data to KDHE, you must first obtain a username and password to submit data. Please contact this document's contact for this information.

The Meaningful Use Stage 2 final rule states that eligible entities are to utilize the transport method or methods supported by the public health agency (PHA) in order to achieve meaningful use. KDHE will accept either SOAP or HTTPS POST interface connections.

Note, Kansas certified Health Information Organizations (HIOs) can act as a conduit to KDHE and is therefore an acceptable method for sending information to this registry.

2.1. Connectivity Testing

To verify proper network configuration and connectivity with KDHE the following services are available.

2.1.1. SOAP

The following is a sample SOAP 1.1 connectivity test. Replace **string** with any text.

```
POST /hl7engine/WebServices/Default.asmx HTTP/1.1
Host: kanphixtrain.kdhe.state.ks.us
Content-Type: text/xml; charset=utf-8 Content-Length: length
SOAPAction: http://tempuri.org/connectivityTest

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
<soap:Body>
  <connectivityTest xmlns="http://tempuri.org/">
    <echoBack>string</echoBack>
  </connectivityTest>
</soap:Body>
</soap:Envelope>
```

2.1.2. POST

The following is a sample HTTPS POST connectivity test. Replace **string** with any text.

```
POST /hl7engine/WebServices/Default.asmx/connectivityTest HTTP/1.1
Host: kanphixtrain.kdhe.state.ks.us
Content-Type: application/x-www-form-urlencoded
Content-Length: length

echoBack=string
```

2.2. Required Fields for Submission

For both transport methods to submit infectious disease data electronically the following fields are required. Please call this document's contact for this information:

- **FacilityID:** Identifier used to authenticate with the web service. Note, this is different from the sending facility used in the MSH segment of your message.

- **FacilityPassword:** Password used to authenticate with the web service.
- **HL7MessageData:** This is your HL7 2.5.1 formatted message.

2.3. SOAP

SOAP can be used as a transport method to send electronic infectious disease data to KDHE. The URL for the production SOAP webservice is:

<https://kanphix.kdhe.state.ks.us/webservices/kdheelr/ELRService.asmx>. The URL for the test SOAP webservice is: <https://kanphixtrain.kdhe.state.ks.us/webservices/kdheelr/ELRService.asmx>.

The following is a sample SOAP 1.1 request. The hi-lighted placeholders need to be replaced with actual values.

```
POST /webservices/kdheelr/ELRService.asmx HTTP/1.1
Host: kanphixtrain.kdhe.state.ks.us
Content-Type: text/xml; charset=utf-8
Content-Length: length
SOAPAction: http://kdheks.gov/ProcessHL7Message
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi=http://www.w3.org/2001/XMLSchema-instance
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ProcessHL7Message xmlns="http://kdheks.gov">
      <elr>
        <FacilityID>string</FacilityID>
        <FacilityPassword>string</FacilityPassword>
        <HL7MessageData>base64Binary</HL7MessageData>
      </elr>
    </ProcessHL7Message>
  </soap:Body>
</soap:Envelope>
```

2.3.1. SOAP Response Message

The following is an example response message or acknowledgement.

The following is a sample SOAP 1.1 response for the ProcessHL7Message service. **string** will be replaced with a response message.

```
HTTP/1.1 200 OK
Content-Type: text/xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi=http://www.w3.org/2001/XMLSchema-instance
xmlns:xsd=http://www.w3.org/2001/XMLSchema xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ProcessHL7MessageResponse xmlns="http://kdheks.gov">
      <ProcessHL7MessageResult>string</ProcessHL7MessageResult>
    </ProcessHL7MessageResponse>
  </soap:Body>
</soap:Envelope>
```

2.4. HTTPS POST

HTTPS POST can be used to send infectious disease data. The POST form must contain the following field names: **FacilityID**, **FacilityPassword**, and **HL7MessageData**. The field names must be named exactly as they are displayed. Post messages will only be accepted as form data and no acknowledgements will be returned unless the **FacilityID** and **FacilityPassword** are incorrect.

The URL for the production POST environment is:

<https://kanphix.kdhe.state.ks.us/webservices/kdheelr/ELRPost.aspx>. The URL for the test POST environment is: <https://kanphixtrain.kdhe.state.ks.us/webservices/kdheelr/ELRPost.aspx>

The following is an example HTTPS POST message. It is meant to hi-light required fields that will be replaced with appropriate values.

```
POST /webservices/kdheelr/ELRPost.aspx HTTP/1.1
Host: kanphixtrain.kdhe.state.ks.us
Content-Type: application/x-www-form-urlencoded
Content-Length: length
```

```
FacilityID=string&FacilityPassword=string&HL7MessageData=base64Binary
```

2.4.1. POST Response Message

The following is an example response message or acknowledgement.

The following is a sample HTTPS POST response. **string** will be replaced with a response message.

```
HTTP/1.1 200 OK
Content-Type: text/xml; charset=utf-8
Content-Length: length <?xml version="1.0" encoding="utf-8"?>
<string xmlns="http://tempuri.org/">string</string>
```

2.5. HL7 Response Message

It is highly recommended that receipt of the HL7 acknowledgement (represented by **string** in the above SOAP and POST response message examples) be retained. The response indicates whether the message that is being acknowledged was processed successfully.

An HL7 acknowledgment contains an MSH segment and a MSA segment with an acknowledgement code. The acknowledgment codes, as defined by HL7 standard, are:

- AA – Application Accept
- AE – Application Error
- AR – Application Reject

3. HL7 Concepts

3.1. HL7 Definitions

Message	A message is the entire unit of data transferred between systems in a single transmission. It is a series of segments in a defined sequence, with a message type and a trigger event.
Segment	A segment is a logical grouping of data fields. Segments within a defined message may be required or optional, may occur only once, or may be allowed to repeat. Each segment is named and is identified by a segment ID, a unique three-character code.
Field	A field is a string of characters. Each field is identified by the segment it is in and the position within the segment (e.g., PID.5 if the fifth field of the PID segment). Optional data fields need not be valued.
Component	A component is one of a logical grouping of items that comprise the contents of a coded or composite field. Within a field having several components, not all components are required to be valued, and some components may be ignored. A component may, in turn, be logically grouped into subcomponents.
Delimiters	The delimiters to be used for laboratory messages are as follows: “<CR>” – Segment Terminator; “ ” – Field Separator; “^” – Component Separator; “&” – Sub-Component Separator; “~” – Repetition Separator; and “\” – Escape Character. Any trailing delimiters found after the last field in a segment, while not accepted, will not cause any errors in the receiving application.

