

# 2.

## Control (continued)

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## 2.A DATA TYPES

The data types in this section are listed in alphabetical order. Refer to [HL7 Table 0440 - Data Types](#) in Section 2.15, "Data Types" for valid values and associated detail.

Beginning HL7 Version 2.5 maximum lengths are being assigned to data types.

The following rules apply to the setting of data type length:

- a) The upper bound maximum length of a data type is the sum of:
  - 1) The combined length of all components (including those not required) that are not mutually exclusive.
  - 2) The combined length of the largest set of mutually exclusive components.
  - 3) The combined length of message delimiters that are required to construct the field, based on Section 2.6-Message construction Rules.
- b) The lower bound maximum length of a data type is the sum of:

- 1) The combined length of all required components that are not mutually exclusive.
- 2) The combined length of the largest set of mutually exclusive required components.
- 3) The combined length of message delimiters that are required to construct the field, based on Section 2.6-Message construction Rules.

The data type examples in this Standard are given using the standard HL7 encoding rules, with the delimiter values from Figure 2-1 of Section 2.5.4, "Message Delimiters." Although only one set of encoding rules is defined as a standard in HL7 Version 2.4, other encoding rules are possible (but since they are non-standard, they may only be used by a site-specific agreement).

In certain data type definitions, square brackets, "[" and "]", are used to specify optional parts of a data type (or of a data type component or subcomponent).

### 2.A.1 AD - address

HL7 Component Table - AD – Address

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	120	ST	O		Street Address		2.A.74
2	120	ST	O		Other Designation		2.A.74
3	50	ST	O		City		2.A.74
4	50	ST	O		State or Province		2.A.74
5	12	ST	O		Zip or Postal Code		2.A.74
6	3	ID	O	0399	Country		2.A.35
7	3	ID	O	0190	Address Type		2.A.35
8	50	ST	O		Other Geographic Designation		2.A.74

Definition: This data type specifies the address of a person, place or organization.

**Maximum Length: 415**

**Note:** Used only in the LA1 data type. Retained for backward compatibility as of v2.6. Replaced elsewhere by the XAD data type as of v 2.3.

Example:

|10 ASH LN^#3^LIMA^OH^48132|

#### 2.A.1.1 Street Address (ST)

Definition: This component specifies the street or mailing address of a person or institution. When referencing an institution, this first component is used to specify the institution name. When used in connection with a person, this component specifies the first line of the address.

#### 2.A.1.2 Other Designation (ST)

Definition: This component specifies the second line of address. In general, it qualifies address.

Examples: Suite 555 or Fourth Floor. When referencing an institution, this component specifies the street address.

#### 2.A.1.3 City (ST)

Definition: This component specifies the city, district or place where the addressee is located depending upon the national convention for formatting addresses for postal usage.

#### 2.A.1.4 State or Province (ST)

Definition: This component specifies the state or province where the addressee is located. State or province should be represented by the official postal service codes for that country.

**2.A.1.5 Zip or Postal Code (ST)**

Definition: This component specifies the zip or postal code where the addressee is located. Zip or postal codes should be represented by the official codes for that country. In the US, the zip code takes the form 99999[-9999], while the Canadian postal code takes the form A9A9A9 and the Australian Postcode takes the form 9999.

**2.A.1.6 Country (ID)**

Definition: This component specifies the country where the addressee is located. HL7 specifies that the 3-character (alphabetic) form of ISO 3166 be used for the country code. Refer to [HL7 Table 0399 – Country Code](#) in section 2.14.9.17 for valid values.

**2.A.1.7 Address Type (ID)**

Definition: This component specifies the kind or type of address. Refer to [HL7 Table 0190 - Address Type](#) for valid values.

**2.A.1.8 Other geographic designation (ST)**

Definition: This component specifies any other geographic designation that may be necessary. It includes county, bioregion, SMSA, etc.

**2.A.2 AUI - authorization information**

HL7 Component Table - AUI – Authorization Information

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	30	ST	O		Authorization Number		2.A.74
2	8	DT	O		Date		2.A.21
3	199	ST	O		Source		2.A.74

Definition: This data type specifies the identifier or code for an insurance authorization instance and its associated detail.

**Maximum Length: 239****Note:** Replaces the CM data type used in sections 6.5.6.14 IN1-14, as of v 2.5.**2.A.2.1 Authorization Number (ST)**

Definition: Identifier assigned to the authorization.

**2.A.2.2 Date (DT)**

Definition: Date of authorization.

**2.A.2.3 Source (ST)**

Definition: Source of authorization.

**2.A.3 CCD - charge code and date**

HL7 Component Table - CCD – Charge Code and Date

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	1	ID	R	0100	Invocation Event		2.A.35
2	24	DTM	O		Date/time		HL7 Component Table - DTM - Date/Time

Definition: Specifies whether a charge action is based on an invocation event or is time-based.

**Maximum Length: 26**

**Note:** Replaces the CM data type used in section 4.5.2.1 BLG-1, as of v 2.5.

### 2.A.3.1 Invocation Event (ID)

Definition: Specifies the code for the event precipitating/triggering the charge activity. Refer to [HL7 Table 0100 - Invocation event](#) for valid values.

HL7 Table 0100 - Invocation event

Value	Description	Comment
D	On discharge	
O	On receipt of order	
R	At time service is completed	
S	At time service is started	
T	At a designated date/time	

### 2.A.3.2 Date/time (DTM)

Definition: The second component is used to express the exact time to charge for the ordered service; it is used only when the *CCD.I* value is T. When used, it is expressed as a DTM data type.

## 2.A.4 CCP - channel calibration parameters

HL7 Component Table – CCP - Channel Calibration Parameters

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	6	NM	O		Channel Calibration Sensitivity Correction Factor		2.A.47
2	6	NM	O		Channel Calibration Baseline		2.A.47
3	6	NM	O		Channel Calibration Time Skew		2.A.47

Definition: This data type identifies the corrections to channel sensitivity, the baseline, and the channel time skew when transmitting waveform results.

**Maximum Length:** 20

**Note:** Replaces the CM data type used in 7.14.1.5 OBX-5.3 where OBX-5 Observation value (\*) is data type CD as of v 2.5.

### 2.A.4.1 Channel Calibration Sensitivity Correction Factor (NM)

Definition: This component defines a correction factor for channel sensitivity, which may be derived from the last calibration procedure performed. The actual channel sensitivity is the nominal channel sensitivity given in the previous component multiplied by the unitless correction factor.

### 2.A.4.2 Channel Calibration Baseline (NM)

Definition: This component defines the actual channel baseline (the data value which corresponds to a nominal input signal of zero). The actual baseline may differ from the ideal because of a dc offset in the amplifier connected to the ADC. The actual baseline values for all channels (which need not be integers) may be determined at the time of calibration as the average digitized values obtained when a zero input signal is connected to each channel.

### 2.A.4.3 Channel Calibration Time Skew (NM)

Definition: This component defines the time difference between the nominal sampling (digitization) time (which would be the same for all channels) and the actual sampling time of the channel, in seconds (or fractions thereof). This value will differ from zero when all channels in the montage are not sampled simultaneously, as occurs in systems, which sample successive channels at regular time intervals. This value may be determined from a calibration procedure in which an identical time-varying signal is applied to all channels and interchannel time differences are estimated, or more commonly it may be taken from the manufacturer's specifications for the digitizing system used. For example, for a system which samples successive channels at regular time intervals  $t$ , the time skew of channel number  $n$  would be  $(n-1)t$ . The actual time of sampling (digitization) of sample number  $m$  of

channel number  $n$  in such a system would be  $R + (m-1)/f + (n-1)t$ , where  $R$  is the reference time at the start of the epoch and  $f$  is the channel sampling frequency ( $t < 1/f$ ).

### 2.A.5 CD - channel definition

HL7 Component Table - CD – Channel Definition

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	22	WVI	O		Channel Identifier		2.A.83
2	17	WVS	O		Waveform Source		2.A.84
3	478	CSU	O		Channel Sensitivity and Units		2.A.12
4	20	CCP	O		Channel Calibration Parameters		2.A.4
5	6	NM	O		Channel Sampling Frequency		2.A.47
6	33	NR	O		Minimum and Maximum Data Values		2.A.48

Definition: This data type is used for labeling of digital waveform data. It defines a recording channel, which is associated with one of the values in each time sample of waveform data. Each channel has a number (which generally defines its position in a multichannel display) and an optional name or label (also used in displays). One or two named waveform sources may also be associated with a channel (providing for the use of differential amplifiers with two inputs). The other components of the channel definition data type are optional. The individual components are defined as follows:

**Maximum Length: 581**

#### 2.A.5.1 Channel Identifier (WVI)

Definition: This component specifies the number and name of the recording channel where waveform data is transmitted.

#### 2.A.5.2 Waveform Source (WVS)

Definition: This component identifies the source of the waveform connected to the channel. Two names may be specified if it is necessary to individually identify the two inputs for a waveform. Only one name need be specified if the channel is connected to a single input. For example, in EKG recordings typically only one name is used (such as I or II); in electroencephalography, two names are typically used, one for each input of the differential amplifier (such as F3 and C3).

#### 2.A.5.3 Channel Sensitivity and Units (CSU)

Definition: This component defines the channel sensitivity (gain) and the units in which it is measured.

#### 2.A.5.4 Channel Calibration Parameters (CCP)

Definition: This component identifies the corrections to channel sensitivity, the baseline, and the channel time skew.

#### 2.A.5.5 Channel Sampling Frequency (NM)

Definition: This component defines the sampling frequency in hertz of the channel, that is, the reciprocal of the time in seconds between successive samples. Note that this is the frequency of transmitted data, which may or may not be the actual frequency at which the data was acquired by an analog-to-digital converter or other digital data source (i.e. the data transmitted may be subsampled, or interpolated, from the originally acquired data.)

#### 2.A.5.6 Minimum and Maximum Data Values (NR)

Definition: This component defines the minimum and maximum data values which can occur in this channel in the digital waveform data, that is, the range of the ADC, and also specifies whether or not non-integral data values may occur in this channel in the waveform data. If the minimum and maximum values are both integers (or not present), only integral data values may be used in this channel. If either the minimum or the maximum value contains a decimal point, then non-integral as well as integral data values may be used in this channel. For an  $n$ -bit signed ADC, the nominal baseline  $B = 0$ , and the minimum ( $L$ ) and maximum ( $H$ ) values may be calculated as follows:

$$L = -2n^{-1}$$

$$H = 2n^{-1} - 1$$

For an unsigned n-bit ADC, the minimum value  $L = 0$ , and the nominal baseline value (B) and maximum value (H) may be calculated from the formulas,

$$B = 2n^{-1}$$

$$H = 2n - 1$$

The actual signal amplitude A (for differentially amplified potential measurements, the potential at electrode number one minus that at electrode number two) may be calculated from the value D (range L to H) in the waveform data using the actual baseline value B and the nominal sensitivity S and actual sensitivity correction factor C by the formula,

$$A = SC(D-B)$$

### 2.A.6 CE - coded element

HL7 Component Table - CE – Coded Element

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1			W		Identifier		2.A.74
2			W		Text		2.A.74
3			W		Name of Coding System		2.A.35
4			W		Alternate Identifier		2.A.74
5			W		Alternate Text		2.A.74
6			W		Name of Alternate Coding System		2.A.35

**Attention:** The CE data type has been replaced by the CWE and CNE data types and the detail was withdrawn and removed from the standard as of v 2.6.

### 2.A.7 CF - coded element with formatted values

HL7 Component Table - CF – Coded Element with Formatted Values

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	ST	O		Identifier		2.A.74
2	65536	FT	O		Formatted Text		2.A.31
3	20	ID	O	0396	Name of Coding System		2.A.35
4	20	ST	O		Alternate Identifier		2.A.74
5	65536	FT	O		Alternate Formatted Text		2.A.31
6	20	ID	O	0396	Name of Alternate Coding System		2.A.35

**Note:** The Vocabulary TC is the steward of the CF data type.

Definition: This data type transmits codes and the formatted text associated with the code. This data type can be used to transmit for the first time the formatted text for the **canned text** portion of a report, for example, a standard radiological description for a normal chest X-ray. The receiving system can store this information and in subsequent messages only the identifier need be sent. Another potential use of this data type is transmitting master file records that contain formatted text. This data type has six components as follows:

**Maximum Length:** 65536

The components, primary and alternate, are defined exactly as in the CE data type with the exception of the second and fifth components, which are of the formatted text data type.

Example:

OBX||CF|71020^CXR^99CPMC||79989^H\Description:\N\|.sp\|ti+4\Heart is not enlarged. There is no evidence of pneumonia, effusion, pneumothorax or any masses. \.sp+3\H\Impression:\N\|.sp\|.ti+4\Negative chest.^99CPMC

### 2.A.7.1 Identifier (ST)

Definition: Sequence of characters (the code) that uniquely identifies the item being referenced by the <text>. Different coding schemes will have different elements here.

### 2.A.7.2 Formatted Text (FT)

Definition: Name or description of the item in question with the addition of embedded formatting instructions.

### 2.A.7.3 Name of Coding System (ID)

Definition: Contains the name of the coding system employed.

Refer to [HL7 Table 0396 – Coding System](#) in section 2.16.4, "Coding System Table" for valid values.

### 2.A.7.4 Alternate Identifier (ST)

Definition: Alternate sequence of characters (the code) that uniquely identifies the item being referenced by the <text>. This identifier is the equivalent of component one.

### 2.A.7.5 Alternate Formatted Text (FT)

Definition: Name or description of the alternate identifier in question with the addition of embedded formatting instructions.

### 2.A.7.6 Name of Alternate Coding System (ID)

Definition: Contains the name of the coding system employed for the alternate identifier.

Refer to [HL7 Table 0396 – Coding System](#) in section 2.16.4, "Coding System Table" for valid values.

## 2.A.8 CNE – coded with no exceptions

HL7 Component Table - CNE – Coded with No Exceptions

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	ST	R		Identifier		2.A.74
2	199	ST	O		Text		2.A.74
3	20	ID	O	0396	Name of Coding System		2.A.35
4	20	ST	O		Alternate Identifier		2.A.74
5	199	ST	O		Alternate Text		2.A.74
6	20	ID	O	0396	Name of Alternate Coding System		2.A.35
7	10	ST	C		Coding System Version ID		2.A.74
8	10	ST	O		Alternate Coding System Version ID		2.A.74
9	199	ST	O		Original Text		2.A.74

**Note:** The Vocabulary TC is the steward of the CNE data type.

Definition: Specifies a coded element and its associated detail. The CNE data type is used when a required or mandatory coded field is needed. The specified HL7 table or imported or externally defined coding system must be used and may not be extended with local values. Text may not replace the code. A CNE field must have an HL7 defined or external table associated with it. A CNE field may be context sensitive such that a choice of explicit coding systems might be designated. This allows for realm and other types of specificity. Every effort will be made to enumerate the valid coding system(s) to be specified in the 3rd component, however, the standards body realizes that this is impossible to fully enumerate.

**Note:** The presence of two sets of equivalent codes in this data type is semantically different from a repetition of a CNE-type field. With repetition, several distinct codes (with distinct meanings) may be transmitted.



<b>Maximum Length: 705</b>
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Example 1: The drug must be coded and must be taken from the specified coding system. The coding system is an external coding system. Example is derived from *FT1-26*.

|0006-0106-58^Prinivil 10mg oral tablet^NDC|

Example 2: Consent mode must be coded and must be taken from the specified coding system. The coding system is an HL7 code table. Example is taken from *CON-10*.

|V^Verbal^HL70497^^^^2.5|

### 2.A.8.1 Identifier (ST)

**Definition:** The first component contains the sequence of characters (the code) that uniquely identifies the item being referenced by the CNE.2. Different coding schemes will have different elements here.

**Usage Note:** The identifier is required and must be a valid code.

### 2.A.8.2 Text (ST)

**Definition:** The second component contains the descriptive or textual name of the identifier, e.g., myocardial infarction or X-ray impression. This is the corresponding text assigned by the coding system to the identifier.

**Usage Note:** Text description of code is optional but its use should be encouraged since it makes messages easier to review for accuracy, especially during interface testing and debugging.

### 2.A.8.3 Name of Coding System (ID)

**Definition:** The third component contains the code for the name of the coding system from which the value in *CNE.1* is obtained. Refer to [HL7 Table 0396 - Coding Systems](#) in section 2.16.4, "Coding System Table" for valid values. Each coding system is assigned a unique identifier.

The combination of the **identifier** and **name of coding system** represent a unique concept for a data item.

Some organizations that publish code sets author more than one. The coding system, then, to be unique, is a concatenation of the name of the coding authority organization and the name of its code set or table. When an HL7 table is used for a CNE data type, the **name of coding system** component is defined as **HL7nnnn** where **nnnn** is the HL7 table number. Similarly, ISO tables will be named **ISONnnn**, where **nnnn** is the ISO table number.

**Usage Note:** Best practice would recommend that this component always be populated. However, if the field narrative explicitly states "*Refer to HL7 Table nnnn for valid values*", and, if the sending and receiving systems are HL7 compliant, the coding system would be known from the standard. This would be similar to a field with an ID data type, except that there is a second triplet in which to express an alternate code.

