California Parkinson's Disease Registry

Electronic Reporting of Parkinson's Disease

HL7 Version 2.5.1: ORU^R01

HL7 Informative Document

Version 1.15

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1.Introduction

The *HL7 Version 2.5.1 Implementation Guide: Electronic Parkinson's Disease Reporting to Public Health* serves as implementation guide for the state of California. The use case describes the transmission of Parkinson's diagnostic findings to the California Department of Public Health using the HL7 2.5.1 ORU^R01 message. It does not cover querying patient demographics or querying of diagnostic reports.

1.1 PURPOSE

The Parkinson's Disease Electronic Reporting to Public Health guide contains the necessary specifications for direct system to system electronic Parkinson's disease reporting to the California Department of Public Health. With computerization of health care system data, it has become advantageous for health systems and public health departments to coordinate on electronic standards and subsequently establish electronic feeds of reportable data to health departments. In particular, the electronic reporting guide addresses messaging format and corresponding required and optional content. The electronic reporting guide does not replace the need for configuration and documentation of the constraints of specific implementations.

1.2 AUDIENCE

This guide is designed for use by analysts and developers who require guidance on optional and ambiguous elements of the *HL7 Version 2.5.1* as it applies to Parkinson's disease reporting. Users of this guide must be familiar with the details of HL7 message construction and processing. This guide is not intended to be a tutorial on that subject.

1.3 SCOPE

This specification covers the exchange of Parkinson's diagnostic conclusions from the source of the diagnosis to the California Department of Public Health. One of the primary features of this implementation guide is its focus on key points of broad interoperability. These key points include the following:

1.4 CONVENTIONS

This guide adheres to the following conventions:

- The guide is constructed assuming the implementer has access to the 2.5.1 version of the HL7 Standard. Although some information from the standard is included in this implementation guide, much information from the standard has not been repeated here.
- The rules outlined in *HL7 2.5.1*, *Chapter 2*, *Section 2.12*, *Conformance Using Message Profiles*, were used to document the use case for, and constraints applied to, the messages described in this guide.
- Data types have been described separately from the fields that use the data types. For details regarding data type field lengths, please refer to *Section 2.1.3*, *Lengths*, in this document.
- No conformance information is provided for optional message elements. This includes length, usage, cardinality, value sets and descriptive information. Implementers who want to use optional message elements should refer to the HL7 Standard to determine how these optional message elements will be used.

1.4.1 Message Element Attributes

The following table describes the various attributes used by this guide to document data type attribute tables, message structure attribute tables and segment attribute tables. Not all attributes apply to all attribute tables.

TABLE 1-1. MESSAGE ELEMENT ATTRIBUTES

Attribute	Definition
Seq	Sequence of the elements as numbered in the HL7 message element. The Seq attribute applies to the data type attribute table and the segment attribute table.
Segment	Three-character code for the segment and the abstract syntax (*e.g.*, the square and curly braces). [XXX] Optional { XXX } Repeating XXX Required [{ XXX }]Optional and Repeating Note that for segment groups there is no segment code present, but the square and curly braces will still be present. The Segment attribute only applies to the Message attribute table.
Length	Maximum length of the element. Lengths are provided only for primitive data types. The length attribute apples to data type attribute tables and segment attribute tables. Lengths should be considered recommendations, not absolutes. The receiver can truncate fields, components and sub-components that are longer than the recommended length. The receiver should continue to process a message even when a field, component, or sub-component length exceeds the maximum recommended length identified in this specification. See section **Error! Reference source not found.** for documentation on how lengths are handled in this guide. The length attribute may contain a character indicating how the data may be truncated by a receiver. The truncation characters are defined as follows: • = Truncation not allowed • # Truncation allowed • No character indicates the truncation behavior is not defined.
DT	Data type used by this profile for HL7 element. The data type attribute applies to data type attribute tables and segment attribute tables.
Usage	Usage of the message element for this profile. Indicates whether the message element (segment, segment group, field, component, or

TABLE 1-1. MESSAGE ELEMENT ATTRIBUTES	
Attribute	**Definition**
	subcomponent) is required, optional, or conditional in the corresponding message element. Usage applies to the message attribute table, data type attribute table and the segment attribute table. See section **Error! Reference source not found.** – Usage for documentation on how usage has been implemented in this guide. In this implementation guide, usage has been divided by actor. This guide documents two separate actors: • Facility Sender • CPDR Receiver Only the Receiver actor is considered “Normative” in this guide. The facility sender actor profile is provided as informational only. The non-normative usage column has a grey background. Legal usage values are: **R –** Required. HL7 Definition: A conforming sending application shall populate all “R” elements with a non-empty value. Conforming receiving application shall process (save/print/archive/etc.) or ignore the information conveyed by required elements. A conforming receiving application must not raise an error due to the presence of a required element, but may raise an error due to the absence of a required element. Any element designated as required in a standard HL7 message definition shall also be required in all HL7 message profiles of that standard message. **RE –** Required, but can be empty. HL7 Definition: The element may be missing from the message, but must be sent by the sending application if there is relevant data. A conforming sending application must be capable of providing all "RE" elements. If the conforming sending application knows the required values for the element, then it must send that element. If the conforming sending application does not know the required values, then that element will be omitted. Receiving applications will be expected to process (save/print/archive/etc.) or ignore data contained in the element, but must be able to successfully process the message if the element is omitted (no error message should be generated because the element is missing). **O –** Optional. HL7 Definition: This code indicates that the Usage for this element has not yet been defined. A usage of ‘Optional’ may not be used in ‘implementation’ profiles (no-optionality profiles). Conformance may not be tested on an Optional field. Narrower profiles may be defined based on this profile, and may assign any usage code to the element **C –** Conditional. HL7 Definition: This usage has an associated condition predicate (See section 2.B.7.6, "Condition predicate"). **If the predicate is satisfied:** A conformant sending application must always send the element. A conformant receiving application must process or ignore

TABLE 1-1. MESSAGE ELEMENT ATTRIBUTES

Attribute	Definition
	data in the element. It may raise an error if the element is not present. **If the predicate is NOT satisfied:** A conformant sending application must NOT send the element. A conformant receiving application must NOT raise an error if the condition predicate is false and the element is not present, though it may raise an error if the element IS present. **CE –** Conditional but may be empty. HL7 Definition: This usage has an associated condition predicate (See section 2.B.7.6, "Condition predicate"). **If the predicate is satisfied:** If the conforming sending application knows the required values for the element, then the application must send the element. If the conforming sending application does not know the values required for this element, then the element shall be omitted. The conforming sending application must be capable of knowing the element (when the predicate is true) for all 'CE' elements. If the element is present, the conformant receiving application shall process (display/print/archive/etc.) or ignore the values of that element. If the element is not present, the conformant receiving application shall not raise an error due to the presence or absence of the element. **If the predicate is not satisfied:** The conformant sending application shall not populate the element. The conformant receiving application may raise an application error if the element is present. **X –** Not used for this profile. HL7 Definition: For conformant sending applications, the element will not be sent. Conformant receiving applications may ignore the element if it is sent, or may raise an application error. - The hyphen (-) indicates the profile for the actor does not provide documentation of the structure containing the particular element or does not provide documentation of the particular element in the structure. For instance in a data type specification for CE, if a profile does not provide documentation of the CE data type, then each component of the data type would have a "-" for the usage for the actor associated with that profile
Cardinality	Minimum and maximum number of times the element may appear. [0..0] Element never present. [0..1] Element may be omitted and can have, at most, one occurrence. [1..1] Element must have exactly one occurrence. [0..n] Element may be omitted or may repeat up to *n* times. [1..n] Element must appear at least once, and may repeat up to *n* times. [0..*] Element may be omitted or repeat an unlimited number of times. [1..*] Element must appear at least once, and may repeat unlimited number of times. [m..n] Element must appear at least *m*, and at most, *n* times.
Value Set	The set of coded values to be used with the field. The value set attribute applies only to the data type attribute tables and the segment attribute tables.

TABLE 1-1. MESSAGE ELEMENT ATTRIBUTES	
Attribute	**Definition**
	The value set may equate with an entire code system part of a code system, or codes drawn from multiple code systems.
Name	HL7 descriptor of the message element. Name applies to the message attribute table, data type attribute table and the segment attribute table.
Description/Comments	Context and usage for the element. Description/Comments applies to the message attribute table, data type attribute table and the segment attribute table.

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2. Messaging Infrastructure

2.1 MESSAGING FRAMEWORK

2.1.1 Delimiters

This profile supports the use of the normal HL7 delimiters. It is recommended, but not required, that implementers be able to send messages using the standard HL7 delimiters. Receivers must be capable of receiving any legal delimiters that are sent in a particular message instance.

This table is pre-adopted from the *HL7 Version 2.6*, which offers information regarding best practices. The intent has not changed from *Version 2.5.1*. Note that this implementation guide includes additional constraints and explanations for the entries.

TABLE 2-1. DELIMITERS

Delimiter	Required Value	Encoding Character Position	Description
Segment Terminator	<cr>	-	Terminates a segment record. This value cannot be changed by implementers. Additional Constraints and Explanation: The <cr> denotes the ASCII-013 carriage return character. There is a common misunderstanding that a linefeed character, or carriage return followed by a linefeed character, is allowed also. Neither HL7 nor this profile allows either of these two as part of the segment terminator. Only the ASCII-013 carriage return is allowed.
Field Separator	|	-	Separates two adjacent data fields within a segment. It also separates the segment ID from the first data field in each segment. Additional Constraints and Explanation: It is recommended that senders use ASCII-124, the vertical bar (|) character, as the field separator.
Component Separator	^	1	Separates adjacent components of data fields where allowed.

TABLE 2-1. DELIMITERS

Delimiter	Required Value	Encoding Character Position	Description
			Additional Constraints and Explanation: It is recommended that senders use ASCII-094, the caret (^) character, as the component separator.
Repetition Separator	~	2	Separates multiple occurrences of a field where allowed. Additional Constraints and Explanation: It is recommended that senders use ASCII-126, the tilde character (~), as the repetition separator.
Escape Character	\	3	Use the escape character with any field represented by an ST, TX or FT data type, or for use with the data (fifth) component of the ED data type. If no escape characters are used in a message, this character may be omitted. However, it must be present if subcomponents are used in the message. Best practice is always to include this character. Additional Constraints and Explanation: It is recommended that senders use ASCII-091, the backslash (\) character, as the escape character.
Subcomponent Separator	&	4	Separates adjacent subcomponents of data fields where allowed. If there are no subcomponents, this character may be omitted. Best practice is always to include this character. Additional Constraints and Explanation: It is recommended that senders use ASCII-038, the ampersand (&) character, as the subcomponent separator.

2.1.2 Null Values In Fields Vs. Components

In HL7, a null value for a field is indicated by paired double quotes (|""|). The null value applies to the field as a whole, not to the components/subcomponents of the field. A null field value indicates that the receiver of the message should delete the corresponding set of information from the data store. For this implementation guide, null values within components and subcomponents are meaningless. For example, |lastname^firstname^""^^^^L| would be interpreted exactly as |lastname^firstname^^^^^L|. The components and subcomponents of a data type constitute

a snapshot of the data. The set of data represented by the data type is handled as a complete set; therefore, using the null value to indicate a missing component or subcomponent is unnecessary.

2.1.3 Lengths

In *HL7 Version 2.5*, HL7 assigned lengths to the components of data types, but did not standardize the lengths of the fields that use those data types. This guide pre-adopts the length rules from *HL7 Version 2.7*: Starting with v2.7, HL7 allows documentation of both a minimum and maximum length for an element.

In *HL7 Version 2.7* length is specified for primitive data types (i.e., those without components). Length is not specified for composite elements. For composite data types, the actual minimum and maximum lengths can be very difficult to determine due to the interdependencies on the component content, and the specification of actual lengths is not useful either. In general, this guide will adopt lengths from *HL7 Version 2.7.*

The concept of truncation is being pre-adopted from HL7 Version 2.7 as well, but only in regards to length documentation. The transmission of the truncation character in message data is not being pre-adopted.

2.1.4 CE – Coded Element

TABLE 2-2. CODED ELEMENT (CE)

SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1	1..20=	ST	RE	-		Identifier	
2	1..199#	ST	RE	-		Text	It is required that text be sent to accompany any identifier.
3	1..12	ID	CE	-	HL70396	Name of Coding System	Required if an identifier is provided in component 1.

Example:|77718-5^Mentation, Behavior and Mood^LN||77686-4^Intellectual Impairment^LN

2.1.5 CNN – Composite ID Number and Name Simplified

TABLE 2-3. COMPOSITE ID NUMBER AND NAME SIMPLIFIED (CNN)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1	1..15=	ST	RE	RE		ID Number	The ID Number component combined with the Assigning Authority – Universal ID component (component 10) must uniquely identify the associated person. Note - despite the component being named “ID Number” this component is an ST string data type, not numeric, so the component is not limited to just numbers.
2	1..50#	ST	RE	RE		Family Name	
3	1..30#	ST	RE	RE		Given Name	I.e., first name.
4	1..30#	ST	RE	RE		Second and Further Given Names or Initials Thereof	
5	1..20#	ST	RE	RE		Suffix (e.g., JR or III)	
6	1..20#	ST	RE	RE		Prefix (e.g., DR)	
7	1..5=	IS	RE	RE	HL70360	Degree (e.g., MD)	

TABLE 2-3. COMPOSITE ID NUMBER AND NAME SIMPLIFIED (CNN)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
8	1..4=	IS	X	X	HL70297	Source Table	Not supported.
9	1..20=	IS	RE	RE	Local	Assigning Authority – Namespace ID	The coding system for this component is locally managed.
10	1..199=	ST	CE	CE		Assigning Authority - Universal ID	Must be an OID. Condition predicate: Required if component 1 (ID Number) is populated.
11	1..6	ID	CE	CE	HL70301	Assigning Authority - Universal ID Type	Condition predicate: This component is required if a value is present in component 10 (Assigning Authority – Universal ID.) Constrained to the value 'ISO'.

Example: |1234^Admit^Alan^A^III^Dr^MD^^DOC^2.16.840.1.113883.19.4.6^ISO|

2.1.6 CQ – Composite Quantity with Units

TABLE 2-4. COMPOSITE QUANTITY WITH UNITS (CQ)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1		NM	R	R		Quantity	

TABLE 2-4. COMPOSITE QUANTITY WITH UNITS (CQ)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
2		CWE	RE	RE	Unified Code for Units of Measure (UCUM)	Units	Units of measure must be drawn from the UCUM coding system.

Example: |150^m&meter&UCUM|

2.1.7 CX – Extended Composite ID with Check Digit

TABLE 2-5. EXTENDED COMPOSITE ID WITH CHECK DIGIT (CX)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1	1..15 =	ST	R	R		ID Number	The ID Number component combined with the Assigning Authority component must uniquely identify the associated object, i.e., any object with which the field is associated. Note - despite the component being named “ID Number” this component is an ST string data type, not numeric, so the component is not limited to just numbers.

TABLE 2-5. EXTENDED COMPOSITE ID WITH CHECK DIGIT (CX)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
2	1..4=	ST	O	O		Check Digit	
3	3..3	ID	O	O	HL7 0061	Check Digit Scheme	
4		HD	R	R		Assigning Authority	The Assigning Authority component is used to identify the system, application, organization, etc. that assigned the ID Number in component 1.
5	2..5	ID	R	R	HL70203	Identifier Type Code	
6		HD	RE	RE		Assigning Facility	The Assigning Facility identifies the place or location that the ID Number was assigned for use.
7		DT	O	O		Effective Date	
8		DT	O	O		Expiration Date	
9		CWE	O	O	Local	Assigning Jurisdiction	
10	3..3	CWE	O	O	Local	Assigning Agency or Department	

Usage: The CX data type is used to carry identifiers. This guide requires that all identifiers be accompanied by assigning authorities, and that all identifiers carry an identifier type. This method allows the exchange of unique identifiers for the associated object across organizational and enterprise boundaries, enabling broad interoperability.

Although the Identifier Type Code component is required, it is not a part of the actual identifier. Rather, it is metadata about the identifier. The ID Number and Assigning Authority component, together, constitute the actual identifier. The reason for this requirement is to promote forward

compatibility with *HL7 Version 3* identifiers, where there is no concept of identifier type codes. Although this guide does not deal directly with *Version 3* constructs, it is intended to work within the context of the HITSP Interoperability constructs, which work with both *Version 2.x* messaging and *Version 3* constructs.

Example: |36363636^^^MPI&2.16.840.1.113883.19.3.2.1&ISO^MR^A&2.16.840.1.113883.19.3.2.1&ISO|

2.1.8 DR – Date/Time Range

TABLE 2-6. DATE/TIME RANGE (DR)

SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1		TS	R	RE		Range Start Date/Time	
2		TS	RE	RE		Range End Date/Time	

Example: |200806021328.0001-0005^200906021328.0001-0005|

2.1.9 DT – Date

TABLE 2-7. DATE (DT)

SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1	4..8	-	R	R		Date	Format: YYYY[MM[DD]]

Example: |20080602|

2.1.10 DTM – Date/Time

TABLE 2-8. DATE/TIME (DTM)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1	4..24	-	R	R		Date/Time	Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]

Usage: It is strongly recommended that the time zone offset always be included in the DTM particularly if the granularity includes hours, minutes, seconds, etc. Specific fields in this implementation guide may require Date/Time to a specific level of granularity, which may require the time zone offset.