3.2. HL7 Data Types Used in This Guide

The HL7 Standards define a large number of data types for use in HL7 messaging. Those data types that are used in this guide are defined and specified further in the table below. For additional details refer to <http://www.mexi.be/documents/hl7/ch200020.htm#E11E17>.

DATA TYPE DEFINITIONS

DATA TYPE	DATA TYPE NAME
CE	Coded Element
CWE	Coded with Exceptions
CX	Extended Composite ID with check Digit
DTM	Date/Time
EI	Entity Identifier
FN	Family Name
HD	Hierarchic Designator
ID	Coded Value for HL7-defined tables
IS	Coded Value for user-defined tables
MSG	Message Type
NM	Numeric
PL	Person Location

PT	Processing Type
SI	Sequence Identifier
ST	String Data
TX7	Text Data
TS	Timestamp
VID	Version Identifier
XAD	Extended Address
XCN	Extended Composite ID Number and Name for Persons
XPN	Extended Person Name

3.3. HL7 Structure

The following table describes the structure of HL7 messages.

ABBREVIATION	DEFINITION
Segment	<p>Three-character code for the segment and the abstract syntax (e.g., the square and curly braces) If a segment is not documented in this guide, it should not be sent.</p> <ul style="list-style-type: none"> • [XXX] Optional • { XXX } Repeating • XXX Required • [{ XXX }] Optional and Repeating
Name	Name of the segment
Description	Explanation of the use of the segment
Usage	<p>Use of the segment for syndromic surveillance Indicates if the segment is required, optional, or conditional in a message Legal values are:</p> <p>R – Required, Must always be populated</p> <p>RE – Required, but may be empty (segment is not sent). If the Sender has data, it must be sent. The Receiver must be capable of processing data if sent, and must not raise an error or warning if the data is not sent.</p> <p>O – Optional There is no specified conformance rules for either Sender or Receiver for this segment in this guide. As an implemented interface must follow known rules for populating segments, a specific interface for a particular Sender or Receiver must constrain this usage to either R, RE, C, CE, or X. This has been deliberately left unconstrained in this guide to support differing and sometimes mutually exclusive statutory requirements in different jurisdictions; this must be determined locally.</p>
Cardinality	<p>Minimum and maximum number of times the segment may appear</p> <p>[0..1] Segment may be omitted and can have, at most, one occurrence.</p> <p>[1..1] Segment must have exactly one occurrence.</p> <p>[0..*] Segment may be omitted or repeat an unlimited number of times.</p> <p>[1..*] Segment must appear at least once, and may repeat unlimited number of times.</p>

3.4. HL7 Segment Attributes

Fields or components that are NOT documented in this guide are considered NOT SUPPORTED. The abbreviated terms and segment definitions used in the constrained message formats are detailed in the following table.

SEGMENT PROFILE ATTRIBUTES	
ABBREVIATION	DEFINITION
Field Name	Descriptive name of the data element
Sequence (Seq)	Sequence of the elements as they are numbered in the HL7 segment
Data type (DT)	Data type used for HL7 element
Length (Len)	Length of an element is calculated using the following rules: <i>Field length</i> = (Sum of all supported component lengths) + (component number of the last-supported component) – 1. <i>Component length</i> = (Sum of all supported sub-component lengths) + (sub-component number of the last-supported component) – 1.
Sender Usage Receiver Usage	Indicator of whether a data element is required, optional, or conditional in a message, set separately for Senders and Receivers. Legal values are: <p>R – Required, Must always be populated by the Sender, and if not present, the Receiver may reject the message.</p> <p>RE - Required, but may be empty (no value). If the Sender has data, the data must be sent. The Receiver must be capable of processing data if sent, and must not raise an error or warning if the data is not sent.</p> <p>O – Optional-There are no specified conformance rules for either Sender or Receiver for this field in this guide. As an implemented interface must follow known rules for populated fields and components, a specific interface for a particular Sender or Receiver must constrain this usage to either R, RE, C, CE, or X. This value has been deliberately left unconstrained in this guide to support differing and sometimes mutually exclusive statutory requirements in different jurisdictions; this must be determined locally.</p> <p>C – Conditional - When conditionality predicate evaluates to ‘True’, considered the same as ‘R’. When condition evaluates to ‘False’, Senders must not populate the field, and Receivers may raise an error if the field is present but must not raise an error if the field is not present.</p> <p>CE - Conditionality Empty - When conditionality predicate evaluates to ‘True’, behaves the same as ‘RE’. When conditionality predicate evaluates to ‘False’, the Sender should not populate the field, and the Receiver may raise an application error if the field is present.</p> <p>X - Not supported - Senders must not populate. Receivers may ignore the element if it is sent, or may raise an error if field is present.</p> <p>Note: A required field in an optional segment does not mean the segment must be present in the message. It means that if the segment is present, the required fields within that segment must be populated. The same applies to required components of optional fields. If the field is being populated, then the required components must be populated. The same applies to required sub-components of optional components. If a component is being populated, then the required sub-components of that component must be populated.</p>
Cardinality	Minimum and maximum number of times the field may appear. [0..0] Field never present [0..1] Field may be omitted and can have, at most, one occurrence. [1..1] Field must have exactly one occurrence [0..n] Field may be omitted or may repeat up to <i>n</i> times [1..n] Field must appear at least once, and may repeat up to <i>n</i> time. [0..*] Field may be omitted or repeat an unlimited number of times. [1..*] Field must appear at least once, and may repeat unlimited number of times. [m..n] Field must appear at least <i>m</i> and at most <i>n</i> times.
Values / Value Set	Link to value set or literal value of data expected to be populated in the field. Numbers in this field denote the related vocabulary in that HL7 Table. Contains the name and/or the PHIN Value Set (accessible through PHIN VADS) when relevant as well as notes, condition rules and recommendations

3.5. HL7 ADT^A03 and ADT^A08 Message Types and Segments

The following HL7 ADT Messages have been identified for reporting infectious disease cases. The below ADT trigger events represent the segments of interest to KDHE for reporting infectious diseases:

- ADT^A08 - Update Patient Information
- ADT^A03 - Discharge/End Visit

Message types that are NOT documented in this guide are NOT SUPPORTED.