### 2.A.8.4 Alternate Identifier (ST)

Analogous to "Identifier" in component 1.

**Usage Notes:** The Alternate Identifier is used to represent the local or user seen code as described. If present, it obeys the same rules of use and interpretation as described for component 1. If both are present, the identifiers in component 4 and component 1 should have exactly the same meaning, i.e., they should be exact synonyms.

### 2.A.8.5 Alternate Text (ST)

**Definition:** The descriptive or textual name of the alternate identifier. Analogous to "Text" in component 2.

**Usage Notes:** If present, component 5 obeys the same rules of use and interpretation as described for component 2.

### 2.A.8.6 Name of Alternate Coding System (ID)

**Definition:** Identifies the coding scheme being used in the alternate identifier component. Analogous to "Name of Coding System" in component 3. Refer to [HL7 Table 0396 - Coding Systems](#) in section 2.16.4, "Coding System Table" for valid values.

**Usage Notes:** If present, components 6 obeys the same rules of use and interpretation as described for component 3.

### 2.A.8.7 Coding System Version ID (ST)

Definition: the version ID for the coding system identified by component 3. It belongs conceptually to components 1-3 and appears here only for reasons of backward compatibility.

**Usage Note:** If the coding system is any system other than an "HL7 coding system," version ID must be valued with an actual version ID. If the coding system is "HL7 coding system," version ID may have an actual value or it may be absent. If version ID is absent, it will be interpreted to have the same value as the HL7 version number in the message header. Text description of code is optional but its use should be encouraged since it makes messages easier to review for accuracy, especially during interface testing and debugging.

### 2.A.8.8 Alternate Coding System Version ID (ST)

Definition: the version ID for the coding system identified by component 6. It belongs conceptually to the group of Alternate components (see note 2.A.1) and appears here only for reasons of backward compatibility.

**Usage Notes:** If present, component 8 obeys the same rules of use and interpretation as described for component 7.

### 2.A.8.9 Original Text (ST)

The original text that was available to an automated process or a human before a specific code was assigned.

## 2.A.9 CNN - composite ID number and name simplified

HL7 Component Table - CNN - Composite ID Number and Name Simplified

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	15	ST	O		ID Number		2.A.74
2	50	ST	O		Family Name		2.A.74
3	30	ST	O		Given Name		2.A.74
4	30	ST	O		Second and Further Given Names or Initials Thereof		2.A.74
5	20	ST	O		Suffix (e.g., JR or III)		2.A.74
6	20	ST	O		Prefix (e.g., DR)		2.A.74
7	5	IS	O	0360	Degree (e.g., MD)		2.A.36
8	4	IS	C	0297	Source Table		2.A.36
9	20	IS	C	0363	Assigning Authority - Namespace ID		2.A.36
10	199	ST	C		Assigning Authority - Universal ID		2.A.74
11	6	ID	C	0301	Assigning Authority - Universal ID Type		2.A.35

Definition: Specifies a person using both an identifier and the person's name. Retained for backward compatibility only as of v2.6.

**Note:** Restores the original data type CN as was initially implementable in the CM used in sections 4.5.3.32 and 7.4.1.32 - (OBR-32), 4.5.3.33 and 7.4.1.33 - (OBR-33), 4.5.3.34 and 7.4.1.34 - (OBR-34), 4.5.3.35 and 7.4.1.35 - (OBR-35). Components 7 and 8, however, have been promoted to data type IS to be consistent with current practice without violating backward compatibility.

**Maximum Length: 406**

### 2.A.9.1 ID Number (ST)

Coded ID according to a user-defined table. If the first component is present, either component 8 or 9, or both 10 and 11, must be valued.

### 2.A.9.2 Family Name (ST)

This component contains the person's family name in a string format.

**2.A.9.3 Given Name (ST)**

Used to specify a first name.

**2.A.9.4 Second and Further Given Names or Initials Thereof (ST)****2.A.9.5 Suffix (ST)**

Used to specify a name suffix (e.g., Jr. or III).

**2.A.9.6 Prefix (ST)**

Used to specify a name prefix (e.g., Dr.).

**2.A.9.7 Degree (IS)**

Used to specify an educational degree (e.g., MD). Refer to *User-defined Table 0360 – Degree/license/certificate* for suggested values.

User-defined Table 0360 – Degree/license/certificate

Value	Description	Comment
PN	Advanced Practice Nurse	
AAS	Associate of Applied Science	
AA	Associate of Arts	
ABA	Associate of Business Administration	
AE	Associate of Engineering	
AS	Associate of Science	
BA	Bachelor of Arts	
BBA	Bachelor of Business Administration	
BE	Bachelor of Engineering	
BFA	Bachelor of Fine Arts	
BN	Bachelor of Nursing	
BS	Bachelor of Science	
BSL	Bachelor of Science – Law	
BSN	Bachelor of Science - Nursing	
BT	Bachelor of Theology	
CER	Certificate	
CANP	Certified Adult Nurse Practitioner	
CMA	Certified Medical Assistant	
CNP	Certified Nurse Practitioner	
CNM	Certified Nurse Midwife	
CRN	Certified Registered Nurse	
CNS	Certified Nurse Specialist	
CPNP	Certified Pediatric Nurse Practitioner	
DIP	Diploma	
DBA	Doctor of Business Administration	
DED	Doctor of Education	
PharmD	Doctor of Pharmacy	
PHE	Doctor of Engineering	
PHD	Doctor of Philosophy	
PHS	Doctor of Science	
MD	Doctor of Medicine	
DO	Doctor of Osteopathy	
EMT	Emergency Medical Technician	
EMTP	Emergency Medical Technician - Paramedic	
FPNP	Family Practice Nurse Practitioner	
HS	High School Graduate	
JD	Juris Doctor	
MA	Master of Arts	
MBA	Master of Business Administration	
MCE	Master of Civil Engineering	
MDI	Master of Divinity	
MED	Master of Education	
MEE	Master of Electrical Engineering	
ME	Master of Engineering	

Value	Description	Comment
MFA	Master of Fine Arts	
MME	Master of Mechanical Engineering	
MS	Master of Science	
MSL	Master of Science – Law	
MSN	Master of Science – Nursing	
MT	Master of Theology	
MDA	Medical Assistant	
MT	Medical Technician	
NG	Non-Graduate	
NP	Nurse Practitioner	
PA	Physician Assistant	
RMA	Registered Medical Assistant	
RPH	Registered Pharmacist	
SEC	Secretarial Certificate	
TS	Trade School Graduate	

#### 2.A.9.8 Source Table (IS)

Refer to [User-defined Table 0297 - CN ID source](#) for suggested values. Used to delineate the first component. If component 1 is valued, either component 8, or 9, or both 10 and 11, must be valued.

User-defined Table 0297 – CN ID source

Value	Description	Comment
	No suggested values defined	

#### 2.A.9.9 Assigning Authority - Namespace ID (IS)

See section, [2.A.14.4, "Assigning Authority \(HD\)"](#) for definition. Refer to [User-defined Table 0363 – Assigning authority](#) for suggested values. Assigning Authority is normally expressed as an HD data type, but has been flattened to 3 components here (CNN.9, CNN.10 and CNN.11) in this data type so that it may be fully expressed. Also note that if additional components are added to the HD data type in the future, adjustment will need to be made accordingly to this data type.

If component 1 is valued, either component 8, or 9, or both 10 and 11, must be valued.

#### 2.A.9.10 Assigning Authority - Universal ID (ST)

See section, [2.A.14.4, "Assigning Authority \(HD\)"](#) for definition.

If CNN.11 is valued, this component must be valued. If component 1 is valued, either component 8, or 9, or both 10 and 11, must be valued.

#### 2.A.9.11 Assigning Authority - Universal ID Type (ID)

See section, [2.A.14.4, "Assigning Authority \(HD\)"](#) for definition. If this component is a known UID refer to [HL7 Table 0301 - Universal ID type](#) for valid values

If CNN.10 is valued, this component must be valued. If component 1 is valued, either component 8, or 9, or both 10 and 11, must be valued.

### 2.A.10 CP - composite price

HL7 Component Table - CP – Composite Price

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	MO	R		Price		2.A.41
2	2	ID	O	0205	Price Type		2.A.35
3	16	NM	O		From Value		2.A.47
4	16	NM	O		To Value		2.A.47
5	705	CWE	O		Range Units		2.A.6
6	1	ID	O	0298	Range Type		2.A.35

**Note:** This data type is often used to define a repeating field within a given segment.

### Maximum Length: 765

Example:

```
|100.00&USD^UP^0^9^min^P~50.00&USD^UP^10^59^min^P~10.00&USD^UP^60^999^P~50.00&
  USD^AP~200.00&USD^PF
~80.00&USD^DC|
```

#### 2.A.10.1 Price (MO)

The only required component; usually containing a decimal point. Note that each component of the MO data type (Section 2.A.41, "*MO - money*") is a subcomponent here.

#### 2.A.10.2 Price Type (ID)

A coded value, data type ID. Refer to [HL7 Table 0205 - Price type](#) for valid values.

HL7 Table 0205 - Price type

Value	Description	Comment
AP	administrative price or handling fee	
DC	direct unit cost	
IC	indirect unit cost	
PF	professional fee for performing provider	
TF	technology fee for use of equipment	
TP	total price	
UP	unit price, may be based on length of procedure or service	

#### 2.A.10.3 From Value (NM)

Each is a NM data type; together they specify the "range". The range can be defined as either time or quantity. For example, the range can indicate that the first 10 minutes of the procedure has one price. Another repetition of the data type can use the range to specify that the following 10 to 60 minutes of the procedure is charged at another price per; a final repetition can specify that the final 60 to N minutes of the procedure at a third price.

Note that, if the <price type> component is TP, both <from value> and <to value> may be null.

#### 2.A.10.4 To Value (NM)

See <from value> above.

#### 2.A.10.5 Range Units (CWE)

A coded value, data type CWE, defined by the standard table of units for either time or quantity (see for example, the tables in Section 7.1.4, "Coding schemes"). This describes the units associated with the range, e.g., seconds, minutes, hours, days, quantity (i.e., count); it is required if <from value> and <to value> are present.

#### 2.A.10.6 Range Type (ID)

Refer to [HL7 Table 0298 - CP range type](#) for valid values.

HL7 Table 0298 - CP range type

Value	Description	Comment
P	Pro-rate. Apply this price to this interval, pro-rated by whatever portion of the interval has occurred/been consumed	
F	Flat-rate. Apply the entire price to this interval, do not pro-rate the price if the full interval has not occurred/been consumed	

### 2.A.11 CQ - composite quantity with units

HL7 Component Table - CQ –Composite Quantity with Units

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	16	NM	O		Quantity		2.A.47
2	705	CWE	O		Units		2.A.6

**Maximum Length:** 722

**Note:** CQ cannot be legally expressed when embedded within another data type. Its use is constrained to a segment field.

Examples:

123.7^kg	kilograms is an ISO unit
150^1b&&ANSI+	weight in pounds is a customary US unit defined within ANSI+.

### 2.A.11.1 Quantity (NM)

Definition: This component specifies the numeric quantity or amount of an entity.

### 2.A.11.2 Units (CWE)

Definition: This component species the units in which the quantity is expressed. Field-by-field, default units may be defined within the specifications. When the quantity is measured in the default units, the units need not be transmitted. If the quantity is recorded in units different from the default, the units must be transmitted.

## 2.A.12 CSU - channel sensitivity and units

HL7 Component Table – CSU - Channel Sensitivity and Units

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	60	NM	R		Channel Sensitivity		2.A.47
2	20	ST	C		Unit of Measure Identifier		2.A.74
3	199	ST	C		Unit of Measure Description		2.A.74
4	20	ID	C	0396	Unit of Measure Coding System		2.A.35
5	20	ST	O		Alternate Unit of Measure Identifier		2.A.74
6	199	ST	O		Alternate Unit of Measure Description		2.A.74
7	20	ID	O	0396	Alternate Unit of Measure Coding System		2.A.35

Definition: This data type defines the channel sensitivity (gain) and the units in which it is measured in a waveform result.

**Maximum Length:** 490

**Note:** Replaces the CM data type used in 7.14.1.5 OBX-5.3 where OBX-5 Observation value (\*) is data type CD as of v 2.5.

### 2.A.12.1 Channel Sensitivity (NM)

Definition: This component transmits the nominal value that corresponds to one unit in the waveform data, that is, the effective resolution of the least significant bit of the ADC, and the polarity of the channel.

### 2.A.12.2 Unit of Measure Identifier (ST)

Definition: The unit designation for the channel sensitivity. This field is required if the unit of measure description is not present.

### 2.A.12.3 Unit of Measure Description (ST)

Definition: The full text name of the unit of measure identifier. This field is required if the unit of measure identifier is not present.

### 2.A.12.4 Unit of Measure Coding System (IS)

Definition: Specifies the designated system of units. Refer to [HL7 Table 0396 – Coding System](#) in section 2.16.4, "Coding System Table" for suggested values. This field is required if the unit of measure identifier is present.

**2.A.12.5 Alternate Unit of Measure Identifier (ST)**

Definition: An alternate units designation for the channel sensitivity.

**2.A.12.6 Alternate Unit of Measure Description (ST)**

Definition: The full text name of the alternate unit of measure identifier

**2.A.12.7 Alternate Unit of Measure Coding System (IS)**

Definition: Specifies the coding system for the alternate unit of measure. Refer to [HL7 Table 0396 – Coding System](#) in section 2.16.4, "Coding System Table" for suggested values.

**2.A.13 CWE – coded with exceptions**

HL7 Component Table - CWE – Coded with Exceptions

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	ST	O		Identifier		2.A.74
2	199	ST	O		Text		2.A.74
3	20	ID	O	0396	Name of Coding System		2.A.35
4	20	ST	O		Alternate Identifier		2.A.74
5	199	ST	O		Alternate Text		2.A.74
6	20	ID	O	0396	Name of Alternate Coding System		2.A.35
7	10	ST	C		Coding System Version ID		2.A.74
8	10	ST	O		Alternate Coding System Version ID		2.A.74
9	199	ST	O		Original Text		2.A.74

**Note:** The Vocabulary TC is the steward of the CWE data type.

Definition: Specifies a coded element and its associated detail. The CWE data type is used when 1) more than one table may be applicable **or** 2) the specified HL7 or externally defined table may be extended with local values **or** 3) when text is in place, the code may be omitted.

**Maximum Length: 705**

The presence of two sets of equivalent codes in this data type is semantically different from a repetition of a CWE-type field. With repetition, several distinct codes (with distinct meanings) may be transmitted.

**Usage Notes:** The CWE data type should be used for coded fields with one or more of the following characteristics:

- The identifier code (CWE.1) component is optional
- The set of allowable values from which the identifier code is drawn may be extended on a site-specific basis
- An exception identifier code may be encountered; that is, a code that is not defined in the value set (either model or site-extended).

This is in contrast to the CNE data type, which requires a code from a non-extendable value set be sent in the identifier code component (CNE.1) in all cases (except, of course, if the entire field is empty and defined as optional at the segment level).

The rules for populating CWE components are governed by the status of the identifier code:

Identifier Code Status	Identifier Code (CWE.1)	Descriptive Text (CWE.2)	Coding System (CWE.3)
Contained in model value set	Populated	May be populated	Must be populated with model coding system, or (not recommended) site-specific coding system that is a superset

			containing model values.
Contained in site-specific extensions to model value set	Populated	May be populated	Site-specific coding system.
Contained in neither model nor extended value sets	Not populated	May be populated with the identifier code, free-text description, or a concatenation of the two. Should be human interpretable.	Must not be populated.
Not supplied; but descriptive text is supplied.	Not populated	May be populated with descriptive text.	Must not be populated.

As an example, consider “currency” codes where:

- The model values are defined by the ISO 4217 value set,
- The value set is extended on site to include the code HL7 – “HL7 Drink Ticket”, and
- The data entry screen on the sending system does not enforce any edits for the currency code.

And so the value set used on site is:

Identifier Code Status	Identifier Code	Descriptive Text
Model values from ISO 4217 external table	AED	United Arab Emirates, Dirhams
	AFA	Afghanistan, Afghanis
	ALL	Albania, Leke
	...	
	ZAR	South Africa, Rand
	ZMK	Zambia, Kwacha
	ZWD	Zimbabwe, Zimbabwe Dollars
Site-specific extension	HL7	HL7 Events, Drink Ticket

Collectively, this value set must be referred to with a local coding system ID, because “HL7” does not exist in ISO 4217. According to the rules, the site assigns the coding system ID “99CUR” to the value set.



Based on the code and descriptive text entered by the user on the sending system, the CWE would be populated as follows:

Entered by user		Sent in CWE		
Code	Descriptive Text	Identifier Code (CWE.1)	Descriptive Text (CWE.2)	Coding System (CWE.3)
GBP	Great Britain, Pound	GBP	Great Britain, Pound	ISO4217
		GBP	Great Britain, Pound	99CUR (This option is NOT recommended)
HL7	HL7 Drink Ticket	HL7	HL7 Drink Ticket	99CUR
XXX	<Bogus entry>	Must not be populated	XXX	Must not be populated.
		Must not be populated	Bogus entry	Must not be populated.
		Must not be populated	XXX: Bogus entry	Must not be populated.
		Must not be populated	anything – or nothing.	Must not be populated.
	Dollar	Must not be populated	Dollar	Must not be populated.
		Valued from HL7 Table 0353 (e.g., “U” for unknown)	Dollar	HL70353

### Notes:

- Where multiple valid options for sending the entered data exist, each alternative is depicted as a separate row.
- CWE.2 - Descriptive Text* is never required, and there are no hard and fast rules on what text may be sent in this component. Of course, common sense suggests that if valued, the text should complement the identifier code of CWE.1.