Example: |200806021328.0001-0005|

2.1.11 ED – Encapsulated Data

TABLE 2-9. ENCAPSULATED DATA (ED)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1		HD	RE	RE		Source Application	Identifier of the application that is the source of the encapsulated data.
2	4..11	ID	R	R	HL70834 (from HL7 2.7)	Type of Data	Identifier of the type of data found in component 5. See section 6.1.1.4 for details of HL70834.

TABLE 2-9. ENCAPSULATED DATA (ED)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
3	1..32=	ID	RE	RE	HL70291 (from HL7 2.7)	Data SubtySpe	Identifier of the subtype of data found in component 5. See section 6.1.1.1 for details of HL70291.
4	1..6	ID	R	R	HL70299	Encoding	Identifier of the type of encoding to be performed in the data component
5		TX	R	R		Data	The data in this component must be properly escaped after encoding. Receivers will need to un-escape the text prior to decoding. Note that the length 65536 has a special meaning in HL7, indicating the length is a "Very Large Number" Since in this case the Data component of the ED data type carries the actually encapsulated data, this component may be much larger than 65536. For instance, an image carried in this data type might be multi-megabyte in size.

2.1.12 EI – Entity Identifier

TABLE 2-10. ENTITY IDENTIFIER (EI)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1	1..199=	ST	R	R		Entity Identifier	
2	1..20=	IS	RE	RE	Local	Namespace ID	The coding system for this component is locally managed.
3	1..199=	ST	R	R		Universal ID	Must be an OID.
4	1..6	ID	R	R	HL70301	Universal ID Type	Constrained to the value "ISO.".

Usage: The EI data type is used to carry identifiers. This guide requires that all entity identifiers be accompanied by assigning authorities. This allows the exchange of unique identifiers for the associated object across organizational and enterprise boundaries, enabling broad interoperability.

In the EI data type, the Namespace ID, Universal ID and Universal ID type correspond to the HD data type identified elsewhere. These types, together, are commonly considered the assigning authority for the identifier. The Entity Identifier and Assigning Authority components, together, constitute the actual identifier.

Example: |23456^EHR^2.16.840.1.113883.19.3.2.3^ISO|

2.1.13 EIP – Entity Identifier Pair

TABLE 2-11. ENTITY IDENTIFIER PAIR (EIP)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1		EI	RE	O		Placer Assigned Identifier	
2		EI	R	R		Filler Assigned Identifier	Condition predicate: Component 2 will be required if the field is OBR-29; otherwise, the component is RE.

Example: |23456&EHR&2.16.840.1.113883.19.3.2.3&ISO^9700122&Lab&2.16.840.1.113883.19.3.1.6&ISO|

2.1.14 ERL – Error Location

TABLE 2-12. ERROR LOCATION (ERL)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1	3..3=	ST	R	R		Segment ID	The 3-character name for the segment (i.e., PID).
2	1..2=	NM	R	R		Segment Sequence	

TABLE 2-12. ERROR LOCATION (ERL)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
3	1..2=	NM	CE	CE		Field Position	The field number with the error. Should not be populated for errors involving the entire segment. Condition predicate: This component is required if components 4, 5 and/or 6 are populated.
4	1..2=	NM	CE	CE		Field Repetition	The first field repetition is counted a 1. Condition predicate: This component is required if the field identified in components 1, 2, and 3 is a repeating field.
5	1..2=	NM	CE	CE		Component Number	Condition predicate: This component is required if component 6 is populated.
6	1..2=	NM	RE	RE		Sub-component Number	

Example: |MSH^1^21^1^2|

2.1.15 FN – Family Name

TABLE 2-14. FAMILY NAME (FN)

SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1	1..50#	ST	R	R		Surname	
2	1..20#	ST	O	O		Own Surname Prefix	
3	1..50#	ST	O	O		Own Surname	
4	1..20#	ST	O	O		Surname Prefix From Partner/Spouse	
5	1..50#	ST	O	O		Surname From Partner/Spouse	

Example: |Admit|

2.1.16 FT – Formatted Text Data

TABLE 2-15. FORMATTED TEXT DATA (FT)

SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
	1..65536	-	R	R		Formatted Text Data	

Usage: The FT data type allows use of the formatting escape sequences documented in *HL7 Version 2.5.1, Chapter 2, Section 2.7 - Use of Escape Sequences in Text Fields*. In this CPDR Profile, the only allowed escape sequences are those allowed in HL7 Version 2.5.1, Chapter 2, Section 2.7.4 - Special Characters. These are the escape sequences for the message delimiters (i.e., |^&~\).

Example: |\.sp\(skip one vertical line)|

2.1.17 HD – Hierarchic Designator

TABLE 2-16. HIERARCHIC DESIGNATOR (HD)

SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1	1..20=	IS	RE	RE	Local	Namespace ID	The coding system for this component is locally managed.
2	1..199=	ST	R	R		Universal ID	Must be an OID
3	1..6	ID	R	R	HL70301	Universal ID Type	Constrained to the value 'ISO'

Usage: The HD data type is used directly to identify objects such as applications or facilities. It is used also as a component of other data types, where it is typically an assigning authority for an identifier. Where this capability is used in this specification, that usage is described separately. Note that the HD data type has been constrained to carry an OID identifying an application, a facility, or an assigning authority.

Example: |Facility.CA^2.16.840.1.113883.19.3.1.1^ISO|

2.1.18 ID – Coded Value for HL7-Defined Tables

TABLE 2-17. CODED VALUE FOR HL7-DEFINED TABLES (ID)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1	1..15 =	-	R	R		Coded Value for HL7-Defined Tables	

Example: |ABC|

2.1.19 IS – Coded Value for User-Defined Tables

TABLE 2-18. CODED VALUE FOR USER-DEFINED TABLES (IS)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1	1..20 =	-	R	R		Coded Value for User-Defined Tables	

Example: |XYZ|

2.1.20 MSG – Message Type

TABLE 2-19. MESSAGE TYPE (MSG)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1	3..3	ID	R	R	HL70076	Message Code	
2	3..3	ID	R	R	HL70003	Trigger Event	
3	3,7	ID	R	R	HL70354	Message Structure	

Example: |ORU^R01^ORU_R01|

2.1.21 NDL - Name With Date And Location

TABLE 2-20. NAME WITH DATE AND LOCATION (NDL)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1		CNN	R	R		Name	
2		TS	X	X		Start Date/time	Not supported.
3		TS	X	X		End Date/time	Not supported.
4	1..20 =	IS	X	X	HL70302	Point of Care	Not supported.
5	1..20 =	IS	X	X	HL70303	Room	Not supported.

TABLE 2-20. NAME WITH DATE AND LOCATION (NDL)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
6	1..20 =	IS	X	X	HL70304	Bed	Not supported.
7		HD	X	X		Facility	Not supported.
8	1..20 =	IS	X	X	HL7306	Location Status	Not supported.
9	1..20 =	IS	X	X	HL70305	Person Location Type	Not supported.
10	1..20 =	IS	X	X	HL7307	Building	Not supported.
11	1..20 =	IS	X	X	HL7308	Floor	Not supported.

Example: |1234&Admit&Alan&A&III&Dr&MD&&DOC&2.16.840.1.113883.19.4.6&ISO|

2.1.22 NM – Numeric

TABLE 2-21. NUMERIC (NM)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1	1..16	-	R	R		Numeric	HL7 allows only ASCII numeric characters as well as an optional leading plus or minus sign and an option decimal point. Note that use of scientific notation for numbers is not supported by this data type.

Example: |123.4|

2.1.23 PL – Person Location

TABLE 2-22. PERSON LOCATION (PL)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1	1..20=	IS	RE	O	HL70302	Point of Care	
2	1..20=	IS	RE	O	HL70303	Room	
3	1..20=	IS	RE	O	HL70304	Bed	
4		HD	O	O		Facility	
5	1..20=	IS	O	O	HL70306	Location Status	

TABLE 2-22. PERSON LOCATION (PL)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
6		CWE	RE	O	HL70305	Person Location Type	
7	1..20=	IS	O	O	HL70307	Building	
8	1..20=	IS	O	O	HL70308	Floor	
9	1..199#	ST	O	O		Location Description	
10		EI	O	O		Comprehensive Location Identifier	
11		HD	O	O		Assigning Authority for Location	

Use of the PL data type in this implementation guide is optional. All fields using the data type are either optional or not supported. Specifics on what components of the PL to use in an implementation would need to be determined by the implementers.

Example:

|4E^234^A^Good Health Hospital&2.16.840.1.113883.19.3.2.3&ISO^N^N^Building 1^4^Neurology unit 4 East^1234&&2.16.840.1.113883.19.3.2.3&ISO^&2.16.840.1.113883.19.3.2.3&ISO|

2.1.24 PT – Processing Type

TABLE 2-23. PROCESSING TYPE (PT)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1	1..1	ID	R	R	HL70103	Processing ID	
2	1..1	ID	O	O	HL70207	Processing Mode	

Example: |P^T|

2.1.25 RP – Reference Pointer

TABLE 2-24. REFERENCE POINTER (RP)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1	1..999#	ST	R	R		Pointer	Pointer to the object. For URIs, it contains the path and query parts.

TABLE 2-24. REFERENCE POINTER (RP)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
2		HD	R	R		Application ID	Unique identifier of the application that holds the object being pointed to. For URIs, it contains the scheme and authority parts. Note that the HD data type used for this component is specialized for use in the RP data type, and is different than what is defined in section 2.1.17 (HD).
2.1	1..20=	IS	O	O	Local	Namespace ID	
2.2	1..199=	ST	R	R		Universal ID	This component is restricted to a universal resource identifier (URI). For URIs, contains the scheme and authority parts. Example: http://www.cdc.gov
2.3	1..6	ID	R	R	HL70301	Universal ID Type	This component is constrained to support only universal Resource Identifier. Literal value: 'URI'
3	4..11	ID	RE	RE	HL70834 (2.7)	Type of Data	Identifier of the type of data pointed to. For the URI example referenced above, this is '"application." See section 6.1.1.4 For details of HL70834.

TABLE 2-24. REFERENCE POINTER (RP)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
4	1..32 =	ID	RE	RE	HL70291 (2.7)	Subtype	Identifier of the subtype of data pointed to. For the URI example above, this is "pdf," indicating portable document format. See section 6.1.1.1 for details of HL70291.

Usage: The field uses the RP data type to allow communication of pointers to images, sound clips, XML documents, HTML markup, etc. The RP data type is used when the object being pointed to is too large to transmit directly.

This specification defines the mechanism for exchanging pointers to objects, but does not address the details of applications actually accessing and retrieving the objects over a network.

This guide constrains this data type to support only Universal Resource Identifiers (URI). See http://ietf.org/rfc/rfc2396.txt for a detailed definition. The general format of a URI is in the form <scheme>://<authority><path>?<query>. The scheme and authority portions appear in the Application ID component, Universal ID subcomponent. The path and query portion of the URI appear in the Pointer component of the RP data type.

Example:
|?requestType=WADO\T\study=1.2.840.113848.5.22.9220847989\T\series=1.2.840.113848.5.22.922084798.4\T\object=1.2.840.113848.5.22.922084798.4.5^&https://www.pacs.poupon.edu/wado.jsp&URI^image^jpeg |

2.1.26 SAD – Street Address

TABLE 2-25. STREET ADDRESS (SAD)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1	1..120#	ST	R	R		Street or Mailing Address	
2	1..50#	ST	O	O		Street Name	
3	1..12#	ST	O	O		Dwelling Number	

Usage: The SAD is used only as a component of the XAD data type.

Example: |2222 Home Street|

2.1.27 SI – Sequence ID

TABLE 2-26. SEQUENCE ID (SI)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1	1..4=	-	R	R		Sequence ID	Non-negative integer up to 9999. May be further constrained to limit the number of times a segment may repeat.

Example: |1|

2.1.28 SN – Structured Numeric

TABLE 2-27. STRUCTURED NUMERIC (SN)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1	1..2	ST	RE	RE		Comparator	Component that must be one of ">" or "<" or ">=" or "<=" or "=" or "<>". This component defaults to "=" if empty.
2		NM	RE	RE		Num1	
3	1..1	ST	RE	RE		Separator/Suffix	Component that must be one of "-" or "+" or "/" or "." or ":".
4		NM	RE	RE		Num2	

Usage: The SN data type carries a structured numeric result value. Structured numeric values include intervals (^0^-^1), ratios (^1^/^2 or ^1^:^2), inequalities (<^10), or categorical results (2^+).

Examples: |^0^-^1|

|^1^/^2|

|^1^:^2|

|<^10|

|2^+|

2.1.29 ST – String Data

TABLE 2-28. STRING DATA (ST)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1		-	R	R		String Data	

Usage: The ST data type is normally used for short text strings. No leading blanks (space characters) are permitted. Trailing blanks are permitted. In this profile, the only allowed escape sequences are those allowed in HL7 Version 2.5.1, Chapter 2, Section 2.7.4 - Special Characters. These are the escape sequences for the message delimiters (i.e., |^&~\).

Example: |almost any diagnostic data|

2.1.30 TM – Time

TABLE 2-29. TIME (TM)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1	2..16	-	R	R		Time	Format: HH[MM[SS[.S[S[S[S]]]]]][+/-ZZZZ]

Usage: It is strongly recommended that the time zone offset always be included in the TM. Specific fields in this implementation guide may require time to a specific level of granularity, which may require the time zone offset.

Example: |235959+1100|

2.1.31 TS – Time Stamp

TABLE 2-30. TIME STAMP (TS)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1		DTM	R	R		Time	
2		ID	X	X		Degree of Precision	Deprecated as of *HL7 Version 2.3*. See component 1 (DTM) for the current method of designating degree of precision.

Example: |200806021328.0001-0005|

2.1.32 TX – Text Data

TABLE 2-31. TEXT DATA (TX)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1		-	R	R		Text Data	

Usage: The TX data type is used to carry string data intended for display purposes. It can contain leading blanks (space characters). In this profile, the only allowed escape sequences are those allowed in HL7 Version 2.5.1, Chapter 2, Section 2.7.4 - Special Characters. These are the escape sequences for the message delimiters (i.e., |^&~\).