SEG	NAME	DESCRIPTION	HL7 Message Type(s)	USAGE	CARDINALITY
MSH	Message Header	Information explaining how to parse and process the message. This information includes identification of message delimiters, sender, receiver, message type, timestamp, etc.	A03 A08	R	[1..1]
EVN	Event Type	Trigger event information for receiving application.	A03 A08	R	[1..1]
PID	Patient Identification	Patient identification and demographic information.	A03 A08	R	[1..1]
PV1	Patient Visit	Information related to this visit at this facility including the nature of the visit, critical timing information and a unique visit identifier.	A03 A08	R	[1..1]
[PV2]	Patient Visit Additional Information	Admit Reason information.	A03 A08	RE	[0..1]
[[DG1]]	Diagnosis	Working and Final Diagnosis information.	A03 A08	R	[1..*]
[[PR1]]	Procedures	Information relative to various types of procedures performed.	A03 A08	O	[0..*]
{OBX}	Observation / Result	Information regarding the age, temperature, and other information.	A03 A08	R	[1..*]
[[IN1]]	Insurance	Information about insurance policy coverage information.	A03 A08	O	[0..*]

3.5.1. HL7 ADT^A03 and ADT^A08 Segment Order

Each message must follow the below segment order (note the location of the OBX segment):

Segment order for ADT^A08	Segment order for ADT^A03
MSH	MSH
EVN	EVN
PID	PID
PV1	PV1
[PV2]	[PV2]
{OBX}	[[DG1]]
[[DG1]]	[[PR1]]
[[PR1]]	{OBX}
[[IN1]]	[[IN1]]

3.5.2. A03 and A08: Message Header (MSH) Segment

The MSH Segment is used to define the intent, source, destination, and some specifics of the syntax of the message. This segment includes identification of message delimiters, sender, receiver, message type, timestamp, etc. **NOTE: The below fields are limited to those that are to be reported. Please pay special attention to field ‘Seq’ence numbers as they are not consecutive.**

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Field Separator	1	ST	1	R	R	[1..1]	Definition: This field contains the separator between the segment ID and the first real field, MSH-2-encoding characters. As such, it serves as the separator and defines the character to be used as a separator for the rest of the message. Default value is , (ASCII 124).
Encoding Characters	2	ST	4	R	R	[1..1]	Definition: This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. Default values are ^~\& (ASCII 94, 126, 92, and 38, respectively).
Sending Application	3	HD	227	O	O	[0..1]	Definition: This field uniquely identifies the sending application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise.
Sending Facility	4	HD	227	R	R	[1..1]	National Provider Identifier. (10-digit identifier) Definition: This field further describes the sending application, MSH-3-sending application. This field uniquely identifies the facility associated with the application that sends the message. If Acknowledgements are in use, this facility will receive any related Acknowledgement message. Note: The use of ‘NPI’ should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field
Namespace ID	4.1	IS	20	RE	RE	[0..1]	
Universal ID	4.2	ST	199	R	R	[1..1]	
Universal ID Type	4.3	ID	6	R	R	[1..1]	HL7 table 0301: Universal ID Type
Receiving Application	5	HD	227	O	O	[0..1]	HL7 table 0361: User-defined: Application Definition: This field uniquely identifies the receiving application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise.
Receiving	6	HD	227	O	O	[0..1]	HL7 table 0362: User-defined: Facility

Facility							Definition: This field identifies the receiving application among multiple identical instances of the application running on behalf of different organizations.
Date/Time Of Message	7	TS	26	R	R	[1..1]	MSH-7 (Date/Time of Message) SHALL be expressed with a minimum precision of the nearest minute, and be represented in the following format: 'YYYYMMDDHHMM[SS.S[S[S[S]]]] [+/-ZZZZ]' Definition: This field contains the date/time that the sending system created the message. If the time zone is specified, it will be used throughout the message as the default time zone. Note: MSH-7 (Date/Time of Message) does not have to equal EVN-2 (Message Date/Time)
Message Type	9	MSG	15	R	R	[1..1]	MSH-9 (Message Type) SHALL the literal value: 'ADT^A03^ADT_A03', Definition: This field contains the message type, trigger event, and the message structure ID for the message.
Message Code	9.1	ID	3	R	R	[1..1]	HL7 table: 0076
Trigger Event	9.2	ID	3	R	R	[1..1]	One of the following literal values: 'A03' or 'A08'
Message Structure	9.3	ID	7	R	R	[1..1]	Valid values are: For A08 : 'ADT_A01' For A03 : 'ADT_A03'
Message Control ID	10	ST	199	R	R	[1..1]	Definition: This field contains a number or other identifier that uniquely identifies the message. The receiving system echoes this ID back to the sending system in the Message acknowledgment segment (MSA). Note: This field is a number or other identifier that uniquely identifies the message.
Processing ID	11	PT	3	R	R	[1..1]	MSH-11 (Processing ID) SHALL have a value in the set of literal values: "P" for Production, "D" for Debug or "T" for Training. Definition: This field is used to decide whether to process the message as defined in HL7 Application (level 7) Processing rules. Note: Indicates how to process the message as defined in HL7 processing rules
Version ID	12	VID	5	R	R	[1..1]	MSH-12 (Version ID) SHALL have a value '2.5.1' Definition: This field is matched by the receiving system to its own version to be sure the message will be interpreted correctly. For this message the value shall be 2.5.1 Note: HL7 version number used to interpret format and content of the message.