It follows that where CWE.1 cannot be valued because the entered code does not exist in the value set, the entered code *may* be sent in CWE.2; with or without additional descriptive text. However, this is not required by HL7.

- The example with GBP shows two options for the code set: ISO4217 or 99CUR. While it is now technically possible to send 99CUR on the basis that this code may exist on its own in the extended local code set, HL7 urges that where a code is a member of the standard code set, that code set should be named in CWE.3. HL7 intends to mandate this in a future release.
- While there are no formal rules regarding the valuation of CWE-2: Descriptive Text, it is expected that any value contained therein be meaningful to a human reader.

### 2.A.13.1 Identifier (ST)

Definition: The first component contains the sequence of characters (the code) that uniquely identifies the item being referenced by the CWE.2. Different coding schemes will have different elements here.

In the context of “Data Missing”, described above in the [Usage Note](#), refer to [HL7 Table 0353 – CWE statuses](#) for valid values.

HL7 Table 0353 - CWE statuses

Code	Description	Comment
U	Unknown	

Code	Description	Comment
UASK	Asked but Unknown	
NAV	Not available	
NA	Not applicable	
NASK	Not asked	

### 2.A.13.2 Text (ST)

Definition: The second component contains the descriptive or textual name of the identifier, e.g., myocardial infarction or X-ray impression.

### 2.A.13.3 Name of Coding System (ID)

Definition: The third component contains the code for the name of the coding system from which the value in *CWE.1* is obtained. Each coding system is assigned a unique identifier.

Refer to [HL7 Table 0396 – Coding System](#) in section 2.16.4, "Coding System Table" for valid values.

Refer to section [2.A.8.3, "Name of Coding System \(ID\)"](#) for a discussion of coding system conventions.

**Usage Note:** Best practice would recommend that this component always be populated. However, if the field narrative explicitly states "Refer to HL7 Table nnnn for valid values", and, if the sending and receiving systems are HL7 compliant the coding system would be known from the standard. This would be similar to a field with an ID data type, except that there is a second triplet in which to express an alternate code.

### 2.A.13.4 Alternate Identifier (ST)

Definition: An alternate sequence of characters (the code) that uniquely identifies the item being referenced. Analogous to "Identifier" in component 1. See usage note in section introduction.

### 2.A.13.5 Alternate Text (ST)

Definition: The descriptive or textual name of the alternate identifier. Analogous to "Text" in component 2. See usage note in section introduction.

### 2.A.13.6 Name of Alternate Coding System (ID)

Definition: Identifies the coding scheme being used in the alternate identifier component. Analogous to "Name of Coding System" above. See usage note in section introduction.

### 2.A.13.7 Coding System Version ID (ST)

Definition: This component carries the version for the coding system identified by components 1-3. If *CWE.3* is populated with a value other than HL7nnnn or is of table type user-defined, version ID must be valued with an actual version ID. If *CWE.3* is populated with a value of HL7nnnn and nnnn is of table type HL7, version ID may have an actual value or it may be absent. If version ID is absent, it will be interpreted to have the same value as the HL7 version number in the message header.

### 2.A.13.8 Alternate Coding System Version ID (ST)

Definition: This component carries the version for the coding system identified by components 4-6.

### 2.A.13.9 Original Text (ST)

The original text that was available to an automated process or a human before a specific code was assigned.

## 2.A.14 CX - extended composite ID with check digit

HL7 Component Table - CX – Extended Composite ID with Check Digit

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	15	ST	R		ID Number		2.A.74
2	4	ST	O		Identifier Check Digit		2.A.74
3	3	ID	O	0061	Check Digit Scheme		2.A.35
4	227	HD	O	0363	Assigning Authority		2.A.33
5	5	ID	O	0203	Identifier Type Code		2.A.35

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
6	227	HD	O		Assigning Facility		2.A.33
7	8	DT	O		Effective Date		2.A.21
8	8	DT	O		Expiration Date		2.A.21
9	705	CWE	O		Assigning Jurisdiction		2.A.13
10	705	CWE	O		Assigning Agency or Department		2.A.13

Definition: This data type is used for specifying an identifier with its associated administrative detail.

**Maximum Length:** 1916

**Note:** The check digit and check digit scheme are null if ID is alphanumeric.

Example:

|1234567^4^M11^ADT01^MR^University Hospital|

### 2.A.14.1 ID (ST)

Definition: The value of the identifier itself.

### 2.A.14.2 Identifier Check Digit (ST)

Definition: A digit, or digits, exclusive of the identifier in CX.1, usually calculated by applying an algorithm to all or some of the digits in the number, which may be used to test validity of the non-check-digit identifier.

This component may also be used to transmit information intended to validate the veracity of the supplied identifier or the presenter of the identifier. For example, this component may be used to ensure that the presenter of a credit card is an authorized user of that card.

### 2.A.14.3 Check Digit Scheme (ID)

Definition: Contains the code identifying the check digit scheme employed.

Refer to [HL7 Table 0061 - Check digit scheme](#) for valid values.

HL7 Table 0061 - Check digit scheme

Value	Description	Comment
BCV	Bank Card Validation Number	A non-embossed number included on bank cards and used to validate authenticity of the card and the person presenting the card
NPI	Check digit algorithm in the US National Provider Identifier	
ISO	ISO 7064: 1983	
M10	Mod 10 algorithm	
M11	Mod 11 algorithm	

The algorithm for calculating a Mod10 check digit is as follows:

Assume you have an identifier - 12345. Take the odd digit positions, counting from the right, i.e., 531, multiply this number by 2 to get 1062. Take the even digit positions, starting from the right (i.e., 42), prepend these to the 1062 to get 421062. Add all of these six digits together to get 15. Subtract this number from the next highest multiple of 10, i.e., 20 - 15 to get 5. The Mod10 check digit is 5. The Mod10 check digit for 401 is 0; for 9999, it's 4; for 99999999, it's 8.

The algorithm for calculating a Mod11 check digit is as follows:

#### Terms

- d = digit of number starting from units digit, followed by 10's position, followed by 100's position, etc.
- w = weight of digit position starting with the units position, followed by 10's position, followed by 100's position etc. Values for w = 2, 3, 4, 5, 6, 7, 2, 3, 4, 5, 6, 7, etc. (repeats for each group of 6 digits)
- c = check digit

#### Calculation

- (Step 1)  $m$  = sum of  $(d * w)$  for positions 1, 2, etc. starting with units digit  
for  $d$  = digit value starting with units position to highest order  
for  $w$  = weight value from 2 to 7 for every six positions starting  
with units digit
- (Step 2)  $c1$  =  $m \bmod 11$
- (Step 3) if  $c1 = 0$  then reset  $c1 = 1$
- $c1$
- (Step 4) =  $(11 - c1) \bmod 10$

**Example:**

If the number is 1234567, then the mod 11 check digit = 4

The calculations are:

$$\begin{aligned}
 M &= (7*2)+(6*3)+(5*4)+(4*5)+(3*6)+(2*7)+(1*2) \\
 &= 14 + 18 + 20 + 20 + 18 + 14 + 2 \\
 &= 106 \\
 c1 &= 106 \bmod 11 \\
 &= 7 \\
 c &= (11-c1) \bmod 10 \\
 &= 4 \bmod 10 \\
 &= 4
 \end{aligned}$$

Other variants of these check digit algorithms exist and may be used by local bilateral site agreement.

**Note:** The check digit and code identifying check digit scheme are null if ID is alphanumeric.

## 2.A.14.4 Assigning Authority (HD)

The assigning authority is a unique name of the system (or organization or agency or department) that creates the data. . Refer to [User-defined Table 0363 – Assigning authority](#) for suggested values.

User-defined Table 0363 – Assigning authority

Value	Description	Comment
	No suggested values	

The reader is referred to the CX.9 and the CX.10 if there is a need to transmit values with semantic meaning for an assigning jurisdiction or assigning department or agency in addition to, or instead of, an assigning authority. However, all 3 components may be valued. If, in so doing, it is discovered that the values in CX.9 and/or CX.10 conflict with CX.4, the user would look to the Message Profile or other implementation agreement for a statement as to which takes precedence.

**Note:** When the HD data type is used in a given segment as a component of a field of another data type, [User-defined Table 0300 - Namespace ID](#) (referenced by the first sub-component of the HD component) may be re-defined (given a different user-defined table number and name) by the technical committee responsible for that segment.

By site agreement, implementers may continue to use [User-defined Table 0300 – Namespace ID](#) for the first sub-component.

## 2.A.14.5 Identifier Type Code (ID)

A code corresponding to the type of identifier. In some cases, this code may be used as a qualifier to the “Assigning authority” component. Refer to [HL7 Table 0203 - Identifier type](#) for suggested values.

HL7 Table 0203 - Identifier type

Value	Description	Comment
AM	American Express	Deprecated and replaced by BC in v 2.5.
AMA	American Medical Association Number	A physician identifier assigned by the AMA.
AN	Account number	An identifier that is unique to an account.

Value	Description	Comment
ANON	Anonymous identifier	An identifier for a living subject whose real identity is protected or suppressed Justification: For public health reporting purposes, anonymous identifiers are occasionally used for protecting patient identity in reporting certain results. For instance, a state health department may choose to use a scheme for generating an anonymous identifier for reporting a patient that has had a positive human immunodeficiency virus antibody test. Anonymous identifiers can be used in PID 3 by replacing the medical record number or other non-anonymous identifier. The assigning authority for an anonymous identifier would be the state/local health department.
ANC	Account number Creditor	Class: Financial A more precise definition of an account number: sometimes two distinct account numbers must be transmitted in the same message, one as the creditor, the other as the debtor. Kreditorenkontonummer
AND	Account number debtor	Class: Financial A more precise definition of an account number: sometimes two distinct account numbers must be transmitted in the same message, one as the creditor, the other as the debtor. Debitorenkontonummer
ANT	Temporary Account Number	Class: Financial Temporary version of an Account Number. Use Case: An ancillary system that does not normally assign account numbers is the first time to register a patient. This ancillary system will generate a temporary account number that will only be used until an official account number is assigned.
APRN	Advanced Practice Registered Nurse number	An identifier that is unique to an advanced practice registered nurse within the jurisdiction of a certifying board
BA	Bank Account Number	Class: Financial
BC	Bank Card Number	Class: Financial An identifier that is unique to a person's bank card. Replaces AM, DI, DS, MS, and VS beginning in v 2.5.
BCT	Birth Certificate	A number associated with a document identifying the event of a person's birth.
BR	Birth registry number	An identifier unique within the Assigning Authority that is the official legal record of a person's birth.
BRN	Breed Registry Number	
CC	Cost Center number	Class: Financial Use Case: needed especially for transmitting information about invoices.
CONM	Change of Name Document	A number associated with a document identifying a person's legal change of name.
CZ	Citizenship Card	A number assigned by a person's country of residence to identify a person's citizenship.
CY	County number	
DDS	Dentist license number	An identifier that is unique to a dentist within the jurisdiction of the licensing board
DEA	Drug Enforcement Administration registration number	An identifier for an individual or organization relative to controlled substance regulation and transactions. Use case: This is a registration number that identifies an individual or organization relative to controlled substance regulation and transactions. A DEA number has a very precise and widely accepted meaning within the United States. Surprisingly, the US Drug Enforcement Administration does not solely assign DEA numbers in the United States. Hospitals have the authority to issue DEA numbers to their medical residents. These DEA numbers are based upon the hospital's DEA number, but the authority rests with the hospital on the assignment to the residents. Thus, DEA as an Identifier Type is necessary in addition to DEA as an Assigning Authority.
DI	Diner's Club card	Deprecated and replaced by BC in v 2.5.
DFN	Drug Furnishing or prescriptive authority Number	An identifier issued to a health care provider authorizing the person to write drug orders Use Case: A nurse practitioner has authorization to furnish or prescribe pharmaceutical substances; this identifier is in component 1.
DL	Driver's license number	
DN	Doctor number	

Value	Description	Comment
DO	Osteopathic License number	An identifier that is unique to an osteopath within the jurisdiction of a licensing board.
DP	Diplomatic Passport	A number assigned to a diplomatic passport.
DPM	Podiatrist license number	An identifier that is unique to a podiatrist within the jurisdiction of the licensing board.
DR	Donor Registration Number	
DS	Discover Card	Deprecated and replaced by BC in v 2.5.
EI	Employee number	A number that uniquely identifies an employee to an employer.
EN	Employer number	
ESN	Staff Enterprise Number	An identifier that is unique to a staff member within an enterprise (as identified by the Assigning Authority).
FI	Facility ID	
GI	Guarantor internal identifier	Class: Financial
GL	General ledger number	Class: Financial
GN	Guarantor external identifier	Class: Financial
HC	Health Card Number	
JHN	Jurisdictional health number (Canada)	Class: Insurance 2 uses: a) UK jurisdictional CHI number; b) Canadian provincial health card number.
IND	Indigenous/Aboriginal	A number assigned to a member of an indigenous or aboriginal group outside of Canada.
LI	Labor and industries number	
LN	License number	
LR	Local Registry ID	
MA	Patient Medicaid number	Class: Insurance
MB	Member Number	An identifier for the insured of an insurance policy (this insured always has a subscriber), usually assigned by the insurance carrier. Use Case: Person is covered by an insurance policy. This person may or may not be the subscriber of the policy.
MC	Patient's Medicare number	Class: Insurance
MCD	Practitioner Medicaid number	Class: Insurance
MCN	Microchip Number	
MCR	Practitioner Medicare number	Class: Insurance
MCT	Marriage Certificate	A number associated with a document identifying the event of a person's marriage.
MD	Medical License number	An identifier that is unique to a medical doctor within the jurisdiction of a licensing board. Use Case: These license numbers are sometimes used as identifiers. In some states, the same authority issues all three identifiers, e.g., medical, osteopathic, and physician assistant licenses all issued by one state medical board. For this case, the CX data type requires distinct identifier types to accurately interpret component 1. Additionally, the distinction among these license types is critical in most health care settings (this is not to convey full licensing information, which requires a segment to support all related attributes).
MI	Military ID number	A number assigned to an individual who has had military duty, but is not currently on active duty. The number is assigned by the DOD or Veterans' Affairs (VA).
MR	Medical record number	An identifier that is unique to a patient within a set of medical records, not necessarily unique within an application.
MRT	Temporary Medical Record Number	Temporary version of a Medical Record Number Use Case: An ancillary system that does not normally assign medical record numbers is the first time to register a patient. This ancillary system will generate a temporary medical record number that will only be used until an official medical record number is assigned.
MS	MasterCard	Deprecated and replaced by BC in v 2.5.
NCT	Naturalization Certificate	A number associated with a document identifying a person's retention of citizenship in a particular country.
NE	National employer identifier	In the US, the Assigning Authority for this value is typically CMS, but it may be used by all providers and insurance companies in HIPAA related transactions.
NH	National Health Plan Identifier	Class: Insurance Used for the UK NHS national identifier. In the US, the Assigning Authority for this value is typically CMS, but it may be used by all providers and insurance companies in HIPAA related transactions.