Example: | leading spaces are allowed.|

2.1.33 VID – Version Identifier

TABLE 2-32. VERSION IDENTIFIER (VID)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1	3..5	ID	R	R	HL70104	Version ID	Restricted to *2.5.1* in this guide. Literal value: '2.5.1'
2		CWE	O	O	Country Value Set	Internationalization Code	
3		CWE	O	O	Local	International Version ID	

Example: |2.5.1|

2.1.34 XAD – Extended Address

TABLE 2-33. EXTENDED ADDRESS (XAD)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
1		SAD	RE	RE		Street Address	
2	1..120 #	ST	RE	RE		Other Designation	Example: Suite 555
3	1..50#	ST	RE	RE		City	
4	1..50#	ST	RE	RE	State Value Set	State or Province	

TABLE 2-33. EXTENDED ADDRESS (XAD)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
5	1..12=	ST	RE	RE	Postal Code Value Set	Zip or Postal Code	In the US, the zip code takes the form 99999[-9999], while the Canadian postal code takes the form A9A9A9.
6	3..3	ID	RE	RE	Country Value Set	Country	
7	1..3	ID	RE	RE	HL70190	Address Type	
8	1..50#	ST	O	O		Other Geographic Designation	
9	1..20=	IS	RE	RE	PHVS_County_FIPS_6-4	County/Parish Code	No standard value set is used. FIPS codes may be used.
10	1..20=	IS	O	O	HL70288	Census Tract	
11	1..1	ID	O	O	HL70465	Address Representation Code	
12		DR	X	X		Address Validity Range	Deprecated as of *HL7 Version 2.5*. See XAD-13 Effective Date and XAD-14 Expiration Date components.
13	1..8=	TS	O	O		Effective Date	
14	1..8=	TS	O	O		Expiration Date	

Example: |4444 Healthcare Drive^Suite 123^San Francisco^CA^99999^USA^B|

2.1.35 XCN – Extended Composite ID Number and Name for Persons

TABLE 2-34. EXTENDED COMPOSITE ID NUMBER AND NAME FOR PERSONS (XCN)

SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1	1..15 =	ST	RE	RE		ID Number	The ID Number component combined with the Assigning Authority component (component 9) must uniquely identify the associated person. Note - despite the component being named "ID Number" this component is an ST string data type, not numeric, so the component is not limited to just numbers.
2		FN	R	R		Family Name	
3	1..30 #	ST	R	R		Given Name	I.e., first name.
4	1..30 #	ST	RE	RE		Second and Further Given Names or Initials Thereof	
5	1..20 #	ST	RE	RE		Suffix (e.g., JR or III)	
6	1..20 #	ST	RE	RE		Prefix (e.g., DR)	
7	1..20 =	IS	O	O	HL70360	Degree (e.g., MD)	

TABLE 2-34. EXTENDED COMPOSITE ID NUMBER AND NAME FOR PERSONS (XCN)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
8	1..20 =	IS	O	O	HL70297	Source Table	
9		HD	CE	CE		Assigning Authority	The Assigning Authority component is used to identify the system, application, organization, etc. that assigned the ID Number in component 1. Harmonized condition predicate: Required if component 1 (ID Number) is populated.
10	1..5	ID	RE	RE	HL70200	Name Type Code	Defaults to l (legal name) if empty.
11	1..4	ST	O	O		Identifier Check Digit	
12	3..3	ID	CE	O	HL70061	Check Digit Scheme	Facility to EHR Condition predicate: Required if component 11 (Identifier Check Digit) is populated.
13	2..5	ID	CE	CE	HL70203	Identifier Type Code	Condition predicate. Required if component 1 (ID Number) is populated.
14		HD	RE	RE		Assigning Facility	
15	1..1	ID	O	O	HL70465	Name Representation Code	

TABLE 2-34. EXTENDED COMPOSITE ID NUMBER AND NAME FOR PERSONS (XCN)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
16		CE	O	O	HL70448	Name Context	
17		DR	X	X		Name Validity Range	Deprecated as of *HL7 Version 2.5*. See XCN-19 Effective Date and XCN-20 Expiration Date components.
18	1..1	ID	O	O	HL70444	Name Assembly Order	
19	1..8=	TS	O	O		Effective Date	
20	1..8=	TS	O	O		Expiration Date	
21	1..199#	ST	RE	RE		Professional Suffix	Suggest using values from HL7 table 360.
22		CWE	O	O		Assigning Jurisdiction	
23		CWE	O	O		Assigning Agency or Department	

Example: |1234^Admit^Alan^A^III^Dr^^^&2.16.840.1.113883.19.4.6^ISO^L^^^EI^&2.16.840.1.113883.19.4.6^ISO^^^^^^^^MD|

2.1.36 XON – Extended Composite Name and Identification Number for Organizations

TABLE 2-35. EXTENDED COMPOSITE NAME AND IDENTIFICATION NUMBER FOR ORGANIZATIONS (XON)

SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1	1..50#	ST	CE	CE		Organization Name	Condition predicate: Must be present if there is no Organization Identifier in component 10. Send it if you have it.
2	1..20=	IS	RE	RE	HL70204	Organization Name Type Code	
3		NM	X	X		ID Number	(Deprecated as of *HL7 Version 2.5*.) Use XON-10 Organization Identifier.
4	1..4=	NM	O	O		Check Digit	
5	3..3	ID	O	O	HL70061	Check Digit Scheme	
6		HD	CE	CE		Assigning Authority	The Assigning Authority component is used to identify the system, application, organization, etc. that assigned the ID in component 10. .
7	2..5	ID	CE	CE	HL70203	Identifier Type Code	Condition predicate: Required if component 10 (Organization Identifier) is populated.
8		HD	O	O		Assigning Facility	
9	1..1	ID	O	O	HL70465	Name Representation Code	

TABLE 2-35. EXTENDED COMPOSITE NAME AND IDENTIFICATION NUMBER FOR ORGANIZATIONS (XON)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
10	1..20=	ST	RE	RE		Organization Identifier	

Example: |Level Seven Healthcare, Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|

2.1.37 XPN – Extended Person Name

TABLE 2-36. EXTENDED PERSON NAME (XPN)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1		FN	R	R		Family Name	
2	1..30 #	ST	R	R		Given Name	I.e., first name.
3	1..30 #	ST	RE	RE		Second and Further Given Names or Initials Thereof	
4	1..20 #	ST	RE	RE		Suffix (e.g., JR or III)	
5	1..20 #	ST	RE	RE		Prefix (e.g., DR)	
6	1..20 =	IS	O	O	HL70360	Degree (e.g., MD)	

TABLE 2-36. EXTENDED PERSON NAME (XPN)							
SEQ	**LEN**	**DT**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**Component Name**	**Comments**
7	1..5	ID	RE	RE	HL70200	Name Type Code	Defaults to l (legal name) if empty.
8	1..1	ID	O	O	HL70465	Name Representation Code	
9		CWE	O	O	HL70448	Name Context	
10		DR	X	X		Name Validity Range	Deprecated as of *HL7 Version 2.5*. See XPN-12 Effective Date and XPN-13 Expiration Date components.
11	1..1	ID	O	O	HL70444	Name Assembly Order	
12		TS	O	O		Effective Date	
13		TS	O	O		Expiration Date	
14	1..199#	ST	RE	RE		Professional Suffix	Suggest using values from HL7 table 360.

Example: |Admit^Alan^A^III^Dr^^L^^^^^^^MD|

2.1.38 XTN – Extended Telecommunication Number

TABLE 2-37. EXTENDED TELECOMMUNICATION NUMBER (XTN)

SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
1		ST	X	X		Telephone Number	Deprecated as of *HL7 Version 2.3*.
2	3..3	ID	RE	RE	HL70201	Telecommunication Use Code	Should use 'NET' if component 4 (Email Address) is present.
3	2..8	ID	RE	RE	HL70202	Telecommunication Equipment Type	Should use 'Internet' if component 4 (Email Address) is present.
4	1..199 =	ST	CE	CE		Email Address	Condition predicate: Required if component 7 (local number) is not present. Component 4 (Email Address) must be empty if component 7 (Local Number) is present.
5	1..3=	NM	CE	CE		Country Code	Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
6	1..3=	NM	CE	CE		Area/City Code	Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.

TABLE 2-37. EXTENDED TELECOMMUNICATION NUMBER (XTN)							
SEQ	LEN	DT	Sending Facility Usage	CPDR Receiver Usage	Value Set	Component Name	Comments
7	1..9=	NM	CE	CE		Local Number	Condition predicate: Required if component 4 (Email Address) is not present. Component 7 (Local Number) must be empty if component 4 (Email Address) is present.
8	1..5=	NM	CE	CE		Extension	Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
9	1..199 #	ST	RE	RE		Any Text	For example: “Regular hours 8 am to 5 pm.”
10	1..4=	ST	X	X		Extension Prefix	Not supported.
11	1..6=	ST	X	X		Speed Dial Code	Not supported.
12	1..199 #	ST	X	X		Unformatted Telephone number	Not supported.

Usage: Note that component 4 (Email Address) and component 7 (Local Number) are mutually exclusive. You must populate one or the other, but not both in a single repeat of this data type.

Example: |^PRN^PH^^1^555^5552003|

|^NET^Internet^john.CPDR@cdph.ca.gov|

3. Message Profile – Parkinson's Disease Reporting

3.1 USE CASE MODEL

TABLE 3-1. USE CASE: LABORATORY TO PUBLIC HEALTH	
Item	**Detail**
Description	The *CA Parkinson's Disease Reporting Use Case* focuses on the use case describing the transmission of Parkinson's disease diagnosis to the California Department of Public Health using the *HL7 2.5.1* ORU message. It includes optional acknowledgments of receipt of transactions. The use case does allow the optional use of batch processing. The use case does not cover querying patient demographics or querying diagnostic content relative to the diagnosis. The goal of the use case is to provide safe, reliable delivery of reportable disease information to public health. If PHIN MS is used for transport, then use of the HL7 Acknowledgments may be un-necessary, although PHIN MS does not ensure that the payload conforms to HL7 formatting rules, it does provide safe and reliable transport.
Actors	Sender – The sender actor is an application capable of transmitting diagnostic content relative to Parkinson's diagnosis. This may be a reporting facility itself or some aggregator of facility healthcare group data. The sender application is capable of transmitting the messages of Parkinson's diagnosis to a receiver, optionally capable of batching result messages and optionally capable of receiving HL7 acknowledgments. If the Sender is an actual facility where a diagnosis was made, it is often referred to as "Filler." The Sender application is an HL7 Application as defined by HL7 Version 3 Standard: Abstract Transport Specification, Normative Edition 2009. One point of confusion is what role data aggregators play in this use case. In typical circumstances, a data aggregator is considered an HL7 Application, and as such directly takes on the role of Sender for this use case. The HL7 Version 3 Standard: Abstract Transport Specification, Normative Edition 2009 also describes several roles typically played by interface engines, include gateway, bridge and intermediary roles. The abstract transport specification considers the gateway role to be an HL7 Application, so for this use case an interface engine playing the gateway role and originating the transaction in this IG would be a Sender actor.

TABLE 3-1. USE CASE: LABORATORY TO PUBLIC HEALTH	
Item	**Detail**
	Receiver – The receiver is an application capable of receiving messages of Parkinson's diagnosis, optionally transmitting an acknowledgment and optionally capable of receiving a batch of Parkinson's diagnosis and transmitting a batch acknowledgment. The receiver may be associated with the local and state health agencies that require access to the results. In the use case, the receiver is identified as the "public health jurisdictional entity."
Assumptions	The following assumptions are preconditions for the use of this profile: Senders are responsible for the setup of their system with the reportable conditions appropriate to Parkinson's Disease Reporting Senders are responsible for querying patient demographics and querying diagnostic content relative the reporting use case for a Parkinson's diagnosis
Business Rules	The following Business Rule applies to the use of this profile: Batch processing may optionally be used as described in the *Transmit Batch Message Use Case* (see *References*).

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4. Messages

The following sections detail the structure of each message, including segment name, usage, cardinality and description. See section 1.4.1 (Message Element Attributes) for a description of the columns in the Abstract Message Syntax Tables.

4.1 ORU^R01^ORU_R01

The ORU^R01 message is constrained for transmitting laboratory results from the testing source to Public Health.

TABLE 4-1. ORU^R01^ORU_R01 ABSTRACT MESSAGE SYNTAX

Segment in Standard	Name	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Description
MSH	Message Header	[1..1]	R	R	The message header (MSH) segment contains information describing how to parse and process the message. This includes identification of message delimiters, sender, receiver, message type, timestamp, etc.
[{SFT}]	Software Segment	[1..*]	R	R	Each HL7 aware application that touches the message on the way to the destination application must add a SFT segment for its application. For instance, PHIN MS is not HL7 aware and would not be expected to add an SFT. On the other hand, an integration engine is HL7 aware and would be expected to add an SFT. The first repeat (i.e., the Sender actor) is required. Any other application that transforms the message must add an SFT segment for that application. Other applications that route or act as a conduit may add an SFT but are not required to do so.

TABLE 4-1. ORU^R01^ORU_R01 ABSTRACT MESSAGE SYNTAX					
Segment in Standard	**Name**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Description**
{	***PATIENT_RESULT Begin***	[1..1]	R	R	
[	***PATIENT Begin***	[1..1]	R	R	For public health reporting, the patient group is required.
PID	Patient Identification	[1..1]	R	R	The patient identification (PID) segment is used to provide basic demographics regarding the patient.
[PD1]	Additional Demographics	[0..1]	O	O	
[{NTE}]	Notes and Comments for PID	[0..*]	RE	RE	This notes and comments (NTE) segment should contain notes or comments pertaining to the patient identified in the PID segment. It should not contain order or diagnosis related comments.
[{NK1}]	Next of Kin/Associated Parties	[0..*]	RE	RE	The next of kin (NK1) segment can be used to document the patient's next of kin, employer, guardian, etc.
[	***VISIT Begin***	[1..1]	RE	RE	
PV1	Patient Visit	[1..1]	R	R	HL7 requires that the patient visit (PV1) segment be present if the VISIT group is present.
[PV2]	Patient Visit – Additional Information	[0..1]	RE	O	
]	***VISIT End***				
]	***PATIENT End***				

TABLE 4-1. ORU^R01^ORU_R01 ABSTRACT MESSAGE SYNTAX					
Segment in Standard	**Name**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Description**
{	***ORDER_OBSERVATION Begin***	[1..*]	R	R	The order group is required and can repeat. This means that multiple orders relating to the Parkinson's diagnosis can be included.
[ORC]	Order Common	[0..1]	CE	CE	The common order (ORC) segment identifies basic information about the diagnostic confirmation of the case of Parkinson's disease. This segment includes identifiers of the diagnosis, who made the definitive diagnosis, when the diagnosis was made, what action is being taken per the diagnosis.
OBR	Observations Request	[1..1]	R	R	The observation request (OBR) segment is used to capture information about a singular diagnostic or treatment content area for a given patient with a diagnosis of Parkinson's disease. Most importantly, the OBR identifies the type of diagnostic signs, surgical treatments and order medications for the patient.
[{NTE}]	Notes and Comments for OBR	[0..*]	RE	RE	
[{	***OBSERVATION Begin***	[0..*]	CE	CE	Multiple results may be associated with a diagnosis. There will always be a single OBX in the results group.

TABLE 4-1. ORU^R01^ORU_R01 ABSTRACT MESSAGE SYNTAX					
Segment in Standard	**Name**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Description**
OBX	Observation related to OBR	[1..1]	R	R	The observation/result (OBX) segment contains information regarding a single observation result. This includes identification of the specific type of observation, the result for the observation, when the observation was made, etc. For Parkinson's disease reporting, the OBX is normally reporting specific content of the Parkinson's diagnosis or treatment information per the diagnosis.
[{NTE}]	Notes and Comments	[0..*]	RE	RE	The notes and comment (NTE) segment may carry comments related to the information being reported in the OBX segment.
}]	***OBSERVATION End***				
}	***ORDER_ OBSERVATION End***				
}	***PATIENT_RESULT End***				
[DSC]	Continuation Pointer	[0..0]	X	X	Not supported.

4.1.1 Diagram of ORU^R01^ORU_R01

The following diagram shows a simple view of the ORU^R01^ORU_R01 message structure. The green boxes represent the key segments in the HL7 result message and include the MSH, PID, OBR and OBX segments. The data found in these segments are key to the Parkinson's diagnosis report. Data found in the other segments may be important but are not key to interpreting the message. Note that this diagram does not show repeating elements of the message (repeating groups or segments). It represents the way in which information in the message is related. Neither does this diagram capture the conditions on when some of the segments must be present in the message.

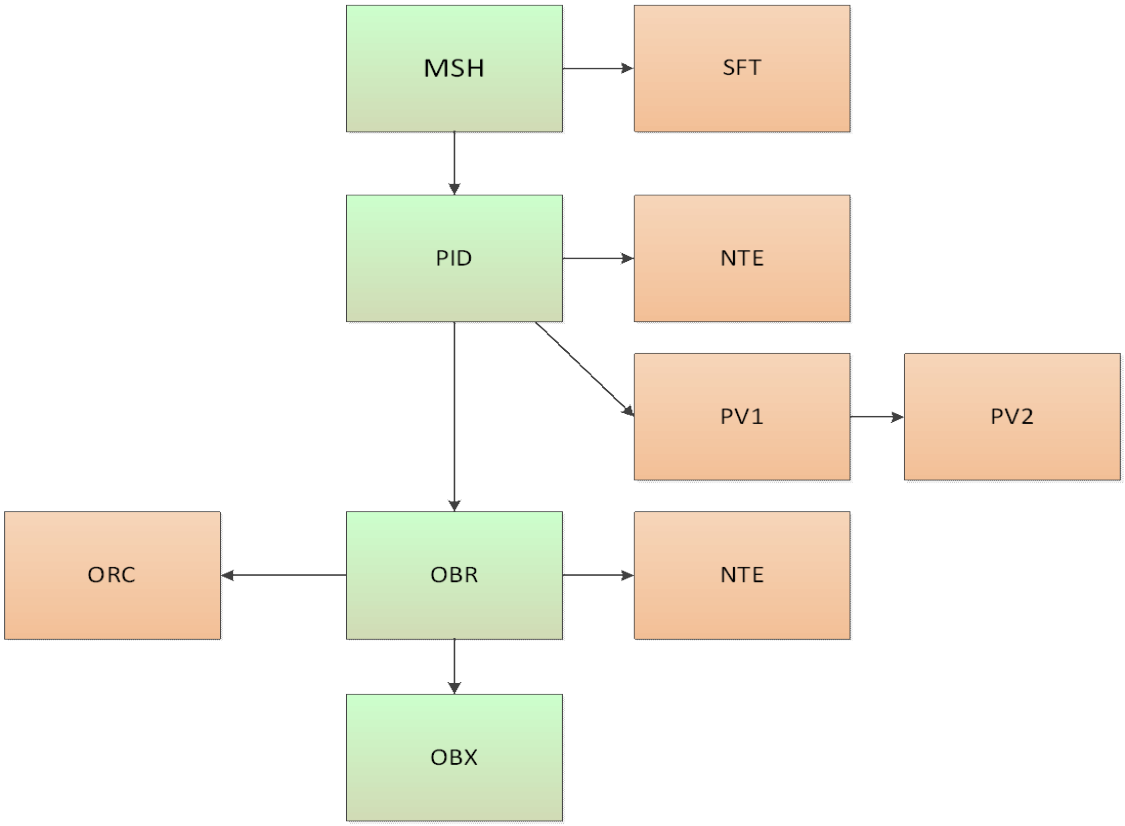

Figure 4-1. 2.5.1 Parkinson's Disease Reporting Message

4.2 ACK^R01^ACK

TABLE 4-2. ACK^R01^ACK ABSTRACT MESSAGE SYNTAX

Segment in Standard	Name	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Description
MSH	Message Header	[1..1]	R	R	The message header (MSH) segment contains information describing how to parse and process the message. This includes identification of message delimiters, sender, receiver, message type, timestamp, etc.
[{SFT}]	Software Segment	[1..*]	R	R	Each HL7 aware application that touches the message on the way to the destination application must add a SFT segment for its application. For instance, PHIN MS is not HL7 aware and would not be expected to add an SFT. On the other hand, an integration engine is HL7 aware and would be expected to add an SFT. The first repeat (i.e., the originator) is required. Any other application that transforms the message must add an SFT segment for that application. Other applications that route or act as a conduit may add an SFT but are not required to do so.
MSA	Message Acknowledgment	[1..1]	R	R	
[{ ERR }]	Error	[0..*]	CE	CE	Required when MSA-1 is not "AA" or "CA."