3.5.3. A03 and A08: Event Type (EVN) Segment

The EVN segment is used to communicate trigger event information to receiving applications. **NOTE: The below fields are limited to those that are to be reported. Please pay special attention to field ‘Seq’ence numbers as they are not consecutive.**

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Recorded Date/Time	2	TS	26	R	R	[1..1]	EVN-2 (Recorded Date/Time of Message) SHALL be expressed with a minimum precision of the nearest minute, and be represented in the following format: ‘YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]’ Note: EVN-2 (Recorded Date/Time) does not have to equal MSH-7 (Date/Time of Message) Note: Most systems default to the system Date/Time when the transaction was entered.
Event Facility	7	HD	241	R	R	[1..1]	Definition: This field identifies the location where the patient was actually treated. Note: The use of ‘NPI’ should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field
Namespace ID	7.1	IS	20	RE	RE	[0..1]	Recommend the use of the Organization Name Legal Business Name (LBN) associated with the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here . If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.
Universal ID	7.2	ST	199	R	R	[1..1]	Recommend the use of the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here . If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.
Universal ID Type	7.3	ID	6	R	R	[1..1]	HL7 table 0301: Universal ID Type

3.5.4. A03 and A08: Patient Identification (PID) Segment

The PID Segment is used as the primary means of communicating patient identification information. This segment contains pertinent patient identifying and demographic information. **NOTE: The below fields are limited to those that are to be reported. Please pay special attention to field ‘Seq’ence numbers as they are not consecutive.**

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Set ID - PID	1	SI	4	R	R	[1..1]	PID-1 (Set ID) SHALL have the Literal Value of '1' Definition: This field contains the number that identifies this transaction. The sequence number shall be one.
Patient Identifier List	3	CX	478	R	R	[1..*]	Definition: PID.3 is a repeating field that can accommodate multiple patient identifiers. Note: Patient's unique identifier(s) from the facility that is submitting this report to public health officials Different jurisdictions use different identifiers and may often use a combination of identifiers to produce a unique patient identifier. Patient identifiers should be strong enough to remain a unique identifier across different data provider models, such as a networked data provider or State HIE.
ID Number	3.1	ST	15	R	R		
Assigning Authority	3.4	HD	227	O	RE	[0..1]	HL7 table 0363: User defined: Assigning authority
Identifier Type Code	3.5	ID	5	R	R	[1..1]	HL7 table 0203: Identifier Type
Assigning Facility	3.6	HD	227	O	RE	[0..1]	
Patient Name	5	XPN	294	R	R	[1..*]	Definition: This field contains the names of the patient; the primary or legal name of the patient is reported first. The name type code in this field should be "L - Legal".
Family Name	5.1	FN	194	O	RE	[0..1]	
Given Name	5.2	ST	30	O	RE	[0..1]	
Second Given Name or Initials	5.3	ST	30	O	RE	[0..1]	
Suffix	5.4	ST	20	O	RE	[0..1]	
Prefix	5.5	ST	20	O	RE	[0..1]	
Name Type Code	5.7	ID	1	R	R	[1..1]	HL7 table 0200: Name Type
Mother's Maiden Name	6	XPN	294	RE	RE	[0..1]	Definition: This field contains the family name under which the mother was born (i.e., before marriage). It is used to distinguish between patients with the same last name. The name type code in this field should be "M – Maiden Name".
Date/Time of Birth	7	TS	26	O	O	[0..1]	Definition: This field contains the patient's date and time of birth.

Administrative Sex	8	IS	1	RE	RE	[0..1]	HL7 table: 0001: Administrative Sex Definition: This field contains the patient's sex.
Race	10	CE	478	RE	RE	[0..*]	Definition: This field refers to the patient's race Note: Patient could have more than one race defined.
Identifier	10.1	ST	20	RE	RE	[0..1]	HL7 table: 0005: Race
Text	10.2	ST	199	O	RE	[0..1]	
Name of Coding System	10.3	ID	20	CE	C	[0..1]	Condition Predicate: If PID-10.1 (Identifier) is provided, then PID 10.3 is valued.
Patient Address	11	XAD	513	RE	RE	[0..1]	Definition: This field contains the mailing address of the patient. Note: Expecting only the patient primary (current) address information in the supported components
Street Address	11.1	SAD	184	O	O	[0..1]	
Other Designation	11.2	ST	120	O	O	[0..1]	
City	11.3	ST	50	O	O	[0..1]	
State or Province	11.4	ST	50	O	O	[0..1]	HL7 table: 0347: State/province
ZIP or Postal Code	11.5	ST	12	RE	RE	[0..1]	USPS
Country	11.6	ID	3	O	O	[0..1]	Use 3-character (alphabetic) form of ISO 3166
Address Type	11.7	ID	3	O	O	[0..1]	HL7 table 0190: Address Type
Other Geographic Designation	11.8	ST	50	O	O	[0..1]	
County/Parish Code	11.9	IS	20	RE	RE	[0..1]	PHVS County FIPS 6-4
Patient Account Number	18	CX	250	O	O	[0..1]	Definition: This field contains the patient account number assigned by accounting to which all charges, payments, etc., are recorded. It is used to identify the patient's account.
Ethnic Group	22	CE	478	RE	RE	[0..1]	Definition: This field further defines the patient's ancestry.
Identifier	22.1	ST	20	RE	RE	[0..1]	PHVS EthnicityGroup CDC
Text	22.2	ST	199	O	O	[0..1]	
Name of Coding System	22.3	ID	20	CE	CE	[0..1]	Condition Predicate: If PID-22.1 (the identifier) is provided then PID 22.3 is valued.
Multiple Birth Indicator	24	ID	1	RE	RE	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Birth Order	25	NM	2	C(RE/O)	C(RE/O)	[0..1]	Condition Predicate: If PID-24 (Multiple Birth Indicator) is valued "Y "
Patient Death	29	TS	26	CE	CE	[0..1]	If valued, PID-29 (Patient Death and Time), SHALL be expressed with a minimum