Value	Description	Comment
NI	National unique individual identifier	Class: Insurance In the US, the Assigning Authority for this value is typically CMS, but it may be used by all providers and insurance companies in HIPAA related transactions.
NII	National Insurance Organization Identifier	Class: Insurance In Germany a national identifier for an insurance company. It is printed on the insurance card (health card). It is not to be confused with the health card number itself. Krankenkassen-ID der KV-Karte
NIIP	National Insurance Payor Identifier (Payor)	Class: Insurance In Germany the insurance identifier addressed as the payor. Krankenkassen-ID des Rechnungsempfängers Use case: a subdivision issues the card with their identifier, but the main division is going to pay the invoices.
NNxxx	National Person Identifier where the xxx is the ISO table 3166 3-character (alphabetic) country code	
NP	Nurse practitioner number	An identifier that is unique to a nurse practitioner within the jurisdiction of a certifying board.
NPI	National provider identifier	Class: Insurance In the US, the Assigning Authority for this value is typically CMS, but it may be used by all providers and insurance companies in HIPAA related transactions.
OD	Optometrist license number	A number that is unique to an individual optometrist within the jurisdiction of the licensing board.
PA	Physician Assistant number	An identifier that is unique to a physician assistant within the jurisdiction of a licensing board
PC	Parole Card	A number identifying a person on parole.
PCN	Penitentiary/correctional institution Number	A number assigned to individual who is incarcerated.
PE	Living Subject Enterprise Number	An identifier that is unique to a living subject within an enterprise (as identified by the Assigning Authority).
PEN	Pension Number	
PI	Patient internal identifier	A number that is unique to a patient within an Assigning Authority.
PN	Person number	A number that is unique to a living subject within an Assigning Authority.
PNT	Temporary Living Subject Number	Temporary version of a Living Subject Number.
PPIN	Medicare/CMS Performing Provider Identification Number	Class: Insurance An Identifier for a provider at a location in the CMS/Medicare program. This identifier type is only unique within the context of a location. The location is not integral to the identifier, it must be derived from the message context/content (e.g., this identifier associated to a location by association in a message or a message segment.)
PPN	Passport number	A unique number assigned to the document affirming that a person is a citizen of the country. In the US this number is issued only by the State Department.
PRC	Permanent Resident Card Number	
PRN	Provider number	A number that is unique to an individual provider, a provider group or an organization within an Assigning Authority. Use case: This allows PRN to represent either an individual (a nurse) or a group/organization (orthopedic surgery team).
PT	Patient external identifier	
QA	QA number	
RI	Resource identifier	A generalized resource identifier. Use Case: An identifier type is needed to accommodate what are commonly known as resources. The resources can include human (e.g. a respiratory therapist), non-human (e.g., a companion animal), inanimate object (e.g., an exam room), organization (e.g., diabetic education class) or any other physical or logical entity.
RPH	Pharmacist license number	An identifier that is unique to a pharmacist within the jurisdiction of the licensing board.
RN	Registered Nurse Number	An identifier that is unique to a registered nurse within the jurisdiction of the licensing board.
RR	Railroad Retirement number	An identifier for an individual enrolled with the Railroad Retirement Administration. Analogous to, but distinct from, a Social Security Number

Value	Description	Comment
RRI	Regional registry ID	
RRP	Railroad Retirement Provider	Class: Insurance An identifier for a provider register within the CMS/Railroad Retirement Administration/Medicare program (a subprogram of the CMS/Medicare)
SL	State license	
SN	Subscriber Number	Class: Insurance An identifier for a subscriber of an insurance policy which is unique for, and usually assigned by, the insurance carrier. Use Case: A person is the subscriber of an insurance policy. The person's family may be plan members, but are not the subscriber.
SP	Study Permit	A number associated with a permit identifying a person who is a resident of a jurisdiction for the purpose of education.
SR	State registry ID	
SS	Social Security number	
TAX	Tax ID number	
TN	Treaty Number/ (Canada)	A number assigned to a member of an indigenous group in Canada. Use Case: First Nation.
TPR	Temporary Permanent Resident (Canada)	A number associated with a document identifying a person's temporary permanent resident status.
U	Unspecified identifier	
UPIN	Medicare/CMS (formerly HCFA)'s Universal Physician Identification numbers	Class: Insurance An identifier for a provider within the CMS/Medicare program. A globally unique identifier for the provider in the Medicare program.
VN	Visit number	
VP	Visitor Permit	A number associated with a document identifying a person as a visitor of a jurisdiction or country.
VS	VISA	Deprecated and replaced by BC in v 2.5.
WC	WIC identifier	
WCN	Workers' Comp Number	
WP	Work Permit	A number associated with a permit for a person who is granted permission to work in a country for a specified time period.
XX	Organization identifier	

### 2.A.14.6 Assigning Facility (HD)

Definition: The place or location identifier where the identifier was first assigned to the patient. This component is not an inherent part of the identifier but rather part of the history of the identifier: as part of this data type, its existence is a convenience for certain intercommunicating systems.

**Note:** When the HD data type is used in a given segment as a component of a field of another data type, *User-defined Table 0300 - Namespace ID* (referenced by the first sub-component of the HD component), may be re-defined (given a different user-defined table number and name) by the technical committee responsible for that segment.

### 2.A.14.7 Effective Date (DT)

Definition: The first date, if known, on which the identifier is valid and active.

### 2.A.14.8 Expiration Date (DT)

Definition: The last date, if known, on which the identifier is valid and active.

### 2.A.14.9 Assigning Jurisdiction (CWE)

Definition: The geo-political body that assigned the identifier in component 1.

- Refer to *HL7 Table 0399 – Country Code* in section 2.15.9.17 for valid values if the administrative unit under whose jurisdiction the identifier was issued is a country.
- Refer to *User-Defined Table 0347 – State/Province* for suggested values if the administrative unit under whose jurisdiction the identifier was issued is a state or province. This table is country specific. In the US, postal codes may be used.

User-defined Table 0347 – State/province

Value	Description	Comment
AB	Alberta (US and Canada)	
MI	Michigan (US)	



- Refer to *User-defined Table –0289 County/Parish* for suggested values if the administrative unit under whose jurisdiction the identifier was issued is a county or parish.

The reader is referred to the CX.4 if there is a need to transmit this information as an OID.

### 2.A.14.10 Assigning Agency or Department (CWE)

Definition: The agency or department that assigned the identifier in component 1.

Refer to *User-defined Table 0530 – Organizations, agency, department* for suggested values if the administrative unit under whose jurisdiction the identifier was issued is an organization, agency or department. This is populated with site-specific assigning authorities. It also should contain national or international codes when CX-5 Identifier Type may be assigned by more than one authority within a governmental or organizational unit. For example, a federal government may have 2 departments that assign a military identifier, its Veterans Affairs department and its Department of Defense. It is **not** recommended to include values for entities such as Social Security Administration (SSA), Immigration and Naturalization Service (INS), Center for Medicare and Medicaid Services (CMS) because they are included in the identifier type table. In these cases the name of the country plus the identifier type yields the correct interpretation of the identifier in component 1. Likewise, entries like department of motor vehicles (DMV) and licensing boards are **not** recommended for inclusion because the combination of state and identifier type yields the correct interpretation of the identifier in component 1. This approach is not to be confused with the detailed information provided in the chapter 15 segments that have provision for specifying the precise granting body and issuing body information needed in personnel management messages.

User-defined Table 0530 – Organization, agency, department

Value	Description	Comment
AE	American Express	
DEA	Drug Enforcement Agency	The US Drug Enforcement Administration does not solely assign DEA numbers in the United States. Hospitals have the authority to issue DEA numbers to their medical residents. These DEA numbers are based upon the hospital's DEA number, but the authority rests with the hospital on the assignment to the residents. Thus, DEA as an Assigning Authority is necessary in addition to DEA as an Identifier Type.
DOD	Department of Defense	In some countries e.g., the US, more than one department may issue a military identifier. Hence, US is not sufficient as the Assigning Authority.
MC	Master Card	
VA	Veterans Affairs	
VI	Visa	

Example 1: <Identifier> plus <Visa> yields a unique identifier.

Example 2: <identifier> plus <state> plus <DLN> yields a unique driver's license number.

Example 3: <identifier> plus <country> plus <INS> yields a unique immigration number.

The reader is referred to the CX.4, if there is a need to transmit this information as an OID.

### 2.A.15 DDI - daily deductible information

HL7 Component Table - DDI – Daily Deductible Information

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	3	NM	O		Delay Days		2.A.47
2	16	MO	R		Monetary Amount		2.A.41
3	4	NM	O		Number of Days		2.A.47

Definition: This data type specifies the detail information for the daily deductible.

**Maximum Length: 25**

**Note:** Replaces the CM data type used in section 6.5.7.30 IN2-30, as of v 2.5.

#### 2.A.15.1 Delay Days (NM)

Definition: The number of days after which the daily deductible begins

### 2.A.15.2 Monetary Amount (MO)

Definition: The monetary amount of the deductible

### 2.A.15.3 Number of Days (NM)

Definition: The number of days to apply the deductible. If this component is not populated, it means that the number of days is indefinite.

## 2.A.16 DIN - date and institution name

HL7 Component Table - DIN – Date and Institution Name

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	24	DTM	R		Date		2.A.77
2	705	CWE	R	0531	Institution Name		2.A.6

Definition: Specifies the date and institution information where a staff member became active or inactive.

**Maximum Length:** 730

**Note:** Replaces the CM data type used in sections 15.4.6.12 STF-12 and 15.4.6.14 STF-13, as of v 2.5.

### 2.A.16.1 Date (DTM)

Definition: Specifies the date when a staff member became active or inactive.

### 2.A.16.2 Institution Name (CWE)

Definition: Specifies the institution where a staff member is or was active. Refer to [User-Defined Table 0531 – Institutions](#) for suggested values.

User-defined Table 0531 – Institution

Value	Description	Comment
	No suggested values	

## 2.A.17 DLD – discharge to location and date

HL7 Component Table - DLD – Discharge to Location and Date

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	705	CWE	R	0113	Discharge to Location		2.A.36
2	24	DTM	O		Effective Date		2.A.77

Definition: Specifies the healthcare facility to which the patient was discharged and the date.

**Maximum Length:** 730

**Note:** Replaces the CM data type used in section 3.4.3.37 PV1-37, as of v 2.5.

### 2.A.17.1 Discharge to Location (CWE)

Definition: This component specifies the healthcare facility to which the patient was discharged. Refer to [User-defined Table 0113 - Discharged to location](#) for suggested values.

User-defined Table 0113 - Discharged to location

Value	Description	Comment
	No suggested values defined	

### 2.A.17.2 Effective Date (DTM)

Definition: Specifies the date on which the patient was discharged to a healthcare facility.

## 2.A.18 DLN - driver's license number

HL7 Component Table - DLN – Driver's License Number

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	ST	R		License Number		2.A.74
2	20	IS	O	0333	Issuing State, Province, Country		2.A.36
3	8	DT	O		Expiration Date		2.A.21

Definition: This field contains the driver's license information. For state or province refer to official postal codes for that country; for country refer to ISO 3166 for codes.

**Maximum Length:** 66

### 2.A.18.1 Driver's License Number (as ST data type)

This field contains the driver's license number.

### 2.A.18.2 Issuing State, Province, Country (IS)

Issuing authority for driver's license. For state or province, refer to official postal codes for that country; for country, refer to ISO 3166 for codes. The ISO 3166 table has three separate forms of the country code: HL7 specifies that the 3-character (alphabetic) form be used for the country code. *User-defined Table 0333 - Driver's license issuing authority* is used as the HL7 identifier for the user-defined table of values for this component.

User-defined Table 0333 – Driver's license issuing authority

Value	Description	Comment
	No suggested values defined	

### 2.A.18.3 Expiration Date (DT)

Expiration date (DT) for driver's license.

## 2.A.19 DLT - delta

HL7 Component Table - DLT – Delta

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	33	NR	O		Normal Range		2.A.48
2	4	NM	O		Numeric Threshold		2.A.47
3	1	ID	O	0523	Change Computation		2.A.74
4	4	NM	O		Days Retained		2.A.47

Definition: Describes the information that controls delta check warnings.

**Length:** 45

**Note:** Replaces the CM data type used in section 8.8.4.9 – OM2-9, as of v 2.5.

### 2.A.19.1 Normal Range (NR)

Definition: Specifies the normal interval of the reference data

### 2.A.19.2 Numeric Threshold (NM)

Definition: The numeric threshold of the change that is detected.

For example the threshold may be set to 10.

### 2.A.19.3 Change Computation (ID)

Definition: Specifies if the change is computed as a percent change or as an absolute change. Refer to *HL7 Table 0523 – Computation type* for valid values.

HL7 Table 0523 – Computation type

Value	Description	Comment
%	Indicates a percent change	
a	Absolute Change	

## 2.A.19.4 Days Retained (NR)

Definition: The length of time in days that the value is retained for computing delta checks.

## 2.A.20 DR - date/time range

HL7 Component Table - DR – Date/Time Range

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	24	DTM	O		Range Start Date/Time		2.A.22
2	24	DTM	O		Range End Date/Time		2.A.22

**Note:** DR cannot be legally expressed when embedded within another data type. Its use is constrained to a segment field.

**Maximum Length:** 49

## 2.A.20.1 Range Start Date/Time (DTM)

Definition: The first component contains the earliest date/time (time stamp) in the specified range.

## 2.A.20.2 Range End Date/Time (DTM)

The second component contains the latest date/time in the specified range. Note that the DTM (time stamp) data type allows the specification of precision.

## 2.A.21 DT - date

HL7 Component Table - DT – Date

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
	8				Date		

Definition: Specifies the century and year with optional precision to month and day.

**Maximum Length:** 8

As of v 2.3, the number of digits populated specifies the precision using the format specification YYYY[MM[DD]]. Thus:

- a) only the first four digits are used to specify a precision of "year"
- b) the first six are used to specify a precision of "month"
- c) the first eight are used to specify a precision of "day"

Examples:

```
|19880704|
|199503|
```

Prior to v 2.3, this data type was specified in the format YYYYMMDD. As of v 2.3 month and days are no longer required. By site-specific agreement, YYYYMMDD may be used where backward compatibility must be maintained.

## 2.A.22 DTM - date/time

HL7 Component Table - DTM – Date/Time

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
	24				Date/Time		

Definition: Specifies a point in time using a 24-hour clock notation.

### Maximum Length: 24

The number of characters populated (excluding the time zone specification) specifies the precision.

Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ].

Thus:

- d) only the first four are used to specify a precision of "year"
- e) the first six are used to specify a precision of "month"
- f) the first eight are used to specify a precision of "day"
- g) the first ten are used to specify a precision of "hour"
- h) the first twelve are used to specify a precision of "minute"
- i) the first fourteen are used to specify a precision of "second"
- j) the first sixteen are used to specify a precision of "one tenth of a second"
- k) the first nineteen are used to specify a precision of "one ten thousandths of a second"

Example: |199904| specifies April 1999.

The time zone (+/-ZZZZ) is represented as +/-HHMM offset from Coordinated Universal Time (UTC) (formerly Greenwich Mean Time (GMT)), where +0000 or -0000 both represent UTC (without offset). The specific data representations used in the HL7 encoding rules are compatible with ISO 8824-1987(E).

Note that if the time zone is not included, the time zone defaults to that of the local time zone of the sender. Also note that a DTM valued field with the HHMM part set to "0000" represents midnight of the night extending from the previous day to the day given by the YYYYMMDD part (see example below). Examples:

Example	Description
19760704010159-0500	1:01:59 on July 4, 1976 in the Eastern Standard Time zone (USA)
19760704010159-0400	1:01:59 on July 4, 1976 in the Eastern Daylight Saving Time zone (USA).
198807050000	Midnight of the night extending from July 4 to July 5, 1988 in the local time zone of the sender.
19880705	Same as prior example, but precision extends only to the day. Could be used for a birth date, if the time of birth is unknown.
19981004010159+010	1:01:59 on October 4, 1998 in Amsterdam, NL. (Time zone=+0100).

The HL7 Standard strongly recommends that all systems routinely send the time zone offset but does not require it. All HL7 systems are required to accept the time zone offset, but its implementation is application specific. For many applications the time of interest is the local time of the sender. For example, an application in the Eastern Standard Time zone receiving notification of an admission that takes place at 11:00 PM in San Francisco on December 11 would prefer to treat the admission as having occurred on December 11 rather than advancing the date to December 12.

**Note:** The time zone [+/-ZZZZ], when used, is restricted to legally-defined time zones and is represented in HHMM format.

One exception to this rule would be a clinical system that processed patient data collected in a clinic and a nearby hospital that happens to be in a different time zone. Such applications may choose to convert the data to a common representation. Similar concerns apply to the transitions to and from daylight saving time. HL7 supports such requirements by requiring that the time zone information be present when the information is sent. It does not, however, specify which of the treatments discussed here will be applied by the receiving system.

### 2.A.23 DTN - day type and number

HL7 Component Table - DTN – Day Type and Number

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	2	IS	R	0149	Day Type		2.A.36
2	3	NM	R		Number of Days		2.A.47

Definition: This data type specifies the type and number of days for which a certification is valid.

**Maximum Length:** 6

**Note:** Replaces the CM data type used in section 6.5.8.11 IN3-11, as of v 2.5.

#### 2.A.23.1 Day Type (IS)

Definition: Specifies whether the days are denied, pending, or approved.

Refer to [User-defined Table 0149 - Day type](#) for suggested values.

User-defined Table 0149 - Day type

Value	Description	Comment
AP	Approved	
DE	Denied	
PE	Pending	

#### 2.A.23.2 Number of Days (NM)

Definition: Specifies the number of days for which the certification is valid.

### 2.A.24 ED - encapsulated data

HL7 Component Table - ED – Encapsulated Data

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	1027	HD	O		Source Application		2.A.33
2	11	ID	R	0834	Type of Data		2.A.35
3	32	ID	O	0291	Data Subtype		2.A.35
4	6	ID	R	0299	Encoding		2.A.35
5	6553 6	TX	R		Data		2.A.78

**Definition:** This data type transmits encapsulated data from a source system to a destination system. It contains the identity of the source system, the type of data, the encoding method of the data, and the data itself. This data type is similar to the RP (reference pointer) data type of Section 2.A.65, "[RP - reference pointer](#)," except that instead of pointing to the data on another system, it contains the data which is to be sent to that system.

**Maximum Length:** 65536

#### 2.A.24.1 Source Application (HD)

A unique name that identifies the system which was the source of the data. Identical format and restrictions as in reference pointer (see Section 2.A.65.2, "[Application ID \(HD\)](#)").

#### 2.A.24.2 Type of Data (ID)

Identical to "type of data" component in the reference pointer (RP) data type. See Section 2.A.65.3, "[Type of Data \(ID\)](#)".

Refer to [Imported Table 0834 – MIME Types](#) for valid values.