4.3 HL7 BATCH PROTOCOL

Messages for this profile may be sent as part of a batch, using the HL7 Batch Protocol. The frequencies of batch transmissions are left to specific implementations. Batches may be sent more often if the message size or resource requirements dictate.

TABLE 4-3. BATCH ABSTRACT MESSAGE SYNTAX

Segment in Standard	Name	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Description
[FHS]	File Header Segment	[1..1]	R	R	File header required.
{	--- BATCH begin	[1..1]	R	R	One batch per file supported.
[BHS]	Batch Header Segment	[1..1]	R	R	One batch per file supported.
{[	--- MESSAGE begin	[1..*]	R	R	One or more messages per batch supported.
MSH	(one or more HL7 messages)	[1..1]	R	R	
....					
....					
....					
]}	--- MESSAGE end				
[BTS]	Batch Trailer Segment	[1..1]	R	R	
}	--- Batch end				

TABLE 4-3. BATCH ABSTRACT MESSAGE SYNTAX					
Segment in Standard	**Name**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Description**
[FTS]	File Trailer Segment	[1..1]	R	R	

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5.Segment and Field Descriptions

This messaging guide provides notes for supported fields. The following format is used in this document for listing and defining message segments and fields. First, the message segment use is defined and then a segment attribute table listing all fields defined in the segment is shown. See section 1.4.1 (Message Element Attributes) for a description of the columns in the Segment Attribute Tables.

5.1 MSH – MESSAGE HEADER SEGMENT

The Message Header Segment (MSH) contains information describing how to parse and process the message. This includes identification of message delimiters, sender, receiver, message type, timestamp, etc.

TABLE 5-1. MESSAGE HEADER SEGMENT (MSH)

Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
1	1..1	ST	[1..1]	R	R		Field Separator	Character to be used as the field separator for the rest of the message. Literal value: '|' [ASCII (124)].
2	4..5	ST	[1..1]	R	R		Encoding Characters	Four characters, always appearing in the same order: |^~\&#|. Literal value: '^~\&#'.
3		HD	[0..1]	RE	RE		Sending Application	Field that may be used to identify the sending application uniquely for messaging purposes. For this field only, if all three components of the HD are valued, the first component defines a member in the set defined by the second and third components.

TABLE 5-1. MESSAGE HEADER SEGMENT (MSH)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
4		HD	[1..1]	R	R		Sending Facility	Field that uniquely identifies the facility associated with the application that plays the Sender Actor (see section 3.1 Use Case Model) that sends the message. If acknowledgments are in use, this facility will receive any related acknowledgment message. Sender Profile: For harmonization across all receiver profiles, use of an OID for this field is recommended. Receiver Profile: For facilities originating messages, the NPI identifier is allowed for the Universal ID component of the HD data type.
5		HD	[0..1]	RE	RE		Receiving Application	Field that may be used to identify the receiving application uniquely for messaging purposes.
6		HD	[0..1]	RE	RE		Receiving Facility	Field that uniquely identifies the facility for the application that plays the Receiver Actor and receives the message. If acknowledgments are in use, this facility originates any related acknowledgment message.
7		TS	[1..1]	R	R		Date/Time Of Message	Field containing the date/time the message was created by the sending system. Format: YYYYMMDDHHMMSS[.S[S[S[S]]]]+/-ZZZZ. Note that the time zone offset is required, and the minimum granularity is to the second, although more precise time stamps are allowed.
8	1..40 =	ST	[0..1]	X	X		Security	Not supported.

TABLE 5-1. MESSAGE HEADER SEGMENT (MSH)

Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
9		MSG	[1..1]	R	R		Message Type	For the result message Literal Value: 'ORU^R01^ORU_R01'. For the acknowledgement message Literal Value: 'ACK^R01^ACK'.
10	1..199 =	ST	[1..1]	R	R		Message Control ID	String that uniquely identifies the message instance from the sending application. Example formats for message control IDs include GUID, timestamp plus sequence number, OID plus sequence number or sequence number. The important point is that care must be taken to ensure that the message control id is unique. The sending application (MSH-3) plus MSH-10 (message control id) needs to be globally unique.
11		PT	[1..1]	R	R		Processing ID	Field that may be used to indicate the intent for processing the message, such as "T" (training,) "D" (debug,) or "P" (production.)
12		VID	[1..1]	R	R		Version ID	HL7 version number used to interpret format and content of the message. For this message, the version ID will always be Literal Value: *2.5.1.* Note that receivers must examine MHS-21 (Message Profile Identifier) to understand which message profile the message instance conforms with.
13		NM	[0..1]	O	O		Sequence Number	
14	1..180 =	ST	[0..1]	O	O		Continuation Pointer	

TABLE 5-1. MESSAGE HEADER SEGMENT (MSH)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
15	2..2	ID	[0..0]	X	X		Accept Acknowledgment Type	Not supported
16	2..2	ID	[0..0]	X	X		Application Acknowledgment Type	Not supported
17	3..3	ID	[0..1]	R	O	Country Value Set	Country Code	Receiver - If empty the default is 'USA'
18	5..15	ID	[0..0]	X	X		Character Set	Not supported
19		CWE	[0..1]	O	O		Principal Language Of Message	
20	3..13	ID	[0..0]	X	X		Alternate Character Set Handling Scheme	Not supported
21		EI	[1..1]	R	R		Message Profile Identifier	Field used to reference or assert adherence to a message profile. Message profiles contain detailed explanations of grammar, syntax, and usage for a particular message or set of messages. The profile ID for CA Parkinson's Disease Reporting is "**CA_CPDR_20_ORU_R01"**. The namespace ID is "**CPDR_CP**". A specific OID for this profile has not been determined at this time. A Universal ID of "2.16.840.1.113883.9.9" with a Universal ID Type of "ISO" can be applied.

Example:

MSH|^~\&||Neurology Clinic
CA^4456789123^NPI||201506010840||ORU^R01^ORU_R01|1234567890|P|2.5.1|||||||CA_CPDR_20_ORU_R01^CPDR_CP^2.16.840.1.113883.9.9^ISO

5.2 SFT – SOFTWARE SEGMENT

The software segment provides information about the sending application or other applications that manipulate the message before the receiving application processes the message. In this guide, the Sender actor is required to populate the first SFT segment. Any other application that transforms the message must add an SFT segment for that application. Other applications that route or act as a conduit may add an SFT but are not required to do so.

TABLE 5-2. SOFTWARE SEGMENT (SFT)

Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
1		XON	[1..1]	R	R		Software Vendor Organization	
2	1..15#	ST	[1..1]	R	R		Software Certified Version or Release Number	
3	1..20#	ST	[1..1]	R	R		Software Product Name	
4	1..20#	ST	[1..1]	R	R		Software Binary ID	

TABLE 5-2. SOFTWARE SEGMENT (SFT)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
5		TX	[0..1]	O	O		Software Product Information	
6		TS	[0..1]	RE	RE		Software Install Date	

Example:
SFT|1|Level Seven Healthcare Software, Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1.2|PD System|56734||20080817

5.3 MSA – ACKNOWLEDGEMENT SEGMENT

The Message Response Segment (MSA) contains the information sent as acknowledgment to the order message received.

TABLE 5-3. ACKNOWLEDGEMENT SEGMENT (MSA)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
1	2..2	ID	[1..1]		R	HL70008	Acknowledgment Code	Acknowledgment code indicating receipt of message. (Refer to *HL7 Table 0008 - Acknowledgment Code* for valid values.)
2	1..199=	ST	[1..1]		R		Message Control ID	Identifier that enables the sending system to associate this response with the message for which it is intended. This value will be the MSH.10 message control ID from the message being acknowledged.
3		ST	[0..0]		X		Text Message	Deprecated as of *HL7 Version 2.4*. See ERR segment.

TABLE 5-3. ACKNOWLEDGEMENT SEGMENT (MSA)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
4		NM	[0..1]		O		Expected Sequence Number	
5		ID	[0..0]		X		Delayed Acknowledgment Type	Deprecated as of *HL7 Version 2.2* and the detail was withdrawn and removed from the standard as of *HL7 Version 2.5*.
6		CWE	[0..0]		X		Error Condition	Deprecated as of *HL7 Version 2.4*. See ERR segment.

Example:
MSA|CA|20070701132554000008

5.4 ERR – ERROR SEGMENT

The ERR segment is used to add error comments to acknowledgment messages.

TABLE 5-4. ERROR SEGMENT (ERR)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
1		ELD	[0..0]	X	X		Error Code and Location	Deprecated as of *HL7 Version 2.5*. See ERR-2 Error Location and ERR-3 HL7 Error Code fields.
2		ERL	[0..*]	O	O		Error Location	
3		CWE	[1..1]	R	R	HL70357	HL7 Error Code	Identifies the HL7 (communications) error code.

TABLE 5-4. ERROR SEGMENT (ERR)

Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
4	1..1	ID	[1..*]	R	R	HL70516	Severity	Identifies the severity of an application error. Knowing if something is Error, Warning, or Information is intrinsic to how an application handles the content.
5		CWE	[0..1]	O	O	HL70533	Application Error Code	Note that HI7 table 0533 has no suggested values. It is always a user defined table, and will generally contain locally defined codes.
6	1..80#	ST	[0..1]	O	O		Application Error Parameter	
7	1..2048#	TX	[0..1]	RE	RE		Diagnostic Information	Information that may be used by help desk or other support personnel to diagnose a problem.
8	1..250#	TX	[0..1]	RE	RE		User Message	
9	1..20=	IS	[0..0]	X	X		Inform Person Indicator	Not supported.
10		CWE	[0..0]	X	X		Override Type	Not supported.
11		CWE	[0..0]	X	X		Override Reason Code	Not supported.
12		XTN	[0..*]	RE	RE		Help Desk Contact Point	

Example:
ERR||OBR^1|100^Segment sequence error^HL70357|E|||Missing required OBR segment|Email help desk for further information on this error||||^NET^Internet^helpdesk@cdph.ca.gov

5.5 PID – PATIENT IDENTIFICATION SEGMENT

The Patient Identification Segment (PID) is used to provide basic demographics regarding the subject of the Parkinson's diagnosis.

TABLE 5-5. PATIENT IDENTIFICATION SEGMENT (PID)

Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
1	1..4	SI	[1..1]	R	R		Set ID – PID	Literal Value: '1'.
2		CX	[0..0]	X	X		Patient ID	Deprecated as of *HL7 Version 2.3.1*. See PID-3 Patient Identifier List.
3		CX	[1..*]	R	R		Patient Identifier List	Field used to convey all types of patient/person identifiers. Medical Record Number is required within this field. Field can include additional identifiers such as social security numbers, driver's license numbers, etc.
4		CX	[0..0]	X	X		Alternate Patient ID – PID	Deprecated as of *HL7 Version 2.3.1*. See PID-3.
5		XPN	[1..*]	R	R		Patient Name	Patient name or aliases. (Last^First^MI)
6		XPN	[0..0]	X	X		Mother's Maiden Name	Not Supported
7		TS	[1..1]	R	R		Date/Time of Birth	Patient's date of birth. The time zone component is optional. Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]
8	1..20 =	IS	[1..1]	R	R	HL70001	Administrative Sex	Patient's gender.

TABLE 5-5. PATIENT IDENTIFICATION SEGMENT (PID)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
9		XPN	[0..0]	X	X		Patient Alias	Deprecated as of *HL7 Version 2.4*. See PID-5 Patient Name.
10		CWE	[1..*]	R	R	HL70005	Race	One or more codes that broadly refer to the patient's race(s).
11		XAD	[1..1]	R	R		Patient Address	PDR currently supports a single patient address.
12	1..20 =	IS	[0..0]	X	X		County Code	Deprecated as of *HL7 Version 2.3*. See PID-11 - Patient Address, component 9 County/Parish Code.
13		XTN	[0..0]	X	X		Phone Number – Home	Not Supported
14		XTN	[0..0]	X	X		Phone Number – Business	Not Supported
15		CWE	[0..0]	X	X		Primary Language	Not Supported
16		CWE	[0..0]	X	X		Marital Status	Not Supported
17		CWE	[0..0]	X	X		Religion	Not Supported
18		CX	[0..1]	C	O		Patient Account Number	
19		ST	[0..1]	RE	RE		SSN Number – Patient	If SSN is not stored within the sending system and is not available, should be defaulted to "999999999"
20		DLN	[0..0]	X	X		Driver's License Number – Patient	Not supported. See PID-3 above
21		CX	[0..0]	X	X		Mother's Identifier	Not supported

TABLE 5-5. PATIENT IDENTIFICATION SEGMENT (PID)

Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
22		CWE	[1..1]	R	R	HL70189	Ethnic Group	CPDR currently supports a single patient ethnic group.
23	1..250#	ST	[0..0]	X	X		Birth Place	
24	1..1	ID	[0..0]	X	X		Multiple Birth Indicator	Not supported
25	1..2=	NM	[0..0]	X	X		Birth Order	Not supported
26		CWE	[0..0]	X	X		Citizenship	Not supported
27		CWE	[0..0]	X	X		Veterans Military Status	Not supported
28		CWE	[0..0]	X	X		Nationality	Deprecated as of *HL7 Version 2.4*. See PID-10 Race, PID-22 Ethnic Group, and PID-26 Citizenship.
29		TS	[0..1]	RE	RE		Patient Death Date and Time	Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]
30	1..1	ID	[0..1]	RE	RE	HL70136	Patient Death Indicator	If PID-29 is valued, then this field should be populated with “Y” since the patient is known to be dead.
31	1..1	ID	[0..0]	X	X		Identity Unknown Indicator	Not supported
32	1..20=	IS	[0..0]	X	X		Identity Reliability Code	Not supported
33		TS	[0..0]	X	X		Last Update Date/Time	Not supported

TABLE 5-5. PATIENT IDENTIFICATION SEGMENT (PID)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
34		HD	[0..0]	X	X		Last Update Facility	Not supported.
35		CWE	[0..0]	X	X	PHVS_Animal_CDC	Species Code	Field supports ELR reporting and is not supported for Parkinson's disease reporting.
36		CWE	[0..0]	X	X	Local	Breed Code	Field supports ELR reporting and is not supported for Parkinson's disease reporting.
37	1..80 =	ST	[0..0]	X	X		Strain	Field supports ELR reporting and is not supported for Parkinson's disease reporting.
38		CWE	[0..0]	X	X	HL70429	Production Class Code	Field supports ELR reporting and is not supported for Parkinson's disease reporting.
39		CWE	[0..0]	X	X	Tribal Citizenship Value Set	Tribal Citizenship	Not Supported

Example:
PID|1||36363636^^^MPI&2.16.840.1.113883.19.3.2.1&ISO^MR^A&2.16.840.1.113883.19.3.2.1&ISO~444333333^^^&2.16.840.1.113883.4.1^ISO^SS||Everyman^Adam^A^^^^L^^^^^^^BS||20150602|M||2106-3^White^CDCREC^^^^04/24/2007|2222 Home Street^Apt C^San Francisco^CA^99999^USA^H||||||||||N^Not Hispanic or Latino^HL70189^^^^2.5.1|||||||||

5.6 PV1 – PATIENT VISIT INFORMATION

This segment contains basic inpatient or outpatient encounter information.