Date and Time							precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S]]]] [+/-ZZZZ]' Condition Predicate: If valued, PID-30 (Patient Death Indicator) SHALL be valued to the Literal Value 'Y'. Condition Predicate: If PV1-36 is valued with any of the following: '20', '40', '41', '42' then PID-29 (Patient Death and Time) SHALL be populated. Definition: This field contains the date and time at which the patient death occurred.
Patient Death Indicator	30	ID	1	CE	CE	[0..1]	If valued, PID-30 (Patient Death Indicator) SHALL be valued to the Literal Value 'Y'. Condition Predicate: If PV1-36 (Discharge Disposition) is valued with any of the following: '20', '40', '41', '42' and PID-29 (Patient Death and Time) SHALL be populated. Definition: This field indicates whether the patient is deceased. Y the patient is deceased N the patient is not deceased
Last Update Date/Time	33	TS	26	O	O	[0..1]	Definition: This field contains the last update date and time for the patient's/person's identifying and demographic data, as defined in the PID segment.
Last Update Facility	34	HD	241	O	O	[0..1]	Definition: This field identifies the facility of the last update to a patient's/person's identifying and demographic data, as defined in the PID segment.

3.5.5. A03 and A08: Patient Visit (PV1) Segment

The PV1 segment is used by Registration/Patient Administration applications to communicate information on a visit-specific basis. **NOTE: The below fields are limited to those that are to be reported. Please pay special attention to field 'Seq'ence numbers as they are not consecutive.**

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Set ID - PV1	1	SI	4	RE	RE	[0..1]	PV1-1 (Set ID) SHALL have the Literal Value of '1' Definition: This field contains the number that identifies this transaction. The sequence number shall be one
Patient Class	2	IS	1	R	R	[1..1]	HL7 table: 0004: Patient class Definition: This field is used by systems to categorize patients by site.

Assigned Patient Location	3	PL	1220	RE	RE	[0..1]	Definition: This field contains the patient's initial assigned location or the location to which the patient is being moved. The first component may be the nursing station for inpatient locations, or clinic or department, for locations other than inpatient. .
Admission Type	4	IS	2	RE	RE	[0..1]	HL7 table 0007: User defined: Admission type Definition: This field indicates the circumstances under which the patient was or will be admitted.
Attending Doctor	7	XCN	309	RE	RE	[0..*]	This field contains the attending physician information. Multiple names and identifiers for the same physician may be sent. The field sequences are not used to indicate multiple attending doctors. The legal name must be sent in the first sequence. If the legal name is not sent, then a repeat delimiter must be sent in the first sequence. Depending on local agreements, either ID or the name may be absent in this field. Refer to user-defined table 0010 - Physician ID for suggested values.
Admit Source	14	IS	6	O	O	[0..1]	This field indicates where the patient was admitted. Refer to user-defined table 0023 - Admit source for suggested values.
Ambulatory Status	15	IS	2	O	O	[0..*]	This field indicates any permanent or transient handicapped conditions. Refer to user-defined table 0009 - Ambulatory status for suggested entries.
Admitting Doctor	17	XCN	309	O	O	[0..*]	This field contains the admitting physician information. Multiple names and identifiers for the same physician may be sent. The field sequences are not used to indicate multiple admitting doctors. The legal name must be sent in the first sequence. If the legal name is not sent, then a repeat delimiter must be sent in the first sequence. Depending on local agreements, either ID or the name may be absent in this field. Refer to user-defined table 0010 - Physician ID for suggested values.
Visit Number	19	CX	478	R	R	[1..1]	This field contains the unique number assigned to each patient visit. Note: Unique identifier for a patient visit
ID Number	19.1	ST	15	R	R	[1..1]	
Assigning Authority	19.4	HD	227	RE	RE	[0..1]	HL7 table 0363: User defined: Assigning Authority
Identifier Type Code	19.5	ID	5	R	R	[1..1]	SHALL be valued to the Literal Value 'VN'.
Assigning Facility	19.6	HD	227	RE	RE	[0..1]	
Discharge Disposition	36	IS	3	A03:R A08: RE	A03:R A08: RE	[1..1] [0..1]	PHVS DischargeDisposition HL7 2x Definition: This field contains the disposition of the patient at time of discharge (i.e., discharged to home, expired, etc.) and shall be populated in a Discharge message.
Admit Date/Time	44	TS	26	R	R	[1..1]	PV1-44 (Admit Date/Time) SHALL be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' Definition: This field contains the admit date/time. This field is also used to reflect the date/time of an outpatient/emergency patient registration. Note: Date and time of the patient presentation.
Discharge Date/Time	45	TS	26	A03:R A08: RE	A03:R A08: RE	[1..1] [0..1]	PV1-45 (Discharge Date/Time) SHALL be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]'

							Definition: This field contains the discharge date/time and shall be populated in a Discharge message. This field is also used to reflect the date/time of an outpatient/emergency patient discharge.
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3.5.6. A03 and A08: Patient Visit – Additional Information (PV2) Segment

The PV2 segment is a continuation of visit-specific information and is the segment where Admit Reason is passed. **NOTE: The below fields are limited to those that are to be reported. Please pay special attention to field ‘Seq’ence numbers as they are not consecutive.**

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Admit Reason	3	CE	478	RE	RE	[0..1]	Definition: This field contains the short description of the providers’ reason for patient admission. NOTE: It may be coded (CE:1 and CE:3) or Free text (CE:2.)
Identifier	3.1	ST	20	RE	RE	[0..1]	PHVS AdministrativeDiagnosis_CDC_ICD-9CM Or PHVS AdministrativeDiagnosis_ICD-10CM Or PHVS Disease_CDC
Text	3.2	ST	199	RE	RE	[0..1]	If only Free Text is used, it is communicated in this component.
Name of Coding System	3.3	ID	20	C	C	[0..1]	Condition Predicate: If PV2-3.1 (the identifier) is provided then PV2-3.3 is valued. PV2-3.3 SHALL be valued to one of the Literal Values in the set ('I10', 'I9CDX', 'SCT').