#### 2.A.24.3 Data Subtype (ID)

Identical to "subtype" component in the reference pointer (RP) data type. See Section 2.A.65.4, "[Subtype \(ID\)](#)".

Refer to [External Table 0291 - Subtype of referenced data](#) for valid values.

#### 2.A.24.4 Encoding (ID)

The type of encoding used to represent successive octets of binary data as displayable ASCII characters. Refer to [HL7 Table 0299 - Encoding](#) for valid values.

HL7 Table 0299 - Encoding

Value	Description	Comment
A	No encoding - data are displayable ASCII characters.	
Hex	Hexadecimal encoding - consecutive pairs of hexadecimal digits represent consecutive single octets.	
Base64	Encoding as defined by MIME (Multipurpose Internet Mail Extensions) standard RFC 1521. Four consecutive ASCII characters represent three consecutive octets of binary data. Base64 utilizes a 65-character subset of US-ASCII, consisting of both the upper and lower case alphabetic characters, digits "0" through "9", "+", "/", and "=".	The Request For Comment (RFC) 1521 standard is available at: <a href="http://www.ietf.org/rfc/rfc1521.txt">http://www.ietf.org/rfc/rfc1521.txt</a>

#### 2.A.24.5 Data (TX)

Displayable ASCII characters which constitute the data to be sent from source application to destination application. The characters are limited to the legal characters of the ST data type, as defined in Section 2.A.74, "*ST - string data*," and, if encoded binary, are encoded according to the method of Section 2.A.24.2, "*Type of Data (ID)*".

If the encoding component (see Section 2.A.24.4, "*Encoding (ID)*") = "A" (none), then the data component must be scanned before transmission for HL7 delimiter characters, and any found must be escaped by using the HL7 escape sequences defined in Section 2.7 – "Use of escape sequences in text fields." On the receiving application, the data field must be de-escaped after being parsed.

If the encoding component ED.4 does not equal "A", then, after encoding, the (encoded) data must be scanned for HL7 delimiter characters, and any found must be escaped by using the HL7 escape sequences. Only then can the component be added to the HL7 segment/message. On the receiving application, the data field must be de-escaped after being parsed out of the message before being decoded. This can be expressed as "encode", "escape", "parse", "de-escape" or "decode".

### 2.A.25 EI - entity identifier

HL7 Component Table - EI – Entity Identifier

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	199	ST	O		Entity Identifier		2.A.74
2	20	IS	O	0363	Namespace ID		2.A.36
3	199	ST	C		Universal ID		2.A.74
4	6	ID	C	0301	Universal ID Type		2.A.35

**Definition:** The entity identifier defines a given entity within a specified series of identifiers.

**Maximum Length:** 427

The EI is appropriate for, but not limited to, machine or software generated identifiers. The generated identifier goes in the first component. The remaining components, 2 through 4, are known as the assigning authority; they identify the machine/system responsible for generating the identifier in component 1.

The specified series, the assigning authority, is defined by components 2 through 4. The assigning authority is of the hierarchic designator (HD) data type, but it is defined as three separate components in the EI data type, rather than as a single component as would normally be the case. This is in order to maintain backward compatibility with the EI's use as a component in several existing data fields. Otherwise, the components 2 through 4 are as defined in Section 2.A.33, "*HD - hierarchic designator*". Hierarchic designators (HD) are unique across a given HL7 implementation.

#### 2.A.25.1 Entity Identifier (ST)

The first component, <entity identifier>, is usually defined to be unique within the series of identifiers created by the <assigning authority>, defined by a hierarchic designator, represented by components 2 through 4. See Section 2.A.33, "*HD - hierarchic designator*".

#### 2.A.25.2 Namespace ID (IS)

See Section 2.A.33.1, "*Namespace ID (IS)*" for definition.

The assigning authority is a unique identifier of the system (or organization or agency or department) that creates the data. Refer to *User-defined Table 0363 – Assigning authority* for suggested values.

**Note:** When the HD is used as a part of another data type, in this case as part of the EI data type, this table may be re-defined (given a different user-defined table number and name) by the technical committee responsible for that segment.

By site agreement, implementers may continue to use *User-defined Table 0300 – Namespace ID* for the first component

### 2.A.25.3 Universal ID (ST)

See Section 2.A.33.2, "*Universal ID (ST)*" for definition.

### 2.A.25.4 Universal ID Type (ID)

Refer to *HL7 Table 0301 - Universal ID type* for valid values. See Section 2.A.33.3, "*Universal ID Type (ID)*," for definition.

## 2.A.26 EIP - entity identifier pair

HL7 Component Table - EIP – Entity Identifier Pair

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	427	EI	O		Placer Assigned Identifier		2.A.25
2	427	EI	O		Filler Assigned Identifier		2.A.25

Definition: Specifies an identifier assigned to an entity by either the placer or the filler system. If both components are populated the identifiers must refer to the same entity.

**Maximum Length:** 855

**Note:** Replaces the CM data type used in sections 4.5.1.8 - ORC-8, 4.5.3.29 – OBR-29, 7.3.1.29 – OBR-29, as of v 2.5.

### 2.A.26.1 Placer Assigned Identifier (EI)

Definition: Specifies an identifier assigned to an entity by the placer system.

For example, the component might be used to convey the following:

- l) placer order number of the parent order.
- m) the specimen identifier as assigned by the placer.
- n) a location identifier assigned (or used by) the placer.

### 2.A.26.2 Filler Assigned Identifier (EI)

Definition: Specifies an identifier assigned to an entity by the filler system.

For example, the component might convey the following:

- o) filler order number of the parent order.
- p) the specimen identifier as assigned by the filler.
- q) a location identifier assigned (or used by) the filler.

## 2.A.27 ELD - error location and description

HL7 Component Table - ELD – Error Location and Description

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	3	ST	O		Segment ID		2.A.74
2	2	NM	O		Segment Sequence		2.A.47
3	2	NM	O		Field Position		2.A.47
4	705	CWE	O	0357	Code Identifying Error		2.A.6

Definition: Specifies the segment that contains an error and describes the nature of the error.

**Maximum Length:** 715



**Note:** Replaces the CM data type used in 2.16.5.1 ERR-1 as of v 2.5. Retained for backward compatibility only as of v 2.5. Refer to ERR segment.

**2.A.27.1 Segment ID (ST)**

Definition: The segment containing the error in another message

**2.A.27.2 Segment sequence (NM)**

Definition: Specifies the specific occurrence if the segment specified in component 1 occurs more than once in the message.

**2.A.27.3 Field Position (NM)**

Definition: Ordinal position of the data field within the segment. For systems that do not use the HL7 Encoding Rules, the data item number may be used for the third component.

**2.A.27.4 Code Identifying Error (CWE)**

Definition: A code that describes the nature of the error. Refer to [HL7 Table 0357 - Message error condition codes](#) in section 2.14.5, "ERR – error segment" for valid values.

**2.A.28 ERL - error location**

HL7 Component Table - ERL – Error Location

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	3	ST	R		Segment ID		2.A.74
2	2	NM	R		Segment Sequence		2.A.47
3	2	NM	O		Field Position		2.A.47
4	2	NM	O		Field Repetition		2.A.47
5	2	NM	O		Component Number		2.A.47
6	2	NM	O		Sub-Component Number		2.A.47

Definition: This data type identifies the segment and its constituent where an error has occurred.

**Maximum Length: 18**

**2.A.28.1 Segment ID (ST)**

Definition: Specifies the 3-letter name for the segment.

**2.A.28.2 Segment Sequence (NM)**

Definition: Identifies the segment occurrence within the message.

**2.A.28.3 Field Position (NM)**

Definition: Identifies the number of the field within the segment. The first field is assigned a number of 1. Field number should not be specified when referring to the entire segment.

**2.A.28.4 Field Repetition (NM)**

Definition: Identifies the repetition number of the field. The first repetition is counted as 1. If a Field Position is specified, but Field Repetition is not, Field Repetition should be assumed to be 1. If Field Position is not specified, Field Repetition should not be specified.

**2.A.28.5 Component Number (NM)**

Definition: Identifies the number of the component within the field. The first component is assigned a number of 1. Component number should not be specified when referring to the entire field.

**2.A.28.6 Sub-Component Number (NM)**

Definition: Identifies the number of the sub-component within the component. The first sub-component is assigned a number of 1. Sub-component number should not be specified when referring to the entire component.

## 2.A.29 FC - financial class

HL7 Component Table - FC– Financial Class

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	IS	R	0064	Financial Class Code		2.A.36
2	24	DTM	O		Effective Date		2.A.22

Maximum Length: 45

## 2.A.29.1 Financial Class Code (IS)

This component contains the financial class assigned to a person. *User-defined Table 0064 - Financial class* is used as the HL7 identifier for the user-defined table of values for this component.

User-defined Table 0064 – Financial class

Value	Description	Comment
	No suggested values defined	

## 2.A.29.2 Effective Date (DTM)

This component contains the effective date/time of the person's assignment to the financial class specified in the first component.

## 2.A.30 FN - family name

HL7 Component Table - FN – Family Name

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	50	ST	R		Surname		2.A.74
2	20	ST	O		Own Surname Prefix		2.A.74
3	50	ST	O		Own Surname		2.A.74
4	20	ST	O		Surname Prefix from Partner/Spouse		2.A.74
5	50	ST	O		Surname from Partner/Spouse		2.A.74

Definition: This data type allows full specification of the surname of a person. Where appropriate, it differentiates the person's own surname from that of the person's partner or spouse, in cases where the person's name may contain elements from either name. It also permits messages to distinguish the surname prefix (such as "van" or "de") from the surname root.

Maximum Length: 194

**Note:** Appears ONLY in the PPN, XCN and XPN.

## 2.A.30.1 Surname (ST)

The atomic element of the person's family name. In most Western usage, this is the person's last name.

## 2.A.30.2 Own Surname Prefix (ST)

Internationalization usage for Germanic languages. This component is optional. An example of a <surname prefix> is the "van" in "Ludwig van Beethoven". Since the <surname prefix> doesn't sort completely alphabetically, it is reasonable to specify it as a separate sub-component of the PN and extended PN data types (XPN and XCN).

**Note:** Subcomponents <own surname prefix>, <own surname>, <surname prefix from partner/spouse> and <surname from partner/spouse> decompose complex Germanic names such as "Martha de Mum-van Beethoven". If these subcomponents are valued, the <surname> subcomponent should still be fully valued for backward compatibility, i.e., ^de Mum-van Beethoven&de&Mum&van&Beethoven^. Also, for clarity, the <last name prefix> has been renamed to <own surname prefix>.

**2.A.30.3 Own Surname (ST)**

The portion of the surname (in most Western usage, the last name) that is derived from the person's own surname, as distinguished from any portion that is derived from the surname of the person's partner or spouse. This component is optional.

If the person's surname has legally changed to become (or incorporate) the surname of the person's partner or spouse, this is the person's surname immediately prior to such change. Often this is the person's "maiden name".

**2.A.30.4 Surname Prefix from Partner/Spouse (ST)**

Internationalization usage for Germanic languages. This component is optional. An example of a <surname prefix> is the "van" in "Ludwig van Beethoven". Since the <surname prefix> doesn't sort completely alphabetically, it is reasonable to specify it as a separate sub-component of the PN and extended PN data types (XPN and XCN).

**Note:** Subcomponents <own surname prefix>, <own surname>, <surname prefix from partner/spouse> and <surname from partner/spouse> decompose complex Germanic names such as "Martha de Mum-van Beethoven". If these subcomponents are valued, the <surname> subcomponent should still be fully valued for backward compatibility, i.e., ^de Mum-van Beethoven&de&Mum&van&Beethoven^." Also, for clarity, the <last name prefix> has been renamed to <own surname prefix>.

**2.A.30.5 Surname from Partner/Spouse (ST)**

The portion of the person's surname (in most Western usage, the last name) that is derived from the surname of the person's partner or spouse, as distinguished from the part derived from the person's own surname. This component is optional.

If no portion of the person's surname is derived from the surname of the person's partner or spouse, this component is not valued. Otherwise, if the surname of the partner or spouse has legally changed to become (or incorporate) the person's surname, this is the surname of the partner or spouse immediately prior to such change.

**2.A.31 FT - formatted text data**

HL7 Component Table - FT – Formatted Text Data

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
	65536				Formatted Text Data		

**Maximum Length:** 65536

This data type is derived from the TX data type by allowing the addition of embedded formatting instructions. These instructions are limited to those that are intrinsic and independent of the circumstances under which the field is being used. The actual instructions and their representation are described in section 2.7.6, "Usage and Examples of Formatted Text". ***The FT field is of arbitrary length (up to 64k)*** and may contain formatting commands enclosed in escape characters.

Example:

```
|\.sp\(skip one vertical line)|
```

For additional examples of formatting commands see Section 2.7, "Use of Escape Sequences in Text Fields".

To include alternative character sets, use the appropriate escape sequence. See Section 2.15.9.18, "Character set" and Section 2.15.9.20, "Alternate character set handling".

**2.A.32 GTS – general timing specification**

HL7 Component Table - GTS – General Timing Specification

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
	199				General Timing Specification		

The General Timing Specification data type is used to communicate complex inter-related information Timing information. The value of such a field follows the formatting rules for a ST field. The string data will be structured according to the rules set forth in the "Version 3 Data Types Part II Unabridged Specification" for the General Timing Specification (GTS) data type.

Maximum Length: 199

### 2.A.33 HD - hierarchic designator

HL7 Component Table - HD – Hierarchic Designator

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	IS	O	0300	Namespace ID		2.A.36
2	999	ST	C		Universal ID		2.A.74
3	6	ID	C	0301	Universal ID Type		2.A.35

Definition: The basic definition of the HD is that it identifies an (administrative or system or application or other) entity that has responsibility for managing or assigning a defined set of instance identifiers (such as placer or filler number, patient identifiers, provider identifiers, etc.). This entity could be a particular health care application such as a registration system that assigns patient identifiers, a governmental entity such as a licensing authority that assigns professional identifiers or drivers' license numbers, or a facility where such identifiers are assigned.

Maximum Length: 1027

The HD is designed to be a more powerful and more general replacement for the application identifier of HL7 versions 2.1 and 2.2. It adds two additional components, the <universal ID> and the <universal ID type> to the former application ID (which is renamed more generically to be the namespace ID).

In the case where an HD identifies an entity that assigns/creates instance identifiers such as a particular patient registration system, it defines an "assigning authority". In the case where an HD identifies a location where instance identifiers are given out (although they may be created by another entity at another location) such as a particular "department of motor vehicles office location," it defines an "assigning facility". These two different uses of the HD appear in many of the extended data types.

The "assigning authority" defined by the HD is similar in its role to the coding system (and version) part of the coded element data types: both identify a set of more discrete instance identifiers. The difference is that the set of HD-defined discrete instances contain identifiers of "real-world" things such as patient or clinical orders, while the coded element-defined set of discrete instances contains concept identifiers (codes).

The HD is designed to be used either as a local identifier (with only the <namespace ID> valued) or a publicly-assigned identifier, a UID (<universal ID> and <universal ID type> both valued). Syntactically, the HD is a group of two identifiers: a local identifier defined by the first component and a universal identifier defined by the second and third components. HDs that have defined third components (defined UID types) must have a second component that is unique within the series of IDs defined by that component.

**Note:** The HD is used in fields that in earlier versions of HL7 used the IS data type. Thus, a single component HD (only the first component valued) will look like a simple IS data type for older systems expecting a single component in the place of the HD data type.

If the first component for the HD data type is present, the second and third components are optional. If the third component is present, then the second must also be present (although in this case the first is optional). The second and third components must either both be valued (both non-null), or both be not valued (both null).

This means that if all three components of the HD are valued, the entity identified by the first component is the same as the entity identified by components two and three taken together. However, implementers may choose, by site agreement, to specify that 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.

Examples:

Example 1: ISO examples with only the 2<sup>nd</sup> and 3<sup>rd</sup> components valued:

```
^1.2.344.24.1.1.3^ISO|
^1.2.34.4.1.5.1.5.1.1.13143143.131.3131.1^ISO|
```

The syntax of the second component is defined by the ISO standard for object identifiers, not by HL7 (for which the second component is of the ST data type). Thus the periods (".") and comma (",") in the second component are part of the ISO syntax, but are legal by the definition of the HL7 ST data type.

Example 2: A GUID example

|^14344.14144321.4122344.14434.654^GUID|

Example 3: An internet example

|^falcon.iupui.edu^DNS|

Example 4: a RANDOM UID

|^40C983F09183B0295822009258A3290582^RANDOM|

**Local examples:**

Example 5: Local use only: a HD that looks like an IS data type

|LAB1|  
|RX.PIMS.SystemB.KP.CA.SCA|

Note that the syntax of the first component is not defined by HL7 but by the site according to its own needs: the only requirement is that the first component's structure is allowed by the HL7 string (ST) data type, which is used for values by the IS data type.

Example 6: Local identifier using components 2 and 3 only

|^RX.PIMS.SystemB.CA.SCA^M|

An alternate way to encode the previous example, illustrating the use of the third component value of "M" (see [HL7 Table 0301 - Universal ID type](#) below) to identify a locally-defined identifier set. The second component has the same value as the previous example but is now defined to be a member of a set of allowable values defined by a site for the identifier set "M".