TABLE 5-7. PATIENT VISIT INFORMATION (PV1)

Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
1	1..4	SI	[1..1]	R	R		Set ID - PV1	Literal Value: '1'.
2	1..20 =	IS	[1..0]	RE	RE	HL70004	Patient Class	A gross identification of the classification of patient's visit
3		PL	[0..0]	X	X		Assigned Patient Location	Not supported
4	1..20 =	IS	[0..0]	X	X	Admission Type Value Set	Admission Type	Not supported
5		CX	[0..0]	X	X		Preadmit Number	Not supported
6		PL	[0..0]	X	X		Prior Patient Location	Not supported
7		XCN	[0..*]	O	O		Attending Doctor	Identifiers in the "Doctor" fields must be a physician's unique NPI
8		XCN	[0..*]	O	O		Referring Doctor	Identifiers in the "Doctor" fields must be a physician's unique NPI
9		XCN	[0..*]	O	O		Consulting Doctor	Identifiers in the "Doctor" fields must be a physician's unique NPI
10	1..20 =	IS	[0..1]	O	O	Local	Hospital Service	Identifies the Reporting Facility Type (Hospital, Pharmacy, Other)
11		PL	[0..0]	X	X		Temporary Location	Not supported

TABLE 5-7. PATIENT VISIT INFORMATION (PV1)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
12	1..20 =	IS	[0..0]	X	X		Preadmit Test Indicator	Not supported
13	1..20 =	IS	[0..0]	X	X		Re-admission Indicator	Not supported.
14	1..20 =	IS	[0..0]	X	X		Admit Source	Not supported
15	1..20 =	IS	[0..0]	X	X		Ambulatory Status	Not supported.
16	1..20 =	IS	[0..0]	X	X		VIP Indicator	Not supported.
17		XCN	[0..*]	O	O		Admitting Doctor	Identifiers in the “Doctor” fields must be a physician’s unique NPI
18	1..20 =	IS	[0..0]	X	X		Patient Type	Not supported
19		CX	[0..0]	X	X		Visit Number	Not supported
20		FC	[0..0]	X	X		Financial Class	Not supported
21	1..20 =	IS	[0..0]	X	X		Charge Price Indicator	Not supported.
22	1..20 =	IS	[0..0]	X	X		Courtesy Code	Not supported.
23	1..20 =	IS	[0..0]	X	X		Credit Rating	Not supported.
24	1..20 =	IS	[0..0]	X	X		Contract Code	Not supported.

TABLE 5-7. PATIENT VISIT INFORMATION (PV1)								
Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
25		DT	[0..0]	X	X		Contract Effective Date	Not supported.
26	1..12 =	NM	[0..0]	X	X		Contract Amount	Not supported.
27	1..3=	NM	[0..0]	X	X		Contract Period	Not supported.
28	1..20 =	IS	[0..0]	X	X		Interest Code	Not supported.
29	1..20 =	IS	[0..0]	X	X		Transfer to Bad Debt Code	Not supported.
30		DT	[0..0]	X	X		Transfer to Bad Debt Date	Not supported.
31	1..20 =	IS	[0..0]	X	X	HL70021	Bad Debt Agency Code	Not supported.
32	1..12 =	NM	[0..0]	X	X		Bad Debt Transfer Amount	Not supported.
33	1..12 =	NM	[0..0]	X	X		Bad Debt Recovery Amount	Not supported.
34	1..20 =	IS	[0..0]	X	X		Delete Account Indicator	Not supported.
35		DT	[0..0]	X	X		Delete Account Date	Not supported.
36	1..20 =	IS	[0..0]	X	X		Discharge Disposition	Not supported

TABLE 5-7. PATIENT VISIT INFORMATION (PV1)								
Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
37		DLD	[0..0]	X	X		Discharged to Location	Not supported
38		CWE	[0..0]	X	X		Diet Type	Not supported
39	1..20 =	IS	[0..0]	X	X		Servicing Facility	Not supported
40	1..20 =	IS	[0..0]	X	X		Bed Status	Not supported
41	1..20 =	IS	[0..0]	X	X		Account Status	Not supported
42		PL	[0..0]	X	X		Pending Location	Not supported
43		PL	[0..0]	X	X		Prior Temporary Location	Not supported
44		TS	[0..0]	X	X		Admit Date/Time	Not supported
45		TS	[0..0]	X	X		Discharge Date/Time	Not supported
46	1..12 =	NM	[0..0]	X	X		Current Patient Balance	Not supported
47	1..12 =	NM	[0..0]	X	X		Total Charges	Not supported
48	1..12 =	NM	[0..0]	X	X		Total Adjustments	Not supported
49	1..12 =	NM	[0..0]	X	X		Total Payments	Not supported

TABLE 5-7. PATIENT VISIT INFORMATION (PV1)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
50		CX	[0..0]	X	X		Alternate Visit ID	Not supported
51	1..20 =	IS	[0..0]	X	X		Visit Indicator	Not supported
52		XCN	[0..0]	X	X		Other Healthcare Provider	Not supported

Example:
PV1|1|O|||||1234567890^NPI|5678912345^NPI|

5.7 PV2 – PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT

The PV2 segment is a continuation of information contained on the PV1 segment.

TABLE 5-8. PATIENT VISIT – ADDITIONAL INFORMATION (PV2)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
1		PL	[0..0]	X	X		Prior Pending Location	Not supported
2		CWE	[0..0]	X	X		Accommodation Code	Not supported.

TABLE 5-8. PATIENT VISIT – ADDITIONAL INFORMATION (PV2)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
3		CWE	[0..1]	O	O	Local	Admit Reason	A generalized explanation of why the patient needed services. Frequently used for chief complaint. Has no universally accepted value set.
4		CWE	[0..0]	X	X		Transfer Reason	Not supported.
5	1..25=	ST	[0..0]	X	X		Patient Valuables	Not supported.
6	1..25=	ST	[0..0]	X	X		Patient Valuables Location	Not supported.
7	1..20=	IS	[0..0]	X	X		Visit User Code	Not supported.
8		TS	[0..0]	X	X		Expected Admit Date/Time	Not supported.
9		TS	[0..0]	X	X		Expected Discharge Date/Time	Not supported.
10	1..3=	NM	[0..0]	X	X		Estimated Length of Inpatient Stay	Not supported.
11	1..3=	NM	[0..0]	X	X		Actual Length of Inpatient Stay	Not supported.
12	1..50#	ST	[0..0]	X	X		Visit Description	Not supported.
13		XCN	[0..0]	X	X		Referral Source Code	Not supported.

TABLE 5-8. PATIENT VISIT – ADDITIONAL INFORMATION (PV2)

Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
14		DT	[0..0]	X	X		Previous Service Date	Not supported.
15	1..1	ID	[0..0]	X	X		Employment Illness Related Indicator	Not supported
16	1..20=	IS	[0..0]	X	X		Purge Status Code	Not supported.
17		DT	[0..0]	X	X		Purge Status Date	Not supported.
18	1..20=	IS	[0..0]	X	X		Special Program Code	Not supported.
19	1..1	ID	[0..0]	X	X		Retention Indicator	Not supported.
20	1..1=	NM	[0..0]	X	X		Expected Number of Insurance Plans	Not supported.
21	1..20=	IS	[0..0]	X	X		Visit Publicity Code	Not supported.
22	1..1	ID	[0..0]	X	X		Visit Protection Indicator	Not supported.
23		XON	[0..0]	X	X		Clinic Organization Name	Name of the organization within a facility that provides patient care. Name shall be unique within any given facility.
24	1..20=	IS	[0..0]	X	X		Patient Status Code	Not supported.
25	1..20=	IS	[0..0]	X	X		Visit Priority Code	Not supported.

TABLE 5-8. PATIENT VISIT – ADDITIONAL INFORMATION (PV2)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
26		DT	[0..0]	X	X		Previous Treatment Date	
27	1..20=	IS	[0..0]	X	X		Expected Discharge Disposition	Not supported.
28		DT	[0..0]	X	X		Signature on File Date	Not supported.
29		DT	[0..0]	X	X		First Similar Illness Date	
30		CWE	[0..0]	X	X		Patient Charge Adjustment Code	Not supported.
31	1..20=	IS	[0..0]	X	X		Recurring Service Code	Not supported.
32	1..1	ID	[0..0]	X	X		Billing Media Code	Not supported.
33		TS	[0..0]	X	X		Expected Surgery Date and Time	Not supported.
34	1..1	ID	[0..0]	X	X		Military Partnership Code	Not supported.
35	1..1	ID	[0..0]	X	X		Military Non-Availability Code	Not supported.
36	1..1	ID	[0..0]	X	X		Newborn Baby Indicator	Not supported.

TABLE 5-8. PATIENT VISIT – ADDITIONAL INFORMATION (PV2)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
37	1..1	ID	[0..0]	X	X		Baby Detained Indicator	Not supported.
38		CWE	[0..0]	X	X		Mode of Arrival Code	Not supported.
39		CWE	[0..0]	X	X		Recreational Drug Use Code	Not supported.
40		CWE	[0..0]	X	X	HL70432	Admission Level of Care Code	A generalized identification of patient's acuity for the services received during the visit covered by this message
41		CWE	[0..0]	X	X		Precaution Code	Not supported.
42		CWE	[0..0]	X	X		Patient Condition Code	Not supported.
43	1..20=	IS	[0..0]	X	X		Living Will Code	Not supported.
44	1..20=	IS	[0..0]	X	X		Organ Donor Code	Not supported.
45		CWE	[0..0]	X	X		Advance Directive Code	Not supported.
46		DT	[0..0]	X	X		Patient Status Effective Date	Not supported.
47		TS	[0..0]	X	X		Expected LOA Return Date/Time	Not supported.
48		TS	[0..0]	X	X		Expected Pre-admission Testing Date/Time	Not supported.

TABLE 5-8. PATIENT VISIT – ADDITIONAL INFORMATION (PV2)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
49		IS	[0..0]	X	X		Notify Clergy Code	Not supported.

Example:
PV2|||1^Sick^99AdmitReason|||||||||||||||||||Level Seven Healthcare, Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|||||||

5.8 ORC – COMMON ORDER SEGMENT

The Common Order Segment (ORC) is used to transmit fields that are common to all orders. This segment includes identifiers for where and when the diagnosis was made.

TABLE 5-9. COMMON ORDER SEGMENT (ORC)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
1	2..2	ID	[1..1]	R	R	HL70119	Order Control	Determiner of the function of the order segment. In the ORU^R01 this should be the literal value: "RE."
2		EI	[0..0]	X	X		Placer Order Number	Not supported

TABLE 5-9. COMMON ORDER SEGMENT (ORC)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
3		EI	[0..0]	X	X		Filler Order Number	Not supported
4		EI	[0..0]	X	X		Placer Group Number	Not supported
5	2..2	ID	[0..0]	X	X		Order Status	Not supported
6	1..1	ID	[0..0]	X	X		Response Flag	Not supported
7		TQ	[0..0]	X	X		Quantity/Timing	Not supported
8		EIP	[0..0]	X	X		Parent	Not supported
9		TS	[0..0]	X	X		Date/Time of Transaction	Not supported
10		XCN	[0..0]	X	X		Entered By	Not supported
11		XCN	[0..0]	X	X		Verified By	Not supported
12		XCN	[0..0]	X	X		Ordering Provider	Not supported
13		PL	[0..0]	X	X		Enterer's Location	Not supported
14		XTN	[0..0]	X	X		Call Back Phone Number	Not supported
15		TS	[0..0]	X	X		Order Effective Date/Time	Not supported
16		CWE	[0..0]	X	X		Order Control Code Reason	Not supported
17		CWE	[0..0]	X	X		Entering Organization	Not supported

TABLE 5-9. COMMON ORDER SEGMENT (ORC)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
18		CWE	[0..0]	X	X		Entering Device	Not supported
19		XCN	[0..0]	X	X		Action By	Not supported
20		CWE	[0..0]	X	X		Advanced Beneficiary Notice Code	Not supported.
21		XON	[1..1]	R	R		Ordering Facility Name	Cardinality: PDR supports a single responsible (ordering) facility name for where the patient was diagnosed and/or treated.
22		XAD	[1.1]	R	R		Ordering Facility Address	The address of the facility where the patient was diagnosed and/or treated Cardinality: PDR supports a single facility address
23		XTN	[1..1]	R	R		Ordering Facility Phone Number	
24		XAD	[0..)]	X	X		Ordering Provider Address	The address of the provider, if different from the provider facility
25		CWE	[0..0]	X	X		Order Status Modifier	Not Supported
26		CWE	[0..0]	X	X		Advanced Beneficiary Notice Override Reason	Not supported.
27		TS	[0..0]	X	X		Filler's Expected Availability Date/Time	Not supported.

TABLE 5-9. COMMON ORDER SEGMENT (ORC)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
28		CWE	[0..0]	X	X	HL70177	Confidentiality Code	Not supported
29		CWE	[0..0]	X	X	HL70482	Order Type	Not supported
30		CNE	[0..0]	X	X	HL70483	Enterer Authorization Mode	Not supported
31		CWE	[0..1]	X	X		Parent Universal Service Identifier	Not supported

Example:
ORC|RE|||||||||||||||||||Level Seven Healthcare, Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1005 Healthcare Drive^^San Francisco^CA^99999^USA^B|^WPN^PH^^1^555^5553001|

5.8.1 Diagnosis Order OBR – Observation Request Segment

The Observation Request Segment (OBR) is used to capture specific information about the specific diagnosis of Parkinson's Disease.

TABLE 5-10. DIAGNOSIS ORDER OBR

Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
1	1..4	SI	[1..1]	R	R		Set ID - OBR	
2		EI	[1..1]	RE	RE		Placer Order Number	This identifier is assigned by the placer of the order being fulfilled by this message. This identifier distinguishes the placer's order from all other orders created by the placer. Normally, it is a type of system identifier assigned by the placer software application. If the order placer and order filler are one in the same, the placer order is not required.
3		EI	[1..1]	R	R		Filler Order Number	Order number associated with the Filling Application. This number is assigned by the organization determining the diagnosis. Normally, this is a type of system identifier assigned by the filler software application such as the accession number and application OID.
4		CWE	[1..1]	R	R		Universal Service Identifier	LOINC 52797-8 Diagnosis ICD Code. Must reference the LOINC code system relative to the diagnosis.
5		ID	[0..0]	X	X		Priority – OBR	Deprecated as of *HL7 Version 2.3*. See TQ1-9 Priority Field.
6		TS	[0..0]	X	X		Requested Date/Time	Deprecated as of *HL7 Version 2.3*. See TQ1-8 Start Date/Time.

TABLE 5-10. DIAGNOSIS ORDER OBR								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
7		TS	[1..1]	R	R		Observation Date/Time	A minimum of year, month and day must be provided Format: YYYYMMDD except when reporting an unknown date of '0000"
8		TS	[0..0]	X	X		Observation End Date/Time	Not supported for CPDR
9		CQ	[0..0]	X	X		Collection Volume	Not supported for CPDR
10		XCN	[0..0]	X	X		Collector Identifier	Not supported for CPDR
11	1..1	ID	[0..0]	X	X		Specimen Action Code	Not supported for CPDR
12		CWE	[0..0]	X	X		Danger Code	Not supported for CPDR
13		ST	[0..0]	X	X		Relevant Clinical Information	Not supported for CPDR
14		TS	[0..0]	X	X		Specimen Received Date/Time	Not supported for CPDR
15		SPS	[0..0]	X	X		Specimen Source	Not supported for CPDR

TABLE 5-10. DIAGNOSIS ORDER OBR

Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
16		XCN	[0..*]	R	R		Ordering Provider	Identifier of the individual provider who confirmed the diagnosis of Parkinson's disease. The National Provider Identifier (NPI) must be used as the identifier.
17		XTN	[0..2]	R	R		Order Callback Phone Number	This is the number the public health department can call for follow-up information when necessary. Format is country, area code, local number, and extension
18	1..199 =	ST	[0..0]	X	X		Placer Field 1	Not supported for CPDR
19	1..199 =	ST	[0..0]	X	X		Placer Field 2	Not supported for CPDR
20	1..199 =	ST	[0..0]	X	X		Filler Field 1	Not supported for CPDR
21	1..199 =	ST	[0..0]	X	X		Filler Field 2	Not supported.
22		TS	[0..0]	X	X		Results Rpt/Status Chng - Date/Time	Not supported.
23		MOC	[0..0]	X	X		Charge to Practice	Not supported.
24	2..3	ID	[0..0]	X	X		Diagnostic Serv Sect ID	Not supported.
25	1..1	ID	[0..0]	X	X		Result Status	Not supported.
26		PRL	[0..0]	X	X		Parent Result	Not supported.

TABLE 5-10. DIAGNOSIS ORDER OBR								
Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
27		TQ	[0..0]	X	X		Quantity/Timing	Not supported.
28		XCN	[0..0]	X	X		Result Copies To	Not supported.
29		EIP	[0..0]	X	X		Parent	Not supported.
30	4..4	ID	[0..0]	X	X		Transportation Mode	Not supported.
31		CWE	[0..0]	X	X		Reason for Study	Not supported.
32		NDL	[0..0]	X	X		Principal Result Interpreter	Not supported.
33		NDL	[0..0]	X	X		Assistant Result Interpreter	Not supported.
34		NDL	[0..*]	X	X		Technician	Not supported.
35		NDL	[0..*]	X	X		Transcriptionist	Not supported.
36		TS	[0..0]	X	X		Scheduled Date/Time	Not supported.
37	1..16 =	NM	[0..0]	X	X		Number of Sample Containers	Not supported.
38		CWE	[0..0]	X	X		Transport Logistics of Collected Sample	Not supported.