3.5.7. A03 and A08: Diagnosis (DG1) Segment

The DG1 segment contains patient diagnosis information of various types. Supports Admitting, Working and Final Diagnosis types. **NOTE: The below fields are limited to those that are to be reported. Please pay special attention to field ‘Seq’ence numbers as they are not consecutive.**

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Set ID - DG1	1	SI	4	R	R	[1..1]	DG1-1 (Set ID) for the first occurrence of a DG1 Segment SHALL have the Literal Value of ‘1’. Each following occurrence SHALL be numbered consecutively Definition: This field contains the number that identifies this transaction. For the first occurrence of the segment the sequence number shall be 1, for the second occurrence it shall be 2, etc.
Diagnosis Code - DG1	3	CE	478	R	R	[1..1]	Definition: This contains the diagnosis code assigned to this diagnosis. Condition Predicate: If the DG1 Segment is provided, DG1-3 (Diagnosis) is required to be valued.

Identifier	3.1	ST	20	R	RE	[0..1]	PHVS AdministrativeDiagnosis CDC ICD-9CM Or PHVS AdministrativeDiagnosis ICD-10CM Or PHVS Disease CDC
Text	3.2	ST	199	RE	RE	[0..1]	
Name of Coding System	3.3	ID	20	R	R	[1..1]	Condition Predicate: If DG1-3.1 (the identifier) is provided then DG1-3.3 is valued. DG1-3.3 SHALL be valued to one of the Literal Values in the set ('I10', 'I9CDX', 'SCT').
Diagnosis Date/Time	5	TS	26	O	O	[0..1]	Definition: This field contains the date/time that the diagnosis was determined.
Diagnosis Type	6	IS	2	R	R	[1..1]	PHVS DiagnosisType HL7 2x Definition: This field contains a code that identifies the type of diagnosis being sent Note: Identifies the type of diagnosis being sent. Condition Predicate: If the DG1 Segment is provided, DG1-6 (Diagnosis Type) is required to be valued.

3.5.8. A03 and A08: Procedures (PR1) Segment

The PR1 segment is used to carry information relative to various types of procedures performed. **NOTE: The below fields are limited to those that are to be reported. Please pay special attention to field 'Seq'ence numbers as they are not consecutive.**

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Set ID – PR1	1	SI	4	R	R	[1..1]	For the first occurrence of the segment the sequence number shall be 1, for the second occurrence it shall be 2, etc. Definition: This field contains the number that identifies this transaction.
Procedure Code	3	CE	478	R	R	[1..1]	Definition: This field contains a unique identifier assigned to the procedure
Identifier	3.1	ST	20	RE	RE	[0..1]	CPT-4
Text	3.2	ST	199	O	O	[0..1]	Free Text
Name of Coding System	3.3	ID	20	CE	CE	[1..1]	Condition Predicate: If PR1-3.1 (the identifier) is provided then PR1-3.3 is valued.
Procedure Date/Time	5	TS	26	R	R	[1..1]	Definition: This field contains the date/time that the procedure was performed.

3.5.9. A03 and A08: Observation/Result (OBX) Segment

The OBX Segment in the ADT Message is used to transmit observations related to the patient and visit. **NOTE: The below fields are limited to those that are to be reported. Please pay special attention to field ‘Seq’ence numbers as they are not consecutive.**

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Set ID - OBX	1	SI	4	R	R	[1..1]	<p>Note: Set ID numbers the repetitions of the segments For the first OBX segment, the sequence number SHALL be one (1), for the second repeat, the sequence number shall be two (2), etc. Example: OBX 1 ... OBX 2 ... OBX 3 ... Definition: This field contains the sequence number.</p>
Value Type	2	ID	3	R	R	[1..1]	<p>Definition: This field contains the format of the observation value in OBX. If the value is CE then the result must be a coded entry. When the value type is TX or FT then the results are bulk text. The valid values for the value type of an observation are listed in HL7 table 0125 - Value type. Note: Identifies the structure of data in observation value (OBX.5). The observation value must be represented according to the format for the data type. For example, a PN consists of 6 components, separated by component delimiters.</p>
Observation Identifier	3	CE	478	R	R	[1..1]	<p>Definition: This field contains a unique identifier for the observation. Note: Identifies data to be received in observation value (OBX.5)</p>
Identifier	3.1	ST	20	R	R	[1..1]	
Text	3.2	ST	199	O	O	[0..1]	
Name of Coding System	3.3	ID	20	R	R	[1..1]	<p>Condition Predicate: If OBX-3.1 (the identifier) is provided then OBX-3.3 is valued.</p>
Observation Value	5	varies	99999	RE	RE	[0..*]	<p>Definition: This field contains the value observed by the observation producer. OBX-2-value type contains the data type for this field according to which observation value is formatted. Note: Values received in observation value are defined by value type (OBX.2) and observation identifier (OBX.3).</p>

Units	6	CE	62	C	C	[0..1]	Condition Predicate: If OBX.2 (Value Type) is valued “NM” Background: When an observation’s value is measured on a continuous scale, one must report the measurement units within the unit’s field of the OBX segment.
Identifier	6.1	ST	20	R	R	[1..1]	
Text	6.2	ST	20	O	O	[0..1]	
Name of Coding System	6.3	ID	20	R	R	[1..1]	Condition Predicate: If OBX-6.1 (the identifier) is provided then OBX-6.3 is valued.
Observation Result Status	11	ID	1	R	R	[1..1]	HL7 table 0085: HL7 defined: Observation Result Status Definition: This field contains the observation result status. This field reflects the current completion status of the results for one Observation Identifier.
Date/Time of the Observation	14	TS	26	O	O	[0..1]	Definition: This field is the observation date-time is the physiologically relevant date-time or the closest approximation to that date-time.