Example 7: Local identifier with 2<sup>nd</sup> and 3<sup>rd</sup> components populated.

|PathLab^PL.UCF.UC^L|

The 'PathLab' application is identified by the namespace component but it is also identified by the 2<sup>nd</sup> and 3<sup>rd</sup> components, (i.e., by the locally-defined UID system "L"). The two identifiers are equivalent.

This is a more complex HD in which the middle component, which is locally defined, is itself structured. As with the ISO example above, the middle component's structure is not defined by HL7 but by the site according to its own needs: the only requirement is that the middle component's structure is allowed by the HL7 string (ST) data type.

Example 8: local identifier and universal ID types:

|LAB1^1.2.3.3.4.6.7^ISO|

A HD with an ISO "object Identifier" as a UID and a locally defined system name. Both the first component and the second and third (taken together) refer to the same entity. This example shows that the local value and the universal ID value may be transmitted with a single HD field.

### 2.A.33.1 Namespace ID (IS)

[User-defined Table 0300 - Namespace ID](#) is used as the HL7 identifier for the user-defined table of values for this component.

User-defined Table 0300 – Namespace ID

Value	Description	Comment
	No suggested values defined	

**Note:** When the HD is used in a given segment (either as a field or as a component of another data type) this table may be re-defined (given a different user-defined table number and name) by the technical committee responsible for that segment.

### 2.A.33.2 Universal ID (ST)

The HD's second component, <universal ID> (UID), is a string formatted according to the scheme defined by the third component, <universal ID type> (UID type). The UID is intended to be unique over time within the UID type. It is rigorously defined. Each UID must belong to one of the specifically enumerated schemes for constructing UIDs (defined by the UID type). The UID (second component) must follow the syntactic rules of the particular universal identifier scheme (defined by the third component). Note that these syntactic rules are not defined within HL7 but are defined by the rules of the particular universal identifier scheme (defined by the third component).

### 2.A.33.3 Universal ID Type (ID)

The third component governs the interpretation of the second component of the HD. If the third component is a known UID refer to [HL7 Table 0301 - Universal ID type](#) for valid values, then the second component is a universal ID of that type.

HL7 Table 0301 - Universal ID type

Value	Description	Comment
DNS	An Internet dotted name. Either in ASCII or as integers	
GUID	Same as UUID.	
HCD	The CEN Healthcare Coding Scheme Designator. (Identifiers used in DICOM follow this assignment scheme.)	
HL7	Reserved for future HL7 registration schemes	
ISO	An International Standards Organization Object Identifier	
L,M,N	These are reserved for locally defined coding schemes.	
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.	
URI	Uniform Resource Identifier	
UUID	The DCE Universal Unique Identifier	
x400	An X.400 MHS format identifier	
x500	An X.500 directory name	

**Note:** X400, X500, and DNS are not technically universally valid for all time. Names can be de-registered from an existing user and registered to a new user.

## 2.A.34 ICD - insurance certification definition

HL7 Component Table - ICD – Insurance Certification Definition

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	11	IS	O	0150	Certification Patient Type		2.A.36
2	1	ID	R	0136	Certification Required		2.A.35
3	24	DTM	O		Date/Time Certification Required		2.A.22

Definition: This data type specifies whether insurance certification is required for particular patient types, and the time window for obtaining the certification.

**Maximum Length:** 38

**Note:** Replaces the CM data type used in section 6.5.8.20 IN3-20, as of v 2.5.

### 2.A.34.1 Certification Patient Type (IS)

Definition: Specifies the category or type of patient for which this certification is requested. Refer to [User-defined Table 0150 - Certification patient type](#) for suggested values.

User-defined Table 0150 - Certification patient type

Value	Description	Comment
ER	Emergency	
IPE	Inpatient elective	
OPE	Outpatient elective	
UR	Urgent	

### 2.A.34.2 Certification Required (ID)

Definition: Specifies whether or not a certification is required. Refer to [HL7 table 0136 - Yes/no indicator](#) for valid values.

### 2.A.34.3 Date/Time Certification Required (DTM)

Definition: The date/time by which the certification must be obtained.

## 2.A.35 ID - coded value for HL7 defined tables

HL7 Component Table - ID – Coded Value for HL7 Defined Tables

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
					Coded Value for HL7-Defined Tables		

**Note:** The Vocabulary TC is the steward of the ID data type.

**Maximum Length:** Varies - dependent on length of longest code in code set.

The value of such a field follows the formatting rules for an ST field except that it is drawn from a table of legal values. There shall be an HL7 table number associated with ID data types. An example of an ID field is [OBR-25-result status](#). This data type should be used only for HL7 tables (see section 2.5.3.6, "Table"). The reverse is not true, since in some circumstances it is more appropriate to use the CNE or CWE data type for HL7 tables.

## 2.A.36 IS - coded value for user-defined tables

HL7 Component Table - IS – Coded Value for User-Defined Tables

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
	20				Coded Value for User-Defined Tables		

**Note:** The Vocabulary TC is the steward of the IS data type.

**Maximum Length:** 20

The value of such a field follows the formatting rules for a ST field except that it is drawn from a site-defined (or user-defined) table of legal values. There shall be an HL7 table number associated with IS data types. An example of an IS field is the Event reason code defined in Section 3.3.1.4, "Event reason code". This data type should be used only for user-defined tables (see Section 2.5.3.6 - Table). The reverse is not true, since in some circumstances, it is more appropriate to use the CWE data type for user-defined tables.

## 2.A.37 JCC - job code/class

HL7 Component Table - JCC– Job Code/Class

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	IS	O	<a href="#">0327</a>	Job Code		2.A.36
2	20	IS	O	<a href="#">0328</a>	Job Class		2.A.36
3	250	TX	O		Job Description Text		2.A.78

**Maximum Length:** 292

Example 1: Codified job (where 1 represents the code for Administrator and F represents full time)  
|1^F^Administrator|

Example 2: Uncodified job (where job codes are not codified and PT represents part time)  
|^PT^Analyst|.

### 2.A.37.1 Job Code (IS)

This component contains the person's job code. [User-defined Table 0327 - Job code](#) is used as the HL7 identifier for the user-defined table of values for this component.

User-defined Table 0327 – Job code

Value	Description	Comment
	No suggested values defined	

### 2.A.37.2 Job Class (IS)

This component contains the person's employee classification. Refer to [User-defined Table 0328 - Employee classification](#) for suggested values.

User-defined Table 0328 – Employee classification

Value	Description	Comment
	No suggested values defined	

## 2.A.37.3 Job Description Text (TX)

This component contains the text of the job description. This will accommodate systems where job descriptions are not codified.

## 2.A.38 LA1 - location with address variation 1

HL7 Component Table – LA1 – Location with Address Variation 1

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	IS	O	0302	Point of Care		2.A.36
2	20	IS	O	0303	Room		2.A.36
3	20	IS	O	0304	Bed		2.A.36
4	227	HD	O		Facility		2.A.33
5	20	IS	O	0306	Location Status		2.A.36
6	20	IS	O	0305	Patient Location Type		2.A.36
7	20	IS	O	0307	Building		2.A.36
8	20	IS	O	0308	Floor		2.A.36
9	415	AD	O		Address		2.A.1

Definition: Specifies a location and its address.

**Maximum Length:** 790

**Note:** Replaces the CM data type used in 4.14.1.8 RXO-8 and 4.14.4.8 RXE-8 as of v 2.5. Retained for backward compatibility only as of v 2.5,

## 2.A.38.1 Point of Care (IS)

Definition: This component specifies the code for the point where patient care is administered. It is conditional on person location type (e.g., nursing unit or department or clinic). After floor, it is the most general patient location designation. Refer to [User-defined Table 0302 - Point of care](#) for suggested values.

## 2.A.38.2 Room (IS)

Definition: This component specifies the code for the patient room. After point of care, it is the most general person location designation. Refer to [User-defined Table 0303 - Room](#) for suggested values.

## 2.A.38.3 Bed (IS)

Definition: This component specifies the code for the patient bed. After room, it is the most general person location designation. Refer to [User-defined Table 0304 - Bed](#) for suggested values.

## 2.A.38.4 Facility (HD)

Definition: This component is subject to site interpretation but generally describes the highest level physical designation of an institution, medical center or enterprise. It is the most general person location designation.

## 2.A.38.5 Location Status (IS)

Definition: This component specifies the code for the status or availability of the location. For example, it may convey bed status. Refer to [User-defined Table 0306 - Location status](#) for suggested values.

## 2.A.38.6 Patient Location Type (IS)

Definition: Person location type is the categorization of the person's location defined by facility, building, floor, point of care, room or bed. Although not a required field, when used, it may be the only



populated field. It usually includes values such as nursing unit, department, clinic, SNF, physician's office. Refer to [User-defined Table 0305 - Person location type](#) for suggested values.

### 2.A.38.7 Building (IS)

Definition: This component specifies the code for the building where the person is located. After facility, it is the most general person location designation. Refer to [User-defined Table 0307 - Building](#) for suggested values.

### 2.A.38.8 Floor (IS)

Definition: This component specifies the code for the floor where the person is located. After building, it is the most general person location designation. Refer to [User-defined Table 0308 - Floor](#) for suggested values.

### 2.A.38.9 Address (AD)

Definition: This component specifies the address of a location.

## 2.A.39 LA2 - location with address variation 2

HL7 Component Table – LA2 – Location with Address Variation 2

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	IS	O	302	Point of Care		2.A.36
2	20	IS	O	303	Room		2.A.36
3	20	IS	O	304	Bed		2.A.36
4	227	HD	O		Facility		2.A.33
5	20	IS	O	306	Location Status		2.A.36
6	20	IS	O	305	Patient Location Type		2.A.36
7	20	IS	O	307	Building		2.A.36
8	20	IS	O	308	Floor		2.A.36
9	120	ST	O		Street Address		2.A.74
10	120	ST	O		Other Designation		2.A.74
11	50	ST	O		City		2.A.74
12	50	ST	O		State or Province		2.A.74
13	12	ST	O		Zip or Postal Code		2.A.74
14	3	ID	O	399	Country		2.A.35
15	3	ID	O	190	Address Type		2.A.35
16	50	ST	O		Other Geographic Designation		2.A.74

Definition: Specifies a location and its address.

**Maximum Length:** 790

**Note:** Replaces the CM data type used in 4.14.5.13 RXD-13, 4.14.6.11 RXG-11 and 4.14.7.11 RXA-11 as of v 2.5. Retained for backward compatibility only as of v 2.5,

### 2.A.39.1 Point of Care (IS)

Definition: This component specifies the code for the point where patient care is administered. It is conditional on Patient Location Type (e.g., nursing unit or department or clinic). After floor, it is the most general patient location designation. Refer to [User-defined Table 0302 - Point of care](#) for suggested values.

### 2.A.39.2 Room (IS)

Definition: This component specifies the code for the patient room. After point of care, it is the most general person location designation. Refer to [User-defined Table 0303 - Room](#) for suggested values.

### 2.A.39.3 Bed (IS)

Definition: This component specifies the code for the patient's bed. After room, it is the most general person location designation. Refer to [User-defined Table 0304 - Bed](#) for suggested values.

### 2.A.39.4 Facility (HD)

Definition: This component is subject to site interpretation but generally describes the highest level physical designation of an institution, medical center or enterprise. It is the most general person location designation.

### 2.A.39.5 Location Status (IS)

Definition: This component specifies the code for the status or availability of the location. For example, it may convey bed status. Refer to [User-defined Table 0306 - Location status](#) for suggested values.

### 2.A.39.6 Patient Location Type (IS)

Definition: Patient location type is the categorization of the patient's location defined by facility, building, floor, point of care, room or bed. Although not a required field, when used, it may be the only populated field. It usually includes values such as nursing unit, department, clinic, SNF, physician's office. Refer to [User-defined Table 0305 - Person location type](#) for suggested values.

### 2.A.39.7 Building (IS)

Definition: This component specifies the code for the building where the person is located. After facility, it is the most general person location designation. Refer to [User-defined Table 0307 - Building](#) for suggested values.

### 2.A.39.8 Floor (IS)

Definition: This component specifies the code for the floor where the person is located. After building, it is the most general person location designation. Refer to [User-defined Table 0308 - Floor](#) for suggested values.

### 2.A.39.9 Street Address (ST)

Definition: This component specifies the street or mailing address of a person or institution. When referencing an institution, it is used to specify the institution name. When used in connection with a person, it specifies the first line of the address.

### 2.A.39.10 Other Designation (ST)

Definition: This component specifies the second line of an address. In general, it qualifies address. Examples: Suite 555 or Fourth Floor. When referencing an institution, this component specifies the street address.

### 2.A.39.11 City (ST)

Definition: This component specifies the city, or district or place where the person or institution is located depending upon the national convention for formatting addresses for postal usage. City should be represented by the official postal service codes for that state.

### 2.A.39.12 State or Province (ST)

Definition: This component specifies the state or province where the person or institution is located. State or province should be represented by the official postal service codes for that country.

### 2.A.39.13 Zip or Postal Code (ST)

Definition: This component specifies the zip or postal code where the person or institution is located. Zip or postal codes should be represented by the official codes for that country. In the US, the zip code takes the form 99999[-9999], while the Canadian postal code takes the form A9A9A9 and the Australian Postcode takes the form 9999.

### 2.A.39.14 Country (ID)

Definition: This component specifies the country where the person or institution is located. ISO 3166 provides a list of country codes that may be used.<sup>1</sup> HL7 specifies that the 3-character (alphabetic) form

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<sup>1</sup> Available from ISO 1 Rue de Varembe, Case Postale 56, CH 1211, Geneva, Switzerland.

of ISO 3166 be used for the country code. Refer to [HL7 Table 0399 – Country code](#) in section 2.14.9.17, "MSH-17 Country Code" for valid values.

### 2.A.39.15 Address Type (ID)

Definition: This component specifies the kind or type of address. Refer to [HL7 Table 0190 - Address type](#) for valid values.

### 2.A.39.16 Other Geographic Designation (ST)

Definition: This component specifies any other geographic designation that may be necessary. It includes county, bioregion, SMSA, etc.

## 2.A.40 MA - multiplexed array

HL7 Component Table - MA – Multiplexed Array

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	16	NM	O		Sample Y From Channel 1		2.A.47
2	16	NM	O		Sample Y From Channel 2		2.A.47
3	16	NM	O		Sample Y From Channel 3		2.A.47
4	16	NM	O		Sample Y From Channel 4		2.A.47

Definition: This data type is used to represent channel-multiplexed waveform data. Assuming that fields that utilize this data type repeat and that Y represents the specific repetition, the components of the repetition will reflect sample Y from each channel.

Usage Note: The MA data type is preferred when the signal recording device outputs the waveform data by time (all signal amplitudes at time sample 1, followed by all signal amplitudes at time sample 2, followed by all signal amplitudes at time sample 3, etc.). The typical count is 32, 64, or 128 channels. At the time of this writing, the MA data type is the one used by most commercial EEG instruments, while other electrophysiological instruments (such as evoked potential instruments) may use the NA data type. The MA data type is the "natural" one for multi-channel EEG instruments since the signal acquisition process involves digitizing each channel in succession as rapidly as possible, then after a fixed interval (like 0.004 seconds) digitizing all the channels again in succession, and repeating this every 0.004 seconds as long as the recording continues.

Conversion of one format to another is often not possible or desirable in near-real-time applications. For example, a long-term EEG recording may go on for 24, 48, 72, or more hours and implementations cannot wait until the recording is ended to transmit the data because physicians need to review the waveforms as the recording is in progress; this is why it only makes sense to organize the data by the MA data type which sends the data one time sample after the next.

Use Case: Commercial EEG instruments

**Maximum Length:** 65536

**Example 1:** 3 channels (identical), 6 time-samples

|0^0^0~1^1^1~2^2^2~3^3~4^4^4~5^5^5|

**Example 2:** 1 channel, 11 time-samples

|0~1~2~3~4~5~6~7~8~9~10|

## 2.A.41 MO - money

HL7 Component Table - MO – Money

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	16	NM	O		Quantity		2.A.47
2	3	ID	O		Denomination		2.A.35

Definition: This data type specifies an amount of money and the denomination in which it is expressed.

**Maximum Length:**20

### 2.A.41.1 Quantity (NM)

The first component is a quantity.

**2.A.41.2 Denomination (ID)**

The second component is the denomination in which the quantity is expressed. The values for the denomination component are those specified in ISO-4217. If the denomination is not specified, "MSH-17-country code", in section 2.14.9.17, is used to determine the default. Example:

|99.50^USD|

where USD is the ISO 4217 code for the U.S. American dollar.

**2.A.42 MOC - money and charge code**

HL7 Component Table - MOC – Money and Code

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	MO	O		Monetary Amount		2.A.41
2	705	CWE	O		Charge Code		2.A.13

Definition: Transmits monetary information and the associated charge code for services performed.

Maximum Length: 726

**Note:** Replaces the CM data type used in sections 4.5.3.23 OBR-23 and 7.4.1.23- OBR-23 as of v 2.5.

**2.A.42.0****2.A.42.1 Monetary Amount (MO)**

Definition: The amount and denomination of money associated with the charge code.

**2.A.42.2 Charge Code (CWE)**

Definition: The code identifying the charge to the ordering entity for the services performed.