TABLE 5-10. DIAGNOSIS ORDER OBR								
Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
39		CWE	[0..0]	X	X		Collector's Comment	Not supported.
40		CWE	[0..0]	X	X		Transport Arrangement Responsibility	Not supported.
41	1..1	ID	[0..0]	X	X		Transport Arranged	Not supported.
42	1..1	ID	[0..0]	X	X		Escort Required	Not supported.
43		CWE	[0..0]	X	X		Planned Patient Transport Comment	Not supported.
44		CWE	[0..0]	X	X		Procedure Code	Not supported.
45		CWE	[0..0]	X	X		Procedure Code Modifier	Not supported.
46		CWE	[0..0]	X	X		Placer Supplemental Service Information	Not supported.
47		CWE	[0..0]	X	X		Filler Supplemental Service Information	Not supported

TABLE 5-10. DIAGNOSIS ORDER OBR								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
48		CWE	[0..0]	X	X		Medically Necessary Duplicate Procedure Reason	Not supported
49		IS	[0..0]	X	X		Result Handling	Not supported
50		CWE	[0..0]	X	X		Parent Universal Service Identifier	Not supported

Example:

OBR|1||PD-15634^Medico-EMR^3.29.2564.425987^ISO|||52797-8^Diagnosis ICD code^LN|||||||20170604|1234567893^NPI|^PRN^PH^^1^555^5552003|

5.8.1.0 Primary Diagnosis OBX – Observation/Result Segment

The Primary Diagnosis Observation/Result Segment (OBX) contains information regarding a single observation related to the Primary Diagnosis of the Patient. This includes identification of the specific type of observation, the result for the observation, when the observation was made, etc.

TABLE 5-11. PRIMARY DIAGNOSIS OBX

Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
1	1..4	SI	[1..1]	R	R		Set ID – OBX	
2	2..3	ID	[1..1]	R	R	HL70125	Value Type	This field identifies the data type used for OBX-5. “CE” should be populated in this field for the Primary Diagnosis OBX
3		CWE	[1..1]	R	R		Observation Identifier	LOINC 86255-7 Primary Diagnosis ICD code. Must reference the LOINC code relative to Primary Diagnosis.
4	1..20 =	ST	[0..1]	CE	CE		Observation Sub-ID	Harmonized condition predicate: Required if there is more than one OBX with the same OBX-3 Observation Identifier associated with the same OBR. Normally, this field is populated with a number, but text values may be used also.
5		Var	[0..1]	R	R	ICD-10	Observation Value	Must populate using ICD-10 code relative to the diagnosis of Parkinson’s Disease (e.g. G20 Parkinson’s Disease)
6		CWE	[0..0]	X	X	Unified Code for Units of Measure (UCUM)	Units	Not supported

TABLE 5-11. PRIMARY DIAGNOSIS OBX								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
7	1..60 =	ST	[0..0]	X	X		References Range	Not supported
8	1..20 =	CWE	[0..0]	X	X		Abnormal Flags	Not supported
9	1..5#	NM	[0..0]	X	X		Probability	Not supported
10	1..2	ID	[0..0]	X	X		Nature of Abnormal Test	Not supported
11	1..1	ID	[0..0]	X	X		Observation Result Status	Not supported
12		TS	[0..0]	X	X		Effective Date of Reference Range	Not supported
13	20=	ST	[0..0]	X	X		User-Defined Access Checks	Not supported
14		TS	[1..1]	RE	RE		Date/Time of the Observation	The date/time of observation is intended to carry the clinically relevant time of the observation. Format: YYYYMMDD except when reporting an unknown date of ‘0000”.
15		CWE	[0..0]	X	X		Producer’s Reference	Not supported
16		XCN	[0..0]	X	X		Responsible Observer	Not supported
17		CWE	[0..0]	X	X		Observation Method	Not supported

TABLE 5-11. PRIMARY DIAGNOSIS OBX								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
18		EI	[0..0]	X	X		Equipment Instance Identifier	Not supported
19		TS	[0..0]	X	X		Date/Time of the Analysis	Not supported
20		(TBD)	[0..0]	X	X		Reserved for harmonization with *Version 2.6.*	Not supported.
21		(TBD)	[0..0]	X	X		Reserved for harmonization with *Version 2.6*.	Not supported.
22		(TBD)	[0..0]	X	X		Reserved for harmonization with *Version 2.6*.	Not supported.
23		XON	[0..0]	X	X		Performing Organization Name	Not supported
24		XAD	[0..0]	X	X		Performing Organization Address	Not supported
25		XCN	[0..0]	X	X		Performing Organization Medical Director	Not supported

Example:
OBX|1|CE|86255-7^Primary Diagnosis^LN||G-20^Parkinson's disease|||||||20170604|

5.8.1.1 Disease Onset OBX – Observation/Result Segment

The Observation/Result Segment (OBX) contains information regarding a single observation related to the Patient's Disease Onset. This includes identification of the specific type of observation, the result for the observation, when the observation was made, etc. If the disease onset date is unknown, it is assumed that this observation should be populated with data from the date of diagnosis.

TABLE 5-12. DISEASE ONSET OBX

Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
1	1..4	SI	[0..1]	O	O		Set ID – OBX	
2	2..3	ID	[1..1]	R	R	HL70125	Value Type	This field identifies the data type used for OBX-5. "DT" should be populated in this field for the Disease Onset OBX
3		CWE	[1..1]	R	R		Observation Identifier	LOINC 76425-8 Date of Onset. Must reference the LOINC code relative to Date of Onset.
4	1..20 =	ST	[0..1]	CE	CE		Observation Sub-ID	Harmonized condition predicate: Required if there is more than one OBX with the same OBX-3 Observation Identifier associated with the same OBR. Normally, this field is populated with a number, but text values may be used also.

TABLE 5-12. DISEASE ONSET OBX								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
5		Var	[0..1]	O	O		Observation Value	Must populate using Disease Onset Date relative to the diagnosis of Parkinson's Disease (YYYYMMDD)
6		CWE	[0..0]	X	X	Unified Code for Units of Measure (UCUM)	Units	Not supported
7	1..60 =	ST	[0..0]	X	X		References Range	Not supported
8	1..20 =	CWE	[0..0]	X	X		Abnormal Flags	Not supported
9	1..5#	NM	[0..0]	X	X		Probability	Not supported.
10	1..2	ID	[0..0]	X	X	HL70080	Nature of Abnormal Test	Not supported.
11	1..1	ID	[0..0]	X	X	HL70085	Observation Result Status	Not supported.
12		TS	[0..0]	X	X		Effective Date of Reference Range	Not supported.
13	20=	ST	[0..0]	X	X		User-Defined Access Checks	Not supported.
14		TS	[0..0]	X	X		Date/Time of the Observation	Not supported.

TABLE 5-12. DISEASE ONSET OBX								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
15		CWE	[0..0]	X	X	Local	Producer's Reference	Not supported.
16		XCN	[0..0]	X	X		Responsible Observer	Not supported.
17		CWE	[0..0]	X	X	HL7 V3 Observation Method	Observation Method	Not supported.
18		EI	[0..0]	X	X		Equipment Instance Identifier	Not supported.
19		TS	[0..0]	X	X		Date/Time of the Analysis	Not supported.
20		(TBD)	[0..0]	X	X		Reserved for harmonization with *Version 2.6.*	Not supported.
21		(TBD)	[0..0]	X	X		Reserved for harmonization with *Version 2.6*.	Not supported.
22		(TBD)	[0..0]	X	X		Reserved for harmonization with *Version 2.6*.	Not supported.
23		XON	[0..0]	X	X		Performing Organization Name	Not supported.

TABLE 5-12. DISEASE ONSET OBX								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
24		XAD	[0..0]	X	X		Performing Organization Address	Not supported.
25		XCN	[0..0]	X	X		Performing Organization Medical Director	Not supported.

Example:
OBX|2|DT|76425-8^Date of Onset^LN||20170604

5.9 FHS – FILE HEADER SEGMENT

This segment is used as the lead-in to a file (group of batches).

TABLE 5-31. FILE HEADER SEGMENT (FHS)

Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
1	1..1	ST	[1..1]	R	R		File Field Separator	Character to be used as the field separator for the rest of the message. The supported value is |, ASCII (124).
2	4..5	ST	[1..1]	R	R		File Encoding Characters	Four characters that always appear in the same order in this field: |^~\&|.
3		HD	[0..1]	O	O		File Sending Application	
4		HD	[1..1]	R	O		File Sending Facility	NHSN - Party ID – same one as used in PHIN MS wrapper.
5		HD	[0..1]	O	O		File Receiving Application	
6		HD	[1..1]	R	O		File Receiving Facility	Unique identifier of the facility that is to receive the message. This field has the same definition as the corresponding field in the MSH segment.
7		TS	[1..1]	R	O		File Creation Date/Time	Date/time the file was created by the sending system.
8	1..40=	ST	[0..0]	X	X		File Security	Not Supported.
9	1..40=	ST	[0..1]	O	O		File Name/ID	
10	1..80=	ST	[0..0]	X	X		File Header Comment	Not Supported.
11	1..20=	ST	[0..0]	X	X		File Control ID	Not Supported.

TABLE 5-31. FILE HEADER SEGMENT (FHS)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
12	1..20=	ST	[0..0]	X	X		Reference File Control D	Not Supported.

Example:
FHS|^~\&||Lab1^2.16.840.1.113883.19.3.1^ISO||SPH^2.16.840.1.113883.19.3.2^ISO|20080723123558-0400

5.10 FTS – FILE TRAILER SEGMENT

The FTS segment defines the end of a file (group of batches).

TABLE 5-32. FILE TRAILER SEGMENT (FTS)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
1	1..10=	NM	[1..1]	R	O		File Batch Count	The number of batches contained in this file. Since this interface is constrained to one batch per file, this number should always be '1'.
2	1..80#	ST	[0..0]	X	X		File Trailer Comment	Not supported.

Example:
FTS|1

5.11 BHS – BATCH HEADER SEGMENT

This segment is used as the lead-in to a file (group of batches).

TABLE 5-33. BATCH HEADER SEGMENT (BHS)

Seq	Len	DT	Cardinality	Sending Facility Usage	CPDR Receiver Usage	Value Set	HL7 Element Name	Description/Comments
1	1..1	ST	[1..1]	R	R		Batch Field Separator	Character used as the field separator for the rest of the message. The supported value is |, ASCII (124).
2	4..5	ST	[1..1]	R	R		Batch Encoding Characters	Four characters that always appear in the same order in this field: |^~\&|.
3		HD	[0..1]	O	O		Batch Sending Application	
4		HD	[1..1]	R	O		Batch Sending Facility	Facility NPI
5		HD	[0..1]	O	O		Batch Receiving Application	
6		HD	[1..1]	R	O		Batch Receiving Facility	Unique identifier of the facility that is to receive the message. This field has the same definition as the corresponding field in the MSH segment.
7		TS	[1..1]	R	O		Batch Creation Date/Time	Date/time the batch was created by the sending system.
8	1..40=	ST	[0..0]	X	X		Batch Security	Not supported.

TABLE 5-33. BATCH HEADER SEGMENT (BHS)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
9	1..40=	ST	[0..1]	O	O		Batch Name/ID/Type	
10	1..80=	ST	[0..0]	X	X		Batch Comment	Not supported.
11	1..20=	ST	[0..0]	X	X		Batch Control ID	Not supported.
12	1..20=	ST	[0..0]	X	X		Reference Batch Control D	Not supported.

Example:
BHS|^~\&||Facility1^2.16.840.1.113883.19.3.1^ISO||SPH^2.16.840.1.113883.19.3.2^ISO|20080723123558-0400

5.12 BTS – BATCH TRAILER SEGMENT

The BTS segment defines the end of a batch of messages.

TABLE 5-34. BATCH TRAILER SEGMENT (BTS)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
1	10	NM	[1..1]	R	R		Batch Message Count	This is the total number of messages contained in the batch.
2	80	ST	[0..0]	X	X		Batch Comment	Not supported.

TABLE 5-34. BATCH TRAILER SEGMENT (BTS)								
Seq	**Len**	**DT**	**Cardinality**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Value Set**	**HL7 Element Name**	**Description/Comments**
3	100	NM	[0..0]	X	X		Batch Totals	Not supported.

Example:
BTS|100

6. Code Systems and Value Sets

Successful message implementation requires that transmitted messages (message instances) contain valid values for coded fields. It is important to note that code sets are relatively dynamic and subject to change between publications of these implementation guides.

Every code value passed in a message instance is drawn from a code system that has a globally unique identifier, such as an OID. In general, the coded values allowed in a field (a) may be drawn from more than one code system, and (b) may be a subset of the codes from a given coding system. Combining (a) and (b) makes it possible for the allowed code value to be a combination of multiple subsets drawn from multiple coding systems. In most cases, only a subset of the codes defined in a code system are legal for use in a particular message.

The subsets of the codes that are legal for a particular field is identified by an HL7 construct known as a "value set." A value set is a collection of coded values drawn from code systems. Value sets serve to identify the specific set of coded values for the message from the universe of coded values across all coding systems.

The segment tables in previous sections identify the value set or coding system used for each supported field containing a coded value. Fields that use the data type CWE require that messages include the code, drawn from *HL7 0396*, that uniquely defines the coding system, as well as the coded value itself. Some of these pre-coordinated value sets must be updated, or new ones created, as new needs are identified.

Value sets are identified by a unique identifier also, but this identifier is not transmitted in the message. The identifier or code for the coding system from which the value is derived is sent in the message. However, the value set identifier is useful and important when vocabulary items are modified or replaced.

6.1 VOCABULARY CONSTRAINTS

Table 6-1. Value Set/Code System Summary shows the various value sets/code systems used in this IG. It also provides information about the source of the vocabulary and an identifier for the vocabulary. The name found in the Value Set/Code System Name column corresponds with the value set identified in the Value Set column of the data type and segment attribute tables found above.

TABLE 6-1. VALUE SET/CODE SYSTEM SUMMARY

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
Country Value Set	HITSP C-80,20090708 V1.1	2.16.840.1.113883.3.88.12.80.63	This identifies the codes for the representation of names of countries, territories and areas of geographical interest. The complete set of 3166-1 codes. http://www.iso.org/iso/iso-3166-1_decoding_table Also available from PHIN VADS as: PHVS_Country_ISO_3166-1 Also known as HL7 Table 0399.
HL70001	HL7 Version 2.5.1	2.16.840.1.113883.12.1 (code system)	Administrative Sex. Also available from PHIN VADS as: PHVS_AdministrativeSex_HL7_2x
HL70002	HL7 Version 2.5.1	2.16.840.1.113883.12.2 (code system)	Marital Status. Note, HITSP has identified a different value set in HITSP C80: Name: Marital Status Value Set Source: Health Level Seven (HL7) Version 3.0
HL70003	HL7 Version 2.5.1	2.16.840.1.113883.12.3 (code system)	Event type

TABLE 6-1. VALUE SET/CODE SYSTEM SUMMARY

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
HL70004	HL7 Version 2.5.1	2.16.840.1.113883.12.4 (code system)	Patient Class Also available from PHIN VADS as: PHVS_PatientClass_HL7 Note, HITSP has identified a different value set in HITSP C80: Name: Patient Class Value Set Source: Health Level Seven (HL7) Version 3.0 Act Encounter Code The HL7 Lab to EHR IG adopted by HITSP uses the HL70004
HL70005	HL7 Version 2.5.1	2.16.840.1.113883.6.238 (code system)	Race Category Also available from PHIN VADS as: PHVS_RaceCategory_CDC
HL70006	HL7 Version 2.5.1	2.16.840.1.113883.12.6 (code system)	Religion
HL70008	HL7 Version 2.5.1	2.16.840.1.113883.12.8 (code system)	Acknowledgment code Also available from PHIN VADS as: PHVS_AcknowledgmentCode_HL7_2x
HL70018	HL7 Version 2.5.1	2.16.840.1.113883.12.18 (code system)	Patient Type
HL70021	HL7 Version 2.5.1	2.16.840.1.113883.12.21 (code system)	Bad Debt Agency Code