3.5.10. A03: Insurance (IN1) Segment

The IN1 segment contains insurance policy coverage information necessary to produce properly pro-rated and patient and insurance bills. **NOTE: The below fields are limited to those that are to be reported. Please pay special attention to field ‘Seq’ence numbers as they are not consecutive.**

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Set ID – IN1	1	SI	4	R	R	[1..1]	Definition: The Set ID in the IN1 segment is used to aggregate the grouping of insurance segments. Note: SET ID numbers the repetitions of the segments.
Insurance Plan ID	2	CE	478	R	R	[1..1]	HL7 table 0072: User defined: Insurance Plan ID Definition: This field contains a unique identifier for the insurance plan.
Insurance Company ID	3	CX	250	R	R	[1..*]	Definition: This field contains unique identifiers for the insurance company. The assigning authority and identifier type code are strongly recommended for all CX data types.
Plan Type	15	IS	3	O	O	[0..1]	HL7 table 0086: User defined: Plan Type Definition: This field contains the coding structure that identifies the various plan types, for example, Medicare, Medicaid, Blue Cross, HMO, etc.

4. APPENDIX A: Reportable Infectious Disease Table

Reportable Disease	ICD-9 CM
Acquired Immune Deficiency Syndrome (AIDS)	042
Amebiasis	006.*
Anaplasmosis	
Anaplasmosis, human	082.49
Anthrax	022.*
Arboviral disease (including West Nile virus, Western Equine encephalitis (WEE) and St. Louis encephalitis (SLE)) - indicate virus whenever possible	
Japanese encephalitis	062.0
Western equine encephalitis	062.1
Eastern equine encephalitis	062.2
St. Louis encephalitis	062.3
Australian encephalitis	062.4
California virus encephalitis	062.5
Other specified mosquito-borne viral encephalitis	062.8
Mosquito-borne viral encephalitis, unspecified	062.9
Phlebotomus fever	066.0
Venezuelan equine fever	066.2
Other mosquito-borne fever	066.3
West Nile Fever, unspecified	066.40
West Nile Fever with encephalitis	066.41
West Nile Fever with other neurologic manifestation	066.42
West Nile Fever with other complications	066.49
Other specified arthropod-borne viral diseases	066.8
Arthropod-borne viral disease, unspecified	066.9
Botulism	005.1
Brucellosis	023.*
Campylobacter infections	008.43
Chancroid	099
Chlamydia trachomatis genital infection	099.41
Cholera	001.*
Cholera due to vibrio cholerae	001.0
Cholera due to vibrio cholerae el tor	001.1
Unspecified	001.9
Cryptosporidiosis	007.4
Cyclospora infection	007.5
Diphtheria	032.**
Faucial diphtheria	032.0
Nasopharyngeal diphtheria	032.1
Anterior nasal diphtheria	032.2
Laryngeal diphtheria	032.3
Other specified diphtheria	032.8*
Unspecified	032.9
Ehrlichiosis	082.4*
Unspecified	082.40
Ehrlichiosis chafeensis	082.41
Other ehrlichiosis	082.49

Escherichia coli O157:H7 (and other shiga-toxin producing E. coli, also known as STEC)	
Shiga toxin-producing Escherichia coli [E. coli] (STEC) O157	041.41
Other specified Shiga toxin-producing Escherichia coli [E. coli] (STEC)	041.42
Shiga toxin-producing Escherichia coli [E. coli] (STEC), unspecified	041.43
Other and unspecified Escherichia coli [E. coli]	041.49
Intestinal infection due to escherichia coli [e. coli]	008.0*
Intestinal infection due to E. coli, unspecified	008.00
Intestinal infection due to enteropathogenic E. coli	008.01
Intestinal infection due to enterotoxigenic E. coli	008.02
Intestinal infection due to enteroinvasive E. coli	008.03
Intestinal infection due to enterohemorrhagic E. coli	008.04
Intestinal infection due to other intestinal E. coli infections	008.09
Intestinal infection due to arizona group of paracolon bacilli	008.1
Intestinal infection due to aerobacter aerogenes	008.2
Intestinal infection due to proteus (mirabilis) (morganii)	008.3
Intestinal infection due to other specified bacteria	008.4*
Intestinal infection due to staphylococcus	008.41
Intestinal infection due to pseudomonas	008.42
Intestinal infection due to campylobacter	008.43
Intestinal infection due to yersinia enterocolitica	008.44
Intestinal infection due to Clostridium difficile	008.45
Intestinal infection due to other anaerobes	008.46
Intestinal infection due to other gram-negative bacteria	008.47
Intestinal infection due to other organisms	008.49
Bacterial enteritis, unspecified	008.5
Enteritis due to specified virus	008.6*
Enteritis due to rotavirus	008.61
Enteritis due to adenovirus	008.62
Enteritis due to norwalk virus	008.63
Enteritis due to other small round viruses [SRV's]	008.64
Enteritis due to calicivirus	008.65
Enteritis due to astrovirus	008.66
Enteritis due to enterovirus nec	008.67
Enteritis due to other viral enteritis	008.69
Intestinal infection due to other organism, not elsewhere classified	008.8
Giardiasis	007.1
Gonorrhea	098.0
Haemophilus influenza, invasive disease	041.5
Hantavirus Pulmonary Syndrome	079.81
Hemolytic uremic syndrome, postdiarrheal	283.11
Hepatitis, viral (acute and chronic)	070.**
Hepatitis A with hepatic coma	070.0
Hepatitis A without mention of hepatic coma	070.1
Hepatitis B with hepatic coma	070.2*
Hepatitis B without mention of hepatic coma	070.3*
Other specified viral hepatitis with hepatic coma	070.4*
Other specified viral hepatitis w/o mention of hepatic coma	070.5*