**2.A.43 MOP - money or percentage**

HL7 Component Table – MOP – Money or Percentage

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	2	ID	R	0148	Money or Percentage Indicator		2.A.35
2	16	NM	R		Money or Percentage Quantity		2.A.47
3	3	ID	O		Currency Denomination		2.A.35

Definition: This data type specifies an amount that may be either currency or a percentage. It is a variation on the MO data type that is limited to currency.

Maximum Length: 23

**Note:** Replaces the CM data type used in section 6.5.8.5 IN3-5, as of v 2.5. This data type is restricted to this field.

Example: USD is the ISO 4217 code for the U.S. American dollar.

|AT^99.50^USD|

**2.A.43.1 Money or Percentage Indicator (ID)**

Definition: Specifies whether the amount is currency or a percentage.

Refer to [HL7 Table 0148 – Money or percentage indicator](#) for valid values.

HL7 Table 0148 – Money or percentage indicator

Value	Description	Comment
AT	Currency amount	
PC	Percentage	

**2.A.43.2 Money or Percentage Quantity (NM)**

Definition: Specifies the currency or percentage quantity.

**2.A.43.3 Currency Denomination (ID)**

Definition: the denomination in which the quantity is expressed where the amount is currency. The values for the denomination component are those specified in ISO-4217. If the denomination is not specified, the context of the message or "MSH-17-country code", in section 2.14.9.17, is used to determine the default.

**2.A.44 MSG - message type**

HL7 Component Table - MSG – Message Type

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	3	ID	R	0076	Message Code		2.A.35
2	3	ID	R	0003	Trigger Event		2.A.35
3	7	ID	R	0354	Message Structure		2.A.35

Definition: This field contains the message type, trigger event, and the message structure ID for the message.

**Maximum Length:** 15.

**Note:** Replaces the CM data type used in 2.16.9.9 MSH-9 as of v 2.5.

**2.A.44.1 Message Code (ID)**

Definition: Specifies the message type code. Refer to [HL7 Table 0076– Message Type](#) in section 2.16.1 for valid values.

This table contains values such as ACK, ADT, ORM, ORU etc.

See section 2.5.1, "Messages" for further discussion.

**2.A.44.2 Trigger Event (ID)**

Definition: Specifies the trigger event code. Refer to [HL7 Table 0003– Event Type](#) in section 2.16.2 for valid values.

This table contains values like A01, O01, R01 etc.

See section 2.3.1 – Trigger Events for further discussion.

**2.A.44.3 Message Structure (ID)**

Definition: Specifies the abstract message structure code. Refer to HL7 Table 0354 – Message Structure in section 2.17.3 for valid values.

**2.A.45 NA - numeric array**

HL7 Component Table - NA – Numeric Array

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	16	NM	R		Value1		2.A.47
2	16	NM	O		Value2		2.A.47
3	16	NM	O		Value3		2.A.47
4	16	NM	O		Value4		2.A.47
...							

Definition: This data type is used to represent a series (array) of numeric values. A field of this type may contain a one-dimensional array (vector or row) of numbers. Also, by allowing the field to repeat, a two-dimensional array (table) of numbers may be transmitted using this format, with each row of the table represented as one repetition of the field. Arrays that have one or more values not present may be transmitted using this data type. "Not present" values are represented as two adjacent component delimiters. If the absent values occur at the end of a row, the trailing component delimiters may be omitted. If an entire row of a table has no values, no component delimiters are necessary (in this case, there will be two adjacent repetition delimiters).

**Maximum Length:** 65536

**Example 1:** vector of 8 numbers

|125^34^-22^-234^569^442^-212^6|

**Example 2:** 3 x 3 array of numbers

|1.2^-3.5^5.2~2.0^3.1^-6.2~3.5^7.8^-1.3|

**Example 3:** 5 x 4 array of numbers with the values in positions (1,1), (2,2), (2,3), (3,3), (3,4), (4,1), (4,2), (4,3), and (4,4) not present

|^2^3^4~5^^8~9^10~~17^18^19^20|

## 2.A.46 NDL – name with date and location

HL7 Component Table - NDL – Name with Date and Location

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	406	CNN	O		Name		2.A.9
2	24	DTM	O		Start Date/time		2.A.22
3	24	DTM	O		End Date/time		2.A.22
4	20	IS	O	0302	Point of Care		2.A.36
5	20	IS	O	0303	Room		2.A.36
6	20	IS	O	0304	Bed		2.A.36
7	227	HD	O		Facility		2.A.33
8	20	IS	O	0306	Location Status		2.A.36
9	20	IS	O	0305	Patient Location Type		2.A.36
10	20	IS	O	0307	Building		2.A.36
11	20	IS	O	0308	Floor		2.A.36

Definition: Specifies the name of the person performing a service, when the person performed the service and where the person performed the service. Retained for backward compatibility as of v2.6.

**Maximum Length:** 831

**Note:** Replaces the CM data type used in sections 4.5.3.32 and 7.4.1.32-( OBR-32), 4.5.3.33 and 7.4.1.33 - ( OBR-33) 4.5.3.34 and 7.4.1.34 - ( OBR-34) 4.5.3.35 and 7.4.1.35 - ( OBR-35) as of v 2.5.

### 2.A.46.1 Name (CNN)

Definition: This component specifies the name of the person performing a service.

### 2.A.46.2 Start date/time (DTM)

Definition: This component specifies the starting date and time for when the person is performing the service.

### 2.A.46.3 End Date/time (DTM)

Definition: This component specifies the ending date and time for when the person is performing the service.

### 2.A.46.4 Point of Care (IS)

Definition: This component specifies the code for the point where patient care is administered. It is conditional on NDL.9 – Patient Location Type (e.g., nursing unit or department or clinic). After floor, it is the most general patient location designation. Refer to [User-defined Table 0302 - Point of care](#) for suggested values

### 2.A.46.5 Room (IS)

Definition: Patient room. After point of care, it is the most general location designation. Refer to [User-defined Table 0303 - Room](#) for suggested values.

**2.A.46.6 Bed (IS)**

Definition: This component specifies the code for the patient's bed. After room, it is the most general location designation. Refer to [User-defined Table 0304 - Bed](#) for suggested values.

**2.A.46.7 Facility (HD)**

Definition: This component is subject to site interpretation but generally describes the highest level physical designation of an institution, medical center or enterprise. It is the most general location designation.

**2.A.46.8 Location Status (IS)**

Definition: This component specifies the code for the status or availability of the location. For example, it may convey bed status. Refer to [User-defined Table 0306 - Location status](#) for suggested values.

**2.A.46.9 Patient Location Type (IS)**

Definition: Location type is the categorization of the location defined by facility, building, floor, point of care, room or bed. Although not a required field, when used, it may be the only populated field. Usually includes values such as nursing unit, department, clinic, SNF, physician's office. Refer to [User-defined Table 0305 - Person location type](#) for suggested values.

**2.A.46.10 Building (IS)**

Definition: This component specifies the code for the building where the person is located. After facility, it is the most general location designation. Refer to [User-defined Table 0307 - Building](#) for suggested values.

**2.A.46.11 Floor (IS)**

Definition: This component specifies the code for the floor where the person is located. After building, it is the most general location designation. Refer to [User-defined Table 0308 - Floor](#) for suggested values.

**2.A.47 NM - numeric**

HL7 Component Table - NM – Numeric

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
	16				Numeric		

Definition: A number represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an optional decimal point. In the absence of a sign, the number is assumed to be positive. If there is no decimal point the number is assumed to be an integer.

<b>Maximum Length: 16</b>
---------------------------

Examples:

```
| 999 |
| -123.792 |
```

Leading zeros, or trailing zeros after a decimal point, are not significant. For example, the following two values with different representations, "01.20" and "1.2," are identical. Except for the optional leading sign (+ or -) and the optional decimal point (.), no non-numeric ASCII characters are allowed. Thus, the value <12 should be encoded as a structured numeric (SN) (preferred) or as a string (ST) (allowed, but not preferred) data type.

**2.A.48 NR - numeric range**

HL7 Component Table - NR – Numeric Range

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	16	NM	O		Low Value		2.A.47
2	16	NM	O		High Value		2.A.47

Definition: Specifies the interval between the lowest and the highest values in a series of data. In the case where a numeric range is unbounded on one side, the component of the unbounded side is null. Whether the end points are included in the range is defined in the usage note for the field.

**Note:** Replaces the CM data type used in sections 8.8.4.6.1– OM2-6.1, 8.8.4.6.3– OM2-6.3and 8.8.4.6.4– OM2-6.4, as of v 2.5.

**Maximum Length:** 33

#### 2.A.48.1 Low Value (NM)

Definition: The number specifying the lower limit or boundary of the range.

#### 2.A.48.2 High Value (NM)

Definition: The number specifying the high limit or boundary of the range.

### 2.A.49 OCD - occurrence code and date

HL7 Component Table - OCD – Occurrence Code and Date

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	705	CNE	R	0350	Occurrence Code		2.A.8
2	8	DT	R		Occurrence Date		2.A.21

Definition: The code and associated date defining a significant event relating to a bill that may affect payer processing.

**Maximum Length:** 714

**Note:** Replaces the CM data type used in sections 6.5.10.10 UB1-16 and 6.5.11.7 UB2-7, as of v 2.5.

This data type carries data defined by CMS or other regulatory agencies. It corresponds to UB82 Fields 28-32 and UB92 fields 32a, 32b, 33a, 33b, 34a, 34b, 35a, and 35b. Refer to a UB specification for additional information.

Use Case: A Medicare beneficiary was confined in hospital from January 1, 1992 to January 10, 1992, however, his Medicare Part A benefits were exhausted as of January 8, 1992, and he was not entitled to Part B benefits. Therefore, Form Locator 32 should contain code 23 and the date 010892.

Example:

|23&Benefits Exhausted&NUBC^19920108|

#### 2.A.49.1 Occurrence Code (CNE)

Definition: The NUBC code for the event or occurrence relating to a bill that may affect payer processing.

Refer to [HL7-defined Table 0350 – Occurrence code](#) for valid values.

Values for this component need to come from National Uniform Billing Committee (NUBC). No extensions are allowed.

HL7-defined Table 0350 - Occurrence code

Value	Description	Comment
	Use NUBC codes	

#### 2.A.49.2 Occurrence Date (DT)

Definition: The date the event, relating to a bill that may affect payer processing, occurred.

### 2.A.50 OSD - order sequence definition

HL7 Component Table - OSD – Order Sequence Definition

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	1	ID	R	0524	Sequence/Results Flag		2.A.35
2	15	ST	R		Placer Order Number: Entity Identifier		2.A.74
3	6	IS	O	0363	Placer Order Number: Namespace ID		2.A.36



SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
4	15	ST	R		Filler Order Number: Entity Identifier		2.A.74
5	6	IS	O	0363	Filler Order Number: Namespace ID		2.A.36
6	12	ST	O		Sequence Condition Value		2.A.74
7	3	NM	O		Maximum Number of Repeats		2.A.47
8	15	ST	R		Placer Order Number: Universal ID		2.A.74
9	6	ID	O	0301	Placer Order Number: Universal ID Type		2.A.35
10	15	ST	R		Filler Order Number: Universal ID		2.A.74
11	6	ID	O	0301	Filler Order Number: Universal ID Type		2.A.35

Definition: This data type specifies a fully coded version for forming a relationship between an order and one or more other orders. The relationship may be sequential or a cyclical pattern.

Usage of the OSD is restricted to the TQ data type (especially as it is applied to the ORC-7). Retained for backward compatibility only as of v 2.5. The reader is advised to consider the TQ1 and TQ2 segments rather than this data type if sequencing levels or cyclical patterns need to be transmitted.

**Maximum Length:** 110

**Note:** Replaces the CM data type used in the TQ data type, component 10, as of v 2.5.

There are many situations, such as the creation of an order for a group of intravenous (IV) solutions, where the sequence of the individual intravenous solutions (each a service in itself) needs to be specified, e.g., hyperalimentation with multi-vitamins in every third bottle.

There are other situations where part of the order's instructions contains a results condition of some type, such as "PRN pain". There is currently a free text "condition" component of ORC-7-quantity/timing that allows any condition to be specified.

The sequencing conditions are based on the completion of a predecessor service.

### Usage notes:

Suppose the following:

The predecessor order is defined by the OE1000&OrdEnt as the placer order number, in subcomponents 2 and 3 of component 10 of ORC-7-quantity/timing.

The successor order, this order, has the placer order number OE1001^OrdEnt in the ORC segment.

The following sequence condition values have the following meanings:

Value	Description	Comment
ES + 10M	Start time of the successor	The finish time of OE1000&OrdEnt (predecessor) plus 10 minutes defines the start time of the successor, OE1001^OrdEnt (this order); i.e., start this order 10 minutes after the completion of its predecessor.
SS - 10M	Start time of this order	The start time of the predecessor minus 10 minutes defines the start time of this order; i.e., start this order 10 minutes before its predecessor.

### Use Case 1: Cyclic placer order groups

For the special case where there is a cycle of orders that must be repeated, the first order to be executed will have a "sequence condition value" whose first character must be an asterisk (\*). The last order to be executed may have a "sequence condition value" whose first character must be a pound sign (#).

Example:

Value	Description	Comment
*FS+10M		Translates to: execute this order the first time without evaluating the condition specified in the 10th component; but repeat only its execution when the specified external order's start or finish date/time has met this condition. This

Value	Description	Comment
		specification generates a repetition of the order for each iteration of the cycle.

**Note:** This requires that the ordering application be able to specify the placer order number of the last order in the cycle in the first order's quantity/timing specification.

To implement a cyclic group of four IV orders using the parent/child paradigm, the parent specifies a custom group of IVs, and the following occurs:

ORC-7-quantity/timing of the second child order specifies that it follows the first child order.

ORC-7-quantity/timing of the third child order specifies that it follows the second child order.

ORC-7-quantity/timing of the fourth child order specifies that it follows the third order.

To repeat the group of four child orders in a cyclic manner, the following occurs:

ORC-7-quantity/timing of the first child order specifies that it is to be executed once without any dependence on the completion of other orders.

Its second execution follows the completion of the fourth order. See example in Chapter 4 RXO segment examples. This scheme allows the following to be tracked:

The status of the whole group of orders to be reported back at the level of the parent order.

The status for each individual IV order by following the status of the corresponding child order.

Separate Orders example:

The same group of orders can be sent as a group of four orders (without a common parent), linked only by the data in their quantity/timing fields. In this case, there is no convenient HL7 method of transmitting the order status of the group as a whole without transmitting the status of each of the four separate orders.

### Use Case 2: Inheritance of order status

Cancellation/discontinuation/hold order control events:

This logic implies the normal execution of the referenced predecessor order. Thus a cancel (or discontinuation or hold) of a predecessor order implies the cancellation (or discontinuation or hold) of all subsequent orders in the chain.

If the referenced order has been canceled (or discontinued or held), the current order inherits that same status.

In the case of hold, the removal of the hold of the predecessor implies a removal of the hold for the given order (which can then be executed according to the specification in the 10th component).

#### 2.A.50.1 Sequence/Results Flag (ID)

Definition: Identifies whether sequence conditions or a repeating cycle of orders is defined. Refer to HL7-defined Table 0524 – Sequence condition for valid values.

HL7 Table 0524 – Sequence condition

Value	Description	Comment
S	Sequence conditions	
C	Repeating cycle of orders	
R	Reserved for possible future use	

#### 2.A.50.2 Placer Order Number: Entity Identifier (ST)

Definition: Contains the first component of the placer order number, entity identifier .

#### 2.A.50.3 Placer Order Number: Namespace ID (IS)

Definition: Contains the second component of the placer order number, namespace ID. Refer to [user-defined table 0363 - Assigning Authority](#) for suggested values.

#### 2.A.50.4 Filler Order Number: Entity Identifier (ST)

Definition: Contains the first component of the filler order number, entity identifier.

**2.A.50.5 Filler Order Number: Namespace ID (IS)**

Definition: Contains the second component of the filler order number, namespace ID. Refer to [user-defined table 0363 - Assigning Authority](#) for suggested values

**2.A.50.6 Sequence Condition Value (ST)**

Definition: Defines the relationship between the start/end of the related predecessor or successor order and the current order from ORC-2, 3 or 4.

The acceptable condition values have the form commonly used in project planning methodologies in the following format: <one of "SS", "EE", "SE", or "ES"> +/- <time>.

The first letter stands for start (S) or end (E) of predecessor order, where the predecessor is defined by the placer or filler order number in subcomponents 1,2 or subcomponents 3,4.

The second letter stands for the start (S) or end (E) of the successor order, where the successor order is the order containing this quantity/timing specification.

The time specifies the interval between the predecessor and successor starts or ends (see following examples).

Where <time> is defined as:

Example	Description	Comment
S<integer>	do for <integer> seconds	
M<integer>	do for <integer> minutes	
H<integer>	do for <integer> hours	
D<integer>	do for <integer> days	
W<integer>	do for <integer> weeks	
L<integer>	do for <integer> months	

**2.A.50.7 Maximum Number of Repeats (NM)**

Definition: The maximum number of repeats to be used only on cyclic groups. The total number of repeats is constrained by the end date/time of the last repeat or the end date/time of the parent, whichever is first.