TABLE 6-1. VALUE SET/CODE SYSTEM SUMMARY

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
HL70023	HL7 Version 2.5.1	2.16.840.1.113883.12.23 (code system)	Admit Source Also available from PHIN VADS as: PHVS_AdmitSource_HL7_2x Note, HITSP has identified a different value set in HITSP C80: Name: Admission Source Value Set Source: National Uniform Billing Committee (NUBC). See UB-04/NUBC CURRENT UB DATA SPECIFICATIONS MANUAL) UB-04 FL15
HL70038	HL7 Version 2.5.1	2.16.840.1.113883.12.38 (code system)	Order status Also available from PHIN VADS as: PHVS_OrderStatus_HL7_2x
HL70061	HL7 Version 2.5.1	2.16.840.1.113883.12.61 (code system)	Check digit scheme
HL70063	HL7 Version 2.5.1	2.16.840.1.113883.12.63 (code system)	Relationship Also available from PHIN VADS as: PHVS_Relationship_HL7_2x
HL70065	HL7 Version 2.5.1	2.16.840.1.113883.12.65 (code system)	Specimen Action Code
HL70074	HL7 Version 2.5.1	2.16.840.1.113883.12.74 (code system)	Diagnostic Service Sector ID Also available from PHIN VADS as: PHVS_DiagnosticServiceSectionID_HL7_2x
HL70076	HL7 Version 2.5.1	2.16.840.1.113883.12.76 (code system)	Message type

TABLE 6-1. VALUE SET/CODE SYSTEM SUMMARY

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
HL70078 (2.5.1)	HL7 Version 2.5.1	2.16.840.1.113883.12.78 (code system)	Abnormal Flags Also available from PHIN VADS as: PHVS_AbnormalFlag_HL7_2x Note, HITSP has identified a different value set in HITSP C80: Name: Result Normalcy Status Value Set Source: Health Level Seven (HL7) Version 3.0 Observation Interpretation.
HL70078 (2.7)	HL7 Version 2.7	2.16.840.1.113883.12.78 (code system)	Observation Interpretation.
HL70080	HL7 Version 2.5.1	2.16.840.1.113883.12.80 (code system)	Nature of Abnormal Test
HL70085	HL7 Version 2.5.1	2.16.840.1.113883.12.85 (code system)	Observation Result Status Also available from PHIN VADS as: PHVS_ObservationResultStatus_HL7_2x
HL70087	HL7 Version 2.5.1	2.16.840.1.113883.12.87 (code system)	Pre-Admit Test Indicator
HL70088	HL7 Version 2.5.1	2.16.840.1.113883.12.88 (code system)	Procedure Code
HL70103	HL7 Version 2.5.1	2.16.840.1.113883.12.103 (code system)	Processing ID. Also available from PHIN VADS as: PHVS_ProcessingID_HL7_2x
HL70104	HL7 Version 2.5.1	2.16.840.1.113883.12.104 (code system)	Version ID

TABLE 6-1. VALUE SET/CODE SYSTEM SUMMARY

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
HL70105	HL7 Version 2.5.1	2.16.840.1.113883.12.105 (code system)	Source of Comment Also available from PHIN VADS as: PHVS_SourceOfComment_HL7_2x
HL70111	HL7 Version 2.5.1	2.16.840.1.113883.12.111 (code system)	Delete Account Code
HL70112	HL7 Version 2.5.1	2.16.840.1.113883.12.112 (code system)	Discharge Disposition Also available from PHIN VADS as: PHVS_DischargeDisposition_HL7_2x Note, HITSP has identified a different value set in HITSP C80: Name: Discharge Disposition Value Set Source: National Uniform Billing Committee (NUBC). UB-04/NUBC CURRENT UB DATA SPECIFICATIONS MANUAL-UB-04 FL17 – Patient Status. The HL7 Lab to EHR IG adopted by HITSP uses the HL70112.
HL70114	HL7 Version 2.5.1	2.16.840.1.113883.12.114 (code system)	Diet type
HL70115	HL7 Version 2.5.1	2.16.840.1.113883.12.115 (code system)	Servicing Facility
HL70117	HL7 Version 2.5.1	2.16.840.1.113883.12.117 (code system)	Account status
HL70119	HL7 Version 2.5.1	2.16.840.1.113883.12.119 (code system)	Order Control. Also available from PHIN VADS as: PHVS_OrderControlCodes_HL7_2x
HL70121	HL7 Version 2.5.1	2.16.840.1.113883.12.121 (code system)	Response flag Also available from PHIN VADS as: PHVS_ResponseFlag_HL7_2x

TABLE 6-1. VALUE SET/CODE SYSTEM SUMMARY

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
HL70125	HL7 Version 2.5.1	2.16.840.1.113883.12.125 (code system)	Value Type
HL70136	HL7 Version 2.5.1	2.16.840.1.113883.12.136 (code system)	Yes/No Also available from PHIN VADS as: PHVS_YesNo_HL7_2x
HL70155	HL7 Version 2.5.1	2.16.840.1.113883.12.155 (code system)	Accept/application acknowledgment condition
HL70171	HL7 Version 2.5.1	2.16.840.1.113883.12.171 (code system)	Citizenship
HL70172	HL7 Version 2.5.1	2.16.840.1.113883.12.172 (code system)	Veterans Military Status
HL70177	HL7 Version 2.5.1	2.16.840.1.113883.12.177 (code system)	Confidentiality code Also available from PHIN VADS as: PHVS_ConfidentialityCode_HL7_2x
HL70189	HL7 Version 2.5.1	2.16.840.1.113883.6.238 (code system)	Ethnic Group A constrained version of the value set without the UNK value is available from PHIN VADS as: PHVS_EthnicityGroup_CDC
HL70190	HL7 Version 2.5.1	2.16.840.1.113883.12.190 (code system)	Address type. Also available from PHIN VADS as: PHVS_AddressType_HL7_2x
HL70191	HL7 Version 2.5.1	2.16.840.1.113883.12.191 (code system)	Type of referenced data
HL70200	HL7 Version 2.5.1	2.16.840.1.113883.12.200 (code system)	Name type Also available from PHIN VADS as: PHVS_NameType_HL7_2x

TABLE 6-1. VALUE SET/CODE SYSTEM SUMMARY

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
HL70201	HL7 Version 2.5.1	2.16.840.1.113883.12.201 (code system)	Telecommunication use code Also available from PHIN VADS as: PHVS_TelecommunicationUseCode_HL7_2x
HL70202	HL7 Version 2.5.1	2.16.840.1.113883.12.202 (code system)	Telecommunication equipment type Also available from PHIN VADS as: PHVS_TelecommunicationEquipmentType_HL7_2x
HL70203	HL7 Version 2.5.1	2.16.840.1.113883.12.203 (code system)	Identifier type. Also available from PHIN VADS as: PH_IdentifierType_HL7_2x
HL70204	HL7 Version 2.5.1	2.16.840.1.113883.12.204 (code system)	Organization name type
HL70207	HL7 Version 2.5.1	2.16.840.1.113883.12.207 (code system)	Processing mode. Also available from PHIN VADS as: PHVS_ProcessingMode_HL7_2x
HL70211	HL7 Version 2.5.1	2.16.840.1.113883.12.211 (code system)	Alternate character sets
HL70288	HL7 Version 2.5.1	2.16.840.1.113883.12.288 (code system)	Census tract
HL70291 (2.7)	HL7 Version 2.7	2.16.840.1.113883.12.291 (code system)	Subtype of referenced data. Also available from PHIN VADS as: PHVS_MIME_MediaSubType_IANA See Table 6-4. HL7 Table 0291 - Subtype Of Referenced Data below.
HL70297	HL7 Version 2.5.1	2.16.840.1.113883.12.297 (code system)	CN ID This is an empty HL7 user defined table, so the codes will all be locally defined.

TABLE 6-1. VALUE SET/CODE SYSTEM SUMMARY

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
HL70299	HL7 Version 2.5.1	2.16.840.1.113883.12.299 (code system)	Encoding, Also available from PHIN VADS as: PHVS_Encoding_HL7_2x
HL70301	HL7 Version 2.7	2.16.840.1.113883.12.301 (code system)	Universal ID type See Table 6-5. HL7 Table 0301 - Universal ID Type below for details.
HL70302	HL7 Version 2.5.1	2.16.840.1.113883.12.302 (code system)	Point of care
HL70303	HL7 Version 2.5.1	2.16.840.1.113883.12.303 (code system)	Room
HL70304	HL7 Version 2.5.1	2.16.840.1.113883.12.304 (code system)	Bed
HL70305	HL7 Version 2.5.1	2.16.840.1.113883.12.305 (code system)	Person location type Note that NHSN has adopted the HL7 Version 3 Healthcare Service Location coding system for this field.
HL70306	HL7 Version 2.5.1	2.16.840.1.113883.12.306 (code system)	Location status
HL70307	HL7 Version 2.5.1	2.16.840.1.113883.12.307 (code system)	Building
HL70308	HL7 Version 2.5.1	2.16.840.1.113883.12.308 (code system)	Floor
HL70326	HL7 Version 2.5.1	2.16.840.1.113883.12.326 (code system)	Visit Indicator
HL70340	HL7 Version 2.5.1	2.16.840.1.113883.12.340 (code system)	Procedure Code Modifier
HL70354	HL7 Version 2.5.1	2.16.840.1.113883.12.354 (code system)	Message structure

TABLE 6-1. VALUE SET/CODE SYSTEM SUMMARY

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
HL70356	HL7 Version 2.5.1	2.16.840.1.113883.12.356 (code system)	Alternate character set handling scheme
HL70357	HL7 Version 2.5.1	2.16.840.1.113883.12.357 (code system)	Message Error Condition Codes Also available from PHIN VADS as: PHVS_MessageErrorConditionCodes_HL7_2x
HL70360	HL7 Version 2.5.1	2.16.840.1.113883.12.360 (code system)	Degree/license/certificate Also available from PHIN VADS as: PHVS_DegreeLicenseCertificate_HL7_2x
HL70364	HL7 Version 2.5.1	2.16.840.1.113883.12.364 (code system)	Comment Type Also available from PHIN VADS as: PHVS_CommentType_CDC
HL70376	HL7 Version 2.5.1	2.16.840.1.113883.12.376 (code system)	Special Handling Code

TABLE 6-1. VALUE SET/CODE SYSTEM SUMMARY

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
HL70396	HL7 http://www.hl7.org/special/committees/vocab/table_0396/index.cfm	2.16.840.1.113883.12.396 (code system)	HL7 Table 0396 defines the standard coding systems recognized by HL7. The table defines a mechanism by which locally defined codes can be transmitted. Any code/coding system not defined in HL7 Table 0396 is considered a "local" coding system from the Hl7 perspective. Coding systems that are identified in this implementation guide will be identified according to the recommended HL7 nomenclature from table 0396 as "99ELR-zzz" where "zzz" represents a string identifying the specific non-standard coding system. To maintain backwards compatibility with the 2.3.1 ELR implementation Guide, coding systems defined locally (i.e., not identified in this guide) and not defined in HL7 Table 0396 can continue to identify the coding system as "L". It is strongly suggested that implementers instead adopt the use of "99zzz" approach to identifying local coding systems since HL7 has indicated that use of the "L" for local coding systems is retained only for backwards compatibility, and its use may be withdrawn in a subsequent 2.x version. Note that the local use of "99zzz" should not collide with any of the "locally" defined coding systems identified in this implementation guide. HL7 now maintains HL7 table 0396 "real time". This means that values may be added to the table at any time so that implementers can have an up-to-date source of truth for the codes to be used to identify coding systems in any 2.x message. Users of this IG should acquire the latest version of HL7 table 0396. The latest version of HL7 table 0396 (independent of HL7 version) is available for download from HL7 at: http://www.hl7.org/special/committees/vocab/table_0396/index.cfm.
HL70411	HL7 Version 2.5.1	2.16.840.1.113883.12.411 (code system)	Supplemental Service Information Values

TABLE 6-1. VALUE SET/CODE SYSTEM SUMMARY			
Value Set/Code System Name	**Value Set/Code System Source**	**Value Set/Code System Identifier**	**Description**
HL70429	HL7 Version 2.5.1	2.16.840.1.113883.12.429 (code system)	Production Class Code Also available from PHIN VADS as: PHVS_ProductionClass_HL7_2x
HL70432	HL7 Version 2.5.1	2.16.840.1.113883.12.432 (code system)	Admission Level of Care Code Also available from PHIN VADS as: PHVS_AdmissionLevelOfCareCode_HL7_2x
HL70444	HL7 Version 2.5.1	2.16.840.1.113883.12.444 (code system)	Name assembly order
HL70445	HL7 Version 2.5.1	2.16.840.1.113883.12.445 (code system)	Identity Reliability Code Also available from PHIN VADS as: PHVS_IdentityReliabilityCode_HL7_2x
HL70448	HL7 Version 2.5.1	2.16.840.1.113883.12.448 (code system)	Name context
HL70465	HL7 Version 2.5.1	2.16.840.1.113883.12.465 (code system)	Name/address representation
HL70472	HL7 Version 2.5.1	2.16.840.1.113883.12.472 (code system)	TQ Conjunction ID
HL70476	HL7 Version 2.5.1	2.16.840.1.113883.12.476 (code system)	Medically Necessary Duplicate Procedure Reason
HL70482	HL7 Version 2.5.1	2.16.840.1.113883.12.482 (code system)	Order Type
HL70483	HL7 Version 2.5.1	2.16.840.1.113883.12.483 (code system)	Authorization Mode
HL70485	HL7 Version 2.5.1	2.16.840.1.113883.12.485 (code system)	Priority Also available from PHIN VADS as: PHVS_ExtendedPriorityCodes_HL7_2x

TABLE 6-1. VALUE SET/CODE SYSTEM SUMMARY			
Value Set/Code System Name	**Value Set/Code System Source**	**Value Set/Code System Identifier**	**Description**
HL70544	HL7 Version 2.5.1	2.16.840.1.113883.12.544 (code system)	This is an empty HL7 user defined table, so it is effectively locally defined.
HL70834 (2.7)	HL7 Version 2.7	2.16.840.1.113883.12.834 (code system)	Imported Table 0834 – MIME Types. Note that the HITSP Lab to EHR IG uses HL70191, which can be directly Also available from PHIN VADS as: PHVS_MIME_MediaType_IANA See Table 6-6. HL7 Table 0834 – MIME Type below.
International Classification of Diseases, 10th Revision, Clinical Modification – ICD-10-CM	ICD-10-CM / https://www.cms.gov/Medicare/Coding/ICD10/	ICD-10 Codes Tables and Index / Parkinsonism	The ICD-10 is copyrighted by the World Health Organization (WHO). WHO has authorized the development of an adaptation of ICD-10 for use in the United States for U.S. government purposes. As agreed, all modifications to the ICD-10 must conform to WHO conventions for the ICD. ICD-10-CM was developed following a thorough evaluation by a Technical Advisory Panel and extensive additional consultation with physician groups, clinical coders, and others to assure clinical accuracy and utility.
PH_HealthcareServiceLoc_HL7_V3	CDC PHIN VADS (see section 0 below)	2.16.840.1.113883.6.259 (code system)	Healthcare Service Locations (HL7) - A comprehensive classification of locations and settings where healthcare services are provided. This is based on the National Healthcare Safety Network (NHSN) location code system that has been developed over a number of years through CDC's interaction with a variety of healthcare facilities and is intended to serve a variety of reporting needs where coding of healthcare service locations is required. Keywords: HSLOC, Healthcare Service Delivery Location
PHVS_County_FIPS_6-4	CDC PHIN VADS (see section 0 below)	2.16.840.1.114222.4.11.829	Codes representing county of origin, address county, reporting county

TABLE 6-1. VALUE SET/CODE SYSTEM SUMMARY

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
PHVS_Language_ISO_639-2_Alpha3	CDC PHIN VADS (see section 0 below)	2.16.840.1.114222.4.11.831	Primary spoken language Note that HITSP identifies a language value set as follows: "The value set is defined by Internet RFC 4646 (replacing RFC 3066). Please see ISO 639 language code set maintained by Library of Congress for enumeration of language codes and Frequently Asked Questions." RFC4646 seems to point to ISO 639 as the source of the actual language codes, so this value set is consistent with the HITSP value set.
Postal Code Value Set	HITSP C-80,20090708 V1.1	2.16.840.1.113883.3.88.12.80.2	This identifies the postal (ZIP) Code of an address in the United States http://zip4.usps.com/zip4/welcome.jsp
Reason For Study Value Set	TBD	TBD	Reason for Study. Union of concepts from PHVS_AdministrativeDiagnosis_CDC_ICD-9CM and ICD-10.
SNOMED CT Specimen Collection (17636008) sub-tree.	SNOMED CT	2.16.840.1.113883.6.96 (code system)	SNOMED CT Specimen Collection (17636008) sub-tree.
SNOMED CT Specimen sub-tree (12303009)	SNOMED CT	2.16.840.1.113883.6.96 (code system)	SNOMED CT Specimen sub-tree (12303009) Also available from PHIN VADS as: PHVS_Specimen_CDC
State Value Set	HITSP C-80,20090708 V1.1	2.16.840.1.113883.3.88.12.80.1	Identifies addresses within the United States are recorded using the FIPS 5-2 two-letter alphabetic codes for the State, District of Columbia, or an outlying area of the United States or associated area. http://www.itl.nist.gov/fipspubs/fip5-2.htm Also available from PHIN VADS as: PHVS_State_FIPS_5-2

TABLE 6-1. VALUE SET/CODE SYSTEM SUMMARY

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
Tribal Citizenship Value Set	TBD	TBD	Tribal Citizenship HL7 recommends using Bureau of Indian Affairs (BIA) Tribal Identity List. The following is a link to the current live list: http://www.usa.gov/Government/Tribal_Sites/index.shtml This is a link to the most recent official static list: http://edocket.access.gpo.gov/2008/E8-6968.htm
Unified Code for Units of Measure (UCUM)	Regenstrief Institute, Inc. http://www.regenstrief.org/medinformatics/ucum	2.16.840.1.113883.3.88.12.80.29	Units of measure concepts that includes atomic UCUM units as well as UCUM expression. Commonly used UCUM units of measure concepts can be obtained from UCUM Web Site http://aurora.regenstrief.org/~ucum/ucum.html#datyp2apdxatblxmp A tool for converting non-UCUM units of measure to the equivalent UCUM units is available at: http://www.regenstrief.org/medinformatics/ucum/unit-conversion-tool A pre-coordinated value set of common units is also available from PHIN VADS as: PHVS_UnitsOfMeasure_UCUM

6.1.1.0 HL7 Table 0125 – Value Type (Constrained from the Full HL7 Table)

TABLE 6-2. HL7 TABLE 0125 – VALUE TYPE

Value	Description	Send Facility Usage	CPDR Receiver Usage	Comment
AD	Address	X	X	Not supported.
CE	Coded Entry	R	O	
CF	Coded Element With Formatted Values	X	X	Not supported.
CK	Composite ID With Check Digit	X	X	Withdrawn as of *Version 2.5.*
CN	Composite ID And Name	X	X	Withdrawn as of *Version 2.5*.
CP	Composite Price	X	X	Not supported.
CWE	Coded with Exceptions	O	O	
CX	Extended Composite ID With Check Digit	O	O	
DT	Date	R	R	
ED	Encapsulated Data	R	R	Field using the ED data type to allow communication of images, sound clips, XML documents, html markup, etc.
FT	Formatted Text (Display)	R	R	Field using the FT data type to carry a text result value. This is intended for display. The text may contain formatting escape sequences as described in the data types section. Numeric results and numeric results with units of measure should not be reported as text. These should be reported as NM or SN numeric results, with the units of measure in OBX-6.