Unspecified viral hepatitis with hepatic coma	070.6
Unspecified viral Hepatitis C	070.7*
Hepatitis, viral, NOS	070.9
Hepatitis B during pregnancy	070.9
Human Immunodeficiency Virus (HIV) (includes Viral Load Tests)	042
Influenza deaths in children <18 years of age * In addition to the ICD codes, DoB (PID-7) and patient death (PID-29 & PID-30) fields will have to be interrogated.	48{7 8}.*
Legionellosis	482.84
Leprosy (Hansen disease)	030.*
Listeriosis	027.0
Lyme disease	088.81
Malaria	084.*
Measles (rubeola)	055.*
Measles with other specified complications	055.7*
Meningitis, bacterial	036.*
Meningococcal Disease	036.*
Meningococcal meningitis	036.0
Meningococcal encephalitis	036.1
Meningococemia	036.2
Waterhouse-Friderichsen syndrome, meningococcal	036.3
Meningococcal carditis	036.4
Meningococcal carditis unspecified	036.40
Meningococcal pericarditis	036.41
Meningococcal endocarditis	036.42
Meningococcal myocarditis	036.43
Other specified meningococcal infections	036.8
Meningococcal optic neuritis	036.81
Meningococcal arthropathy	036.82
Other specified meningococcal infections	036.89
Meningococcal infection unspecified	036.9
Mumps	072.**
Mumps orchitis	072.0
Mumps meningitis	072.1
Mumps encephalitis	072.2
Mumps pancreatitis	072.3
Mumps hepatitis	072.71
Mumps polyneuropathy	072.72
Other mumps with other specified complications	072.79
Mumps with unspecified complication	072.8
Mumps without mention of complication	072.9
Pertussis (whooping cough)	033.*
Plague (Yersinia pestis)	020.*
Poliomyelitis	
Acute paralytic poliomyelitis specified as bulbar	045.0*
Acute poliomyelitis with other paralysis	045.1*
Acute nonparalytic poliomyelitis	045.2*

Unspecified acute poliomyelitis	045.9*
Slow virus infection of central nervous system	046
Other specified slow virus infection of central nervous system	046.8
Unspecified slow virus infection of central nervous system	046.9
Psittacosis	073
Ornithosis with pneumonia	073.0
Ornithosis with other specified complications	073.7
Ornithosis with unspecified complication	073.8
Ornithosis unspecified	073.9
Q Fever (Coxiella burnetii)	083.0
Rabies, human and animal	071
Spotted Fever Rickettsiosis	
Spotted Fevers	082.0
Other specified tick-borne rickettsioses	082.8
Tick-borne rickettsiosis, unspecified	082.9
Rubella, including congenital rubella syndrome	056.*
Rubella with other specified complications	056.7*
Salmonellosis, including typhoid fever	
Salmonella gastroenteritis	003.0
Salmonella septicemia	003.1
Localized salmonella infection, unspecified	003.20
Salmonella meningitis	003.21
Salmonella pneumonia	003.22
Salmonella arthritis	003.23
Salmonella osteomyelitis	003.24
Other localized salmonella infections	003.29
Other specified salmonella infections	003.8
Salmonella infection, unspecified	003.9
typhoid fever	002.0
Paratyphoid fever A	002.1
Paratyphoid fever B	002.2
Paratyphoid fever C	002.3
Paratyphoid fever, unspecified	002.9
Severe Acute Respiratory Syndrome (SARS)	079.82
Shigellosis	004.*
Smallpox	050.*
Streptococcal invasive, drug-resistant disease from Group A Streptococcus or Streptococcus pneumoniae	041.09
Pneumococcal pneumonia [Streptococcus pneumoniae pneumonia]	481
Syphilis, including congenital syphilis	
Congenital syphilis	090
Early syphilis, symptomatic	091
Syphilis, primary, genital	091.0
Early syphilis, latent	092
Cardiovascular syphilis	093
Neurosyphilis	094
Other forms of late syphilis, with symptoms	095

Late syphilis, latent	096
Other and unspecified syphilis	097
Tetanus	037
Toxic shock syndrome, streptococcal and staphylococcal	040.82
Transmissible Spongiform Encephalopathy (TSE) or prion disease (includes CJD)	
Transmissible Spongiform Encephalopathy (Kuru)	046.0
Creutzfeld-Jakob disease	046.1*
Subacute sclerosing panencephalitis	046.2
Progressive multifocal leukoencephalopathy	046.3
Other specified prion diseases of central nervous system	046.7*
Other and unspecified prion disease of central nervous system	046.79
Trichinosis	124
Tuberculosis, active disease	
Primary tuberculous infection	010.**
Pulmonary tuberculosis	011.**
Other respiratory tuberculosis	012.**
Tuberculosis of meninges and central nervous system	013.**
Tuberculosis of intestines peritoneum and mesenteric glands	014.**
Tuberculosis of bones and joints	015.**
Tuberculosis of genitourinary system	016.**
Tuberculosis of other organs	017.**
Miliary tuberculosis	018.**
Tuberculosis, latent infection	
Other specified pulmonary tuberculosis, unspecified	011.80
Tularemia	021.*
Varicella (chickenpox)	052.*
Postvaricella encephalitis	052.0
Varicella (hemorrhagic) pneumonitis	052.1
Postvaricella myelitis	052.2
Chickenpox with other specified complications	052.7
Chickenpox with unspecified complication	052.8
Varicella without complication	052.9
Viral hemorrhagic fever	065.*
Crimean hemorrhagic fever [CHF Congo virus]	065.0
Omsk hemorrhagic fever	065.1
Kyasanur forest disease	065.2
Other tick-borne hemorrhagic fever	065.3
Mosquito-borne hemorrhagic fever	065.4
Other specified arthropod-borne hemorrhagic fever	065.8
Arthropod-borne hemorrhagic fever, unspecified	065.9
Yellow fever	060.*
Sylvatic yellow fever	060.0
Urban yellow fever	060.1
Unspecified	060.9

5. APPENDIX B: HL7 Examples

6. APPENDIX B: HL7 Code Table Reference

http://www.hl7.org/special/committees/vocab/v26_appendix_a.pdf