TABLE 6-2. HL7 TABLE 0125 – VALUE TYPE

Value	Description	Send Facility Usage	CPDR Receiver Usage	Comment
MO	Money	X	X	Not supported.
NM	Numeric	R	R	Field using the NM data type to carry a numeric result value. The only non-numeric characters allowed in this field are a leading plus (+) or minus (-) sign. The structured numeric (SN) data type should be used for conveying inequalities, ranges, ratios, etc. The units for the numeric value should be reported in OBX-6.
PN	Person Name	X	X	Withdrawn as of *Version 2.5*.
RP	Reference Pointer	R	R	Field using the RP data type to allow communication of pointers to images, sound clips, XML documents, html markup, etc. The RP data type is used when the object being pointed to is too large to transmit directly. This specification defines the mechanism for exchanging pointers to objects, but it does not address the details of applications actually accessing and retrieving the objects over a network. The most common scheme for passing a pointer is to use a Universal Resource Identifier (URI). See http://ietf.org/rfc/rfc2396.txt for detailed definition. The general format of a URI is in the form: <scheme>://<authority><path>?<query>. The scheme and authority portions appear in the Application ID component, Universal ID subcomponent. The path and query portion of the URI appear in the Pointer component of the RP data type.

TABLE 6-2. HL7 TABLE 0125 – VALUE TYPE

Value	Description	Send Facility Usage	CPDR Receiver Usage	Comment
SN	Structured Numeric	R	R	Field using the SN data type to carry a structured numeric result value. Structured numeric include intervals (^0^-^1), ratios (^1^/^2 or ^1^:^2), inequalities (<^10), or categorical results (2^+). The units for the structured numeric value should be reported in OBX-6.
ST	String Data	R	R	Field using the ST data type to carry a short text result value. Numeric results and numeric results with units of measure should not be reported as text. These shall be reported as NM or SN numeric results, with the units of measure in OBX-6.
TM	Time	R	R	
TN	Telephone Number	X	X	Withdrawn as of *Version 2.5*.
TS	Time Stamp (Date & Time)	R	R	
TX	Text Data (Display)	R	R	Field using the TX data type to carry a text result value this is intended for display. Numeric results and numeric results with units of measure should not be reported as text. These should be reported as NM or SN numeric results, with the units of measure in OBX-6.
XAD	Extended Address	X	X	Not supported.
XCN	Extended Composite Name And Number For Persons	X	X	Not supported.
XON	Extended Composite Name And Number For Organizations	X	X	Not supported.

TABLE 6-2. HL7 TABLE 0125 – VALUE TYPE				
Value	**Description**	**Send Facility Usage**	**CPDR Receiver Usage**	**Comment**
XPN	Extended Person Name	X	X	Not supported.
XTN	Extended Telecommunications Number	X	X	Not supported.

6.1.1.1 5.2.1 HL7 Table 0155 – Accept/Application Acknowledgment Conditions (Constrained from the Full HL7 Table)

TABLE 6-3. HL7 TABLE 0155 – ACCEPT/APPLICATION ACKNOWLEDGMENT CONDITIONS				
Value	**Description**	**Sending Facility Usage**	**CPDR Receiver Usage**	**Comment**
AL	Always	R	O	
NE	Never	R	R	
ER	Error/reject conditions only	O	O	
SU	Successful completion only	O	O	

6.1.1.2 HL7 Table 0291 – Subtype Of Referenced Data

TABLE 6-4. HL7 TABLE 0291 - SUBTYPE OF REFERENCED DATA

Value	Description	Comment
	Source RFC 2046	MIME media subtypes established in accordance with RFC 2046 (http://ietf.org/rfc/rfc2046.txt) and registered with the Internet Assigned Numbers Authority (http://www.iana.org/numbers.html). Note that the MIME media subtype values are case-insensitive, in accordance with RFC 2045.
x-hl7-cda-level-one	HL7 Clinical Document Architecture Level One document	Not supported.

6.1.1.3 HL7 Table 0301 - Universal ID Type

TABLE 6-5. HL7 TABLE 0301 - UNIVERSAL ID TYPE

Value	Description	Usage	Comments
DNS	An Internet dotted name. Either in ASCII or as integers	X	Not supported.
GUID	Same as UUID.	X	Not supported.
CEN	The CEN Healthcare Coding Scheme Designator. (Identifiers used in DICOM follow this assignment scheme.)	X	Not supported.
HL7	Reserved for future HL7 registration schemes	X	Not supported.
ISO	An International Standards Organization Object Identifier	R	Used as the Universal ID Type in the CNN, EI and HD data types.
L,M,N	These are reserved for locally defined coding schemes.	X	Not supported.

TABLE 6-5. HL7 TABLE 0301 - UNIVERSAL ID TYPE			
Value	**Description**	**Usage**	**Comments**
Random	Usually a base64 encoded string of random bits. The uniqueness depends on the length of the bits. Mail systems often generate ASCII string _unique names," from a combination of random bits and system names. Obviously, such identifiers will not be constrained to the base64 character set.	X	Not supported.
URI	Uniform Resource Identifier	R	Used as the Universal ID Type in the RP data type
UUID	The DCE Universal Unique Identifier	X	Not supported.
x400	An X.400 MHS format identifier	X	Not supported.
x500	An X.500 directory name	X	Not supported.

6.2 VOCABULARY DISTRIBUTION

Vocabularies recommended in this guide are primarily standard vocabularies recommended by the HITSP for use in the particular domains. In many cases, these vocabularies are further constrained into value sets for use within this guide or were previously constrained into value sets by the CDC and maintained in PHIN VADs for use in the Public Health domain.

PHIN VADS is based upon Whitehouse E-Gov Consolidated Health Informatics (CHI) domain recommendations and its main purpose is to distribute the vocabulary subsets that are needed for public health. PHIN VADS allow implementers to browse, search, and download the value sets associated with an implementation guide. PHIN VADS has the capability to host multiple versions of value sets and implementation guide vocabulary. PHIN VADS provides vocabulary metadata that are needed for HL7 messaging or CDA implementation. The latest version of any value set referenced in this implementation guide can be obtained from the CDC PHIN VADS [http://phinvads.cdc.gov].

7. Example Parkinson's Result Messages

The examples provided in this section are handcrafted and as such are subject to human error. **Examples should not be used as the basis for implementing the messages in the implementation guide.** Examples are provided to illustrate the use of the messages.

7.1 PARKINSON'S DIAGNOSIS RESULT MESSAGE – NARRATIVE REPORT

MSH|^~\&||Neurology Clinic
CA^4456789123^NPI||201506010840||ORU^R01^ORU_R01|1234567890|P|2.5.1|||||||||
CA_CPDR_20_ORU_R01^CPDR_CP^2.16.840.1.113883.9.9^ISO

SFT|1|Level Seven Healthcare Software,
Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1.2|PD
System|56734||20150817|

PID|1||36363636^^^MPI&2.16.840.1.113883.19.3.2.1&ISO^MR^A&2.16.840.1.113883.1
9.3.2.1&ISO~444333333^^^&2.16.840.1.113883.4.1^ISO^SS||Everyman^Adam^A^^
^^L^^^^^^^BS||20150602|M||2106-3^White^CDCREC^^^^04/24/2007|2222 Home
Street^Apt C^San Francisco^CA^99999^USA^H||||||||||N^Not Hispanic or
Latino^HL70189^^^^2.5.1|||||||||

PV1|1|O|||||1234567890^NPI|5678912345^NPI|

PV2|||1^Sick^99AdmitReason|||||||||||||||||||Level Seven Healthcare,
Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|||||||

ORC|RE|||||||||||||||||||Level Seven Healthcare,
Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1005 Healthcare Drive^^San
Francisco^CA^99999^USA^B|^WPN^PH^^1^555^5553001|

OBR|1||PD-15634^Medico-EMR^3.29.2564.425987^ISO|||52797-8^Diagnosis ICD
code^LN|||||||||20170604|1234567893^NPI|^PRN^PH^^1^415^3334003|

OBX|1|CE|86255-7^Primary Diagnosis^LN||G-20^Parkinson's
disease^I10|||||||||20170604|

OBX|2|DT|76425-8^Date of Onset^LN|20170604|

NTE|1|L|Comment goes here. It can be a very long
comment.|RE^Remark^HL70364^^^^2.5.1

7.2 MINIMAL MESSAGE WITH ACKNOWLEDGEMENT

Acknowledgments are an optional part of this implementation guide.

The first example is a minimal message, including only those fields that are required. The subsequent examples include acknowledgements for a successful receipt, an error upon receipt and a rejection acknowledgement in response to the minimal message.

7.2.1 Example: Successful Receipt Message

Acknowledgment:

MSH|^~\&||Neurology Clinic
CA^4456789123^NPI||201506010840||ORU^R01^ORU_R01|1234567890|P|2.5.1|||||||||
CA_CPDR_20_ORU_R01^CPDR_CP^2.16.840.1.113883.9.9^ISO

SFT|1|Level Seven Healthcare Software,
Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1.2|An ELR
System|56739||20150817

MSA|CA|1234567890

7.2.2 Example: Error on Receipt Message

Transaction sent:

MSH|^~\&||Neurology Clinic
CA^4456789123^NPI||201506010840||ORU^R01^ORU_R01|1234567890|P|2.5.1|||||||||
CA_CPDR_20_ORU_R01^CPDR_CP^2.16.840.1.113883.9.9^ISO

SFT|1|Level Seven Healthcare Software,
Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1.2|PD
System|56734||20150817

PID|1||36363636^^^MPI&2.16.840.1.113883.19.3.2.1&ISO^MR^A&2.16.840.1.113883.1
9.3.2.1&ISO~444333333^^^&2.16.840.1.113883.4.1^ISO^SS||Everyman^Adam^A^^
^^L^^^^^^^BS||20150602|M||2106-3^White^CDCREC^^^^04/24/2007|2222 Home
Street^Apt C^San Francisco^CA^99999^USA^H||||||||||N^Not Hispanic or
Latino^HL70189^^^^2.5.1|||||||||

PV1|1|O|||||1234567890^NPI|5678912345^NPI|

PV2|||1^Sick^99AdmitReason|||||||||||||||||||Level Seven Healthcare,
Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|||20150603|||20140705|

ORC|RE|||||||||||||||||||Level Seven Healthcare,
Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1005 Healthcare Drive^^San
Francisco^CA^99999^USA^B|^WPN^PH^^1^555^5553001|4444 Healthcare
Drive^Suite 123^San Francisco^CA^99999^USA^B

OBR|1| (Missing in transaction sent)

OBX|1|CE|86255-7^Primary Diagnosis^LN||G-20^Parkinson's disease^I10|||||||20170604|

OBX|2|DT|76425-8^Date of Onset^LN|20170604|

NTE|1|L|Comment goes here. It can be a very long comment.|RE^Remark^HL70364^^^^2.5.1

Acknowledgment:

MSH|^~\&||Neurology Clinic
CA^4456789123^NPI||201506010840||ORU^R01^ORU_R01|1234567890|P|2.5.1|||||||||
CA_CPDR_20_ORU_R01^CPDR_CP^2.16.840.1.113883.9.9^ISO

SFT|1|Level Seven Healthcare Software, Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1.2|An ELR System|56739||20150817

MSA|CE|1234567890

ERR||OBR^1|100^Segment sequence error^HL70357|E|||Missing required OBR segment|Email help desk for further information on this error||||^NET^Internet^helpdesk@hl7.org

7.2.3 Example: Error on Receipt - Warning

Transaction sent:

MSH|^~\&||Neurology Clinic
CA^4456789123^NPI||201506010840||ORU^R01^ORU_R01|1234567890|P|2.5.1|||||||||
CA_CPDR_20_ORU_R01^CPDR_CP^2.16.840.1.113883.9.9^ISO

SFT|1|Level Seven Healthcare Software, Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1.2|PD System|56734||20150817

PID|1||36363636^^^MPI&2.16.840.1.113883.19.3.2.1&ISO^MR^A&2.16.840.1.113883.19.3.2.1&ISO~444333333^^^&2.16.840.1.113883.4.1^ISO^SS||Everyman^Adam^A^^^^L^^^^^^^BS||20150602|M||2106-3^White^CDCREC^^^^04/24/2007|2222 Home Street^Apt C^San Francisco^CA^99999^USA^H||||||||||N^Not Hispanic or Latino^HL70189^^^^2.5.1|||||||||

PV1|1|O|||||1234567890^NPI|5678912345^NPI|

PV2|||1^Sick^99AdmitReason|||||||||||||||||||Level Seven Healthcare, Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|||20150603|||20140705|

ORC|RE|||||||||||||||||||Level Seven Healthcare, Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1005 Healthcare Drive^^San Francisco^CA^99999^USA^B|^WPN^PH^^1^555^5553001|4444 Healthcare Drive^Suite 123^San Francisco^CA^99999^USA^B

OBR|1||PD-15634^Medico-EMR^3.29.2564.425987^ISO|||52797-8^Diagnosis ICD code^LN|||||||20170604|1234567893^NPI|^PRN^PH^^1^415^3334003|

OBX|1|CE|86255-8^Primary Diagnosis^LN||G-20^Parkinson's disease^I10|||||||20170604|

OBX|2|DT|**88888-8**^Date of Onset^LN|20170604|

NTE|1|L|Comment goes here. It can be a very long comment.|RE^Remark^HL70364^^^^2.5.1

Acknowledgement:

MSH|^~\&||Neurology Clinic
CA^4456789123^NPI||201506010840||ORU^R01^ORU_R01|1234567890|P|2.5.1|||||||||
CA_CPDR_20_ORU_R01^CPDR_CP^2.16.840.1.113883.9.9^ISO

SFT|1|Level Seven Healthcare Software, Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1.2|An ELR System|56739||20150817

MSA|CE|1234567890

ERR||OBR^1^3|207^Application internal error^HL70357|W|||Invalid LOINC Code|Email help desk for further information on this error|||^NET^Internet^helpdesk@hl7.org

7.2.4 Example: Reject Receipt Message

Transaction sent:

MSH|^~\&||Neurology Clinic
CA^4456789123^NPI||201506010840||ORU^R01^ORU_R01|1234567890|E|2.5.1|||||||||
CA_CPDR_20_ORU_R01^CPDR_CP^2.16.840.1.113883.9.9^ISO

(The remainder of the message is the same as that in *Section 7.3.1* above.)

Acknowledgment:

MSH|^~\&||Neurology Clinic
CA^4456789123^NPI||201506010840||ORU^R01^ORU_R01|1234567890|E|2.5.1|||||||||
CA_CPDR_20_ORU_R01^CPDR_CP^2.16.840.1.113883.9.9^ISO

SFT|1|Level Seven Healthcare Software, Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1.2|An ELR System|56739||20150817

MSA|CR|1234567890

ERR||MSH^1^10|202^Unsupported processing id^HL70357|E|||Test message sent in production environment|Email help desk for further information on this error||||^NET^Internet^helpdesk@hl7.org