**2.A.50.8 Placer Order Number: Universal ID (ST)**

Definition: Contains the next to the last component of the placer order number, universal ID.

**2.A.50.9 Placer Order Number: Universal ID Type(ID)**

Definition: Contains the last component of the placer order number. Refer to [HL7 table 0301 - Universal ID Type](#) for valid values.

**2.A.50.10 Filler Order Number: Universal ID (ST)**

Definition: Contains the next to the last component of the filler order number, universal ID.

**2.A.50.11 Filler Order Number: Universal ID Type (ID)**

Definition: Contains the last component of the placer order number. Refer to [HL7 table 0301 - Universal ID Type](#) for valid values.

**2.A.51 OSP - occurrence span code and date**

HL7 Component Table - OSP – Occurrence Span Code and Date

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	705	CNE	R	0351	Occurrence Span Code		2.A.8
2	8	DT	C		Occurrence Span Start Date	Either start or stop date or both must be present.	2.A.21

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
3	8	DT	C		Occurrence Span Stop Date	Either start or stop date or both must be present.	2.A.21

Definition: A code and the related dates that identify an event that relates to the payment of the claim. For example, Prior Stay Dates which is the from/through dates given by the patient of any hospital stay that ended within 60 days of this hospital or SNF admission.

**Maximum Length: 723**

**Note:** Replaces the CM data type used in section 6.5.11.8 UB2-8, as of v 2.5.

Use case: The patient was admitted for minor surgery (1/6/03) and discharged the following day (1/7/03). Complications ensued and the patient was readmitted the following day (1/8/03). When the claim for 1/8/03 is filed, the prior stay dates (1/6/03-1/7/03) must be reported (per the Health Plan) using Occurrence Span Code and Dates 71 - Prior Stay Date. Example:

|71&Prior Stay Date&NUBC^20030106^20030107|

### 2.A.51.1 Occurrence Span Code (CNE)

Definition: The NUBC code itself that identifies an event that relates to the payment of a claim.

Refer to [HL7-defined Table 0351 – Occurrence span](#) for valid values. Values for this component need to come from National Uniform Billing Committee (NUBC). No extensions are allowed.

HL7-defined Table 0351 - Occurrence span

Value	Description	Comment
	use NUBC codes	

### 2.A.51.2 Occurrence Span Start Date (DT)

Definition: The date an event started that relates to the payment of a claim.

### 2.A.51.3 Occurrence Span Stop Date (DT)

Definition: The date an event ended that relates to the payment of a claim.

## 2.A.52 PIP – practitioner institutional privileges

HL7 Component Table - PIP – Practitioner Institutional Privileges

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	705	CWE	R	<a href="#">0525</a>	Privilege		2.A.13
2	705	CWE	O	<a href="#">0526</a>	Privilege Class		2.A.13
3	8	DT	O		Expiration Date		2.A.21
4	8	DT	O		Activation Date		2.A.21
5	427	EI	O		Facility		2.A.25

Definition: This data type specifies the institutional privileges with associated detail granted to a provider.

**Maximum Length: 1875**

**Note:** Replaces the CM data type used in 15.4.5.7 PRA-7 as of v 2.5.

### 2.A.52.1 Privilege (CWE)

Definition: Specifies the institutional privilege itself. Refer to [User-defined table 0525 – Privilege](#) for suggested values.

User-defined Table 0525 – Privilege

Value	Description	Comment
	No suggested values	

### 2.A.52.2 Privilege Class (CWE)

Definition: Specifies the class category of institutional privilege. Refer to [User-Defined Table 0526 – Privilege Class](#) for suggested values.

User-defined Table 0526 – Privilege class

Value	Description	Comment
	No suggested values	

### 2.A.52.3 Expiration Date (DT)

Definition: Specifies the date the institutional privilege is/was no longer valid.

### 2.A.52.4 Activation Date (DT)

Definition: Specifies the date the institutional privilege became/becomes valid.

### 2.A.52.5 Facility (EI)

Definition: Specifies the facility in which the institutional privilege is/was valid.

## 2.A.53 PL - person location

HL7 Component Table - PL– Person Location

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	IS	O	0302	Point of Care		2.A.36
2	20	IS	O	0303	Room		2.A.36
3	20	IS	O	0304	Bed		2.A.36
4	227	HD	O		Facility		2.A.33
5	20	IS	O	0306	Location Status		2.A.36
6	20	IS	C	0305	Person Location Type		2.A.36
7	20	IS	O	0307	Building		2.A.36
8	20	IS	O	0308	Floor		2.A.36
9	199	ST	O		Location Description		2.A.74
10	427	EI	O		Comprehensive Location Identifier		2.A.25
11	227	HD	O		Assigning Authority for Location		2.A.33

Definition: This data type is used to specify a patient location within a healthcare institution. Which components are valued depends on the needs of the site. For example for a patient treated at home, only the person location type is valued. It is most commonly used for specifying patient locations, but may refer to other types of locations within a healthcare setting.

**Maximum Length:** 1230

**Note:** This data type contains several location identifiers that should be thought of in the following order from the most general to the most specific: facility, building, floor, point of care, room, bed. Additional data about any location defined by these components can be added in the following components: person location type, location description and location status.

### Example: Nursing Unit

A nursing unit at Community Hospital: 4 East, room 136, bed B

4E^136^B^CommunityHospital^N^^

### Example: Clinic

A clinic at University Hospitals: Internal Medicine Clinic located in the Briones building, 3<sup>rd</sup> floor.

InternalMedicine^^UniversityHospitals^C^Briones^3^

### Example: Home

The patient was treated at his home.

^^^^H^^

#### 2.A.53.1 Point of Care (IS)

Definition: This component specifies the code for the point where patient care is administered. It is conditional on PL.6 Person Location Type (e.g., nursing unit or department or clinic). After floor, it is the most general patient location designation. Refer to [User-defined Table 0302 - Point of care](#) for suggested values.

User-defined Table 0302 – Point of care

Value	Description	Comment
	No suggested values defined	

#### 2.A.53.2 Room (IS)

Definition: This component specifies the code for the patient's room. After point of care, it is the most general person location designation. Refer to [User-defined Table 0303 - Room](#) for suggested values.

User-defined Table 0303 – Room

Value	Description	Comment
	No suggested values defined	

#### 2.A.53.3 Bed (IS)

Definition: This component specifies the code for the patient's bed. After room, it is the most general person location designation. Refer to [User-defined Table 0304 - Bed](#) for suggested values.

User-defined Table 0304 – Bed

Value	Description	Comment
	No suggested values defined	

#### 2.A.53.4 Facility (HD)

Definition: This component is subject to site interpretation but generally describes the highest level physical designation of an institution, medical center or enterprise. It is the most general person location designation.

See Section [2.A.33](#), “[HD - hierarchic designator](#)” for discussion of data type.

**Note:** When the HD data type is used in a given segment as a component of a field of another data type, [User-defined Table 0300 - Namespace ID](#) (referenced by the first sub-component of the HD component) may be redefined (given a different user-defined table number and name) by the technical committee responsible for that segment.

#### 2.A.53.5 Location Status (IS)

Definition: This component specifies the code for the status or availability of the location. For example, it may convey bed status. Refer to [User-defined Table 0306 - Location status](#) for suggested values.

User-defined Table 0306 – Location status

Value	Description	Comment
	No suggested values defined	

#### 2.A.53.6 Person Location Type (IS)

Definition: Person location type is the categorization of the person's location defined by facility, building, floor, point of care, room or bed. Although not a required field, when used, it may be the only

populated field. It usually includes values such as nursing unit, department, clinic, SNF, physician's office. Refer to [User-defined Table 0305 - Person location type](#) for suggested values.

User-defined Table 0305 – Person location type

Value	Description	Comment
C	Clinic	
D	Department	
H	Home	
N	Nursing Unit	
O	Provider's Office	
P	Phone	
S	SNF	

**2.A.53.7 Building (IS)**

Definition: This component specifies the code for the building where the person is located. After facility, it is the most general person location designation. Refer to [User-defined Table 0307 - Building](#) for suggested values.

User-defined Table 0307 – Building

Value	Description	Comment
	No suggested values defined	

**2.A.53.8 Floor (IS)**

Definition: This component specifies the code for the floor where the person is located. After building, it is the most general person location designation. Refer to [User-defined Table 0308 - Floor](#) for suggested values.

User-defined Table 0308 – Floor

Value	Description	Comment
	No suggested values defined.	

**2.A.53.9 Location Description (ST)**

Definition: This component describes the location in free text.

**2.A.53.10 Comprehensive Location Identifier (EI)**

Definition: The unique identifier that represents the physical location as a whole without regard for the individual components. This accommodates sites that may have a different method of defining physical units or who may code at a less granular level. For example, point of care, room, and bed may be 1 indivisible code.

**2.A.53.11 Assigning Authority for Location (HD)**

Definition: The entity that creates the data for the individual physical location components. If populated, it should be the authority for all components populated. Refer to [User-defined Table 0363 – Assigning authority](#) for suggested values for the first sub-component of the HD component, <namespace ID>.

This component makes it possible for codes to be differentiated when the field in which this data type is used repeats.

**Note:** When the HD data type is used in a given segment as a component of a field of another data type, [User-defined Table 0300 - Namespace ID](#) (referenced by the first sub-component of the HD component) may be re-defined (given a different user-defined table number and name) by the technical committee responsible for that segment.

By site agreement, implementors may continue to use [User-defined Table 0300 – Namespace ID](#) for the first sub-component.

## 2.A.54 PLN – practitioner license or other Id number

HL7 Component Table - PLN – Practitioner License or Other ID Number

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	ST	R		ID Number		2.A.74
2	8	IS	R	0338	Type of ID Number		2.A.36
3	62	ST	O		State/other Qualifying Information		2.A.74
4	8	DT	O		Expiration Date		2.A.21

Definition: This data type specifies a practitioner's license number, or other ID number such as UPIN, Medicare and Medicaid number, and associated detail.

**Maximum Length: 101**

**Note:** Replaces the CM data type used in 15.4.5.6 PRA-6, 11.6.3.7 PRD-7 and 11.6.4.7 CTD-7 as of v 2.5.

### 2.A.54.1 ID Number (ST)

Definition: Specifies the license number or other ID number such as UPIN, Medicare and Medicaid number.

### 2.A.54.2 Type of ID Number (IS)

Definition: Specifies the type of number.

Refer to [User-defined table 0338 – Practitioner ID Number](#) for suggested values.

User-defined Table 0338 - Practitioner ID number type

Value	Description	Comment
CY	County number	
DEA	Drug Enforcement Agency no.	
GL	General ledger number	
LI	Labor and industries number	
L&I	Labor and industries number	Deprecated as of v 2.5; Use LI instead
MCD	Medicaid number	
MCR	Medicare number	
QA	QA number	
SL	State license number	
TAX	Tax ID number	
TRL	Training license number	
UPIN	Unique physician ID no.	

### 2.A.54.3 State/other Qualifying Information (ST)

Definition: Specifies the state or province in which the license or ID is valid, if relevant, or other qualifying information. It is recommended that state qualifications use the abbreviations from the postal service of the country.

### 2.A.54.4 Expiration date (DT)

Definition: Specifies the date when the license or ID is no longer valid.

## 2.A.55 PPN - performing person time stamp

HL7 Component Table – PPN – Performing Person Time Stamp

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	15	ST	O		ID Number		2.A.74
2	194	FN	O		Family Name		2.A.30
3	30	ST	O		Given Name		2.A.74



SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
4	30	ST	O		Second and Further Given Names or Initials Thereof		2.A.74
5	20	ST	O		Suffix (e.g., JR or III)		2.A.74
6	20	ST	O		Prefix (e.g., DR)		2.A.74
7	5	IS	B	0360	Degree (e.g., MD)	deprecated as of 2.5	2.A.36
8	4	IS	C	0297	Source Table		2.A.36
9	227	HD	O	0363	Assigning Authority		2.A.33
10	1	ID	O	0200	Name Type Code		2.A.35
11	4	ST	O		Identifier Check Digit		2.A.74
12	3	ID	C	0061	Check Digit Scheme		2.A.35
13	5	ID	O	0203	Identifier Type Code		2.A.35
14	227	HD	O		Assigning Facility		2.A.33
15	24	DTM	O		Date/Time Action Performed		2.A.22
16	1	ID	O	0465	Name Representation Code		2.A.35
17	705	CWE	O	0448	Name Context		2.A.13
18	17	DR	B		Name Validity Range	deprecated as of v 2.5	2.A.20
19	1	ID	O	0444	Name Assembly Order		2.A.35
20	24	DTM	O		Effective Date		2.A.22
21	24	DTM	O		Expiration Date		2.A.22
22	199	ST	O		Professional Suffix		2.A.74
23	705	CWE	O		Assigning Jurisdiction		2.A.13
24	705	CWE	O		Assigning Agency or Department		2.A.13

### Maximum Length: 3213

This data type is the equivalent of an XCN data type joined with a DTM data type. However, the XCN data type has been flattened to allow legal expression of its embedded complex data types HD, CWE and CWE.

#### 2.A.55.1 ID Number (ST)

Coded ID according to a user-defined table, defined by the 8<sup>th</sup> component. If the first component is present, either the source table or the assigning authority must be valued.

#### 2.A.55.2 Family Name (FN)

This component allows full specification of the surname of a person. Where appropriate, it differentiates the person's own surname from that of the person's partner or spouse, in cases where the person's name may contain elements from either name. It also permits messages to distinguish the surname prefix (such as "van" or "de") from the surname root. See section 2.A.30, "*FN – Family Name*".

#### 2.A.55.3 Given Name (ST)

First name.

#### 2.A.55.4 Second and Further Given Names or Initials Thereof (ST)

Multiple middle names may be included by separating them with spaces.

#### 2.A.55.5 Suffix (ST)

Used to specify a name suffix (e.g., Jr. or III).

#### 2.A.55.6 Prefix (ST)

Used to specify a name prefix (e.g., Dr.).

### 2.A.55.7 Degree (IS)

Retained for backward compatibility only as of v 2.5. See Professional Suffix component.

Used to specify an educational degree (e.g., MD). Refer to [User-defined Table 0360 – Degree](#) for suggested values.

### 2.A.55.8 Source Table (IS)

[User-defined Table 0297 - CN ID](#) source is used as the HL7 identifier for the user-defined table of values for this component. Used to delineate the first component.

### 2.A.55.9 Assigning Authority (HD)

The assigning authority is a unique identifier of the system (or organization or agency of department) that creates the data. It is a HD data type. [User-defined Table 0363 – Assigning authority](#) is used as the HL7 identifier for the user-defined table of values for the first sub-component of the HD component, <namespace ID>.

**Note:** When the HD data type is used in a given segment as a component of a field of another data type, [User-defined Table 0300 - Namespace ID](#) (referenced by the first sub-component of the HD component) may be re-defined (given a different user-defined table number and name) by the technical committee responsible for that segment.

By site agreement, implementors may continue to use [User-defined Table 0300 – Namespace ID](#) for the first sub-component.

The reader is referred to the PPN.23 and the PPN.24 if there is a need to transmit values with semantic meaning for an assigning jurisdiction or assigning department or agency in addition to, or instead of, an assigning authority. However, all 3 components may be valued. If, in so doing, it is discovered that the values in PPN.23 and/or PPN.24 conflict with PPN.94, the user would look to the Message Profile or other implementation agreement for a statement as to which takes precedence.

### 2.A.55.10 Name Type Code (ID)

A code that represents the type of name. Refer to [HL7 Table 0200 - Name type](#) for valid values (see Section 2.A.88, “[XPN - extended person name](#)”).

### 2.A.55.11 Identifier Check Digit (ST)

Definition: A digit, or digits, exclusive of the identifier in CX.1, usually calculated by applying an algorithm to all or some of the digits in the number, which may be used to test validity of the non-check-digit identifier.

This component may also be used to transmit information intended to validate the veracity of the supplied identifier or the presenter of the identifier. For example, this component may be used to ensure that the presenter of a credit card is an authorized user of that card.

### 2.A.55.12 Check Digit Scheme (ID)

Definition: Contains the code identifying the check digit scheme employed.

Refer to [HL7 Table 0061 - Check digit scheme](#) for valid values.

### 2.A.55.13 Identifier Type Code (ID)

A code corresponding to the type of identifier. In some cases, this code may be used as a qualifier to the "Assigning authority" component. Refer to [HL7 Table 0203 - Identifier type](#) for suggested values.

### 2.A.55.14 Assigning Facility (HD)

The place or location identifier where the identifier was first assigned to the patient. This component is not an inherent part of the identifier but rather part of the history of the identifier: as part of this data type, its existence is a convenience for certain intercommunicating systems.

**Note:** When the HD data type is used in a given segment as a component of a field of another data type, [User-defined Table 0300 - Namespace ID](#) (referenced by the first sub-component of the HD component) may be re-defined (given a different user-defined table number and name) by the technical committee responsible for that segment.

### 2.A.55.15 Date/Time Action Performed (DTM)

This component describes when the activity was performed.

**Note:** If this field is not null, both the performing person and the time stamp must be valued.

#### 2.A.55.16 Name Representation Code (ID)

Different name/address types and representations of the same name/address should be described by repeating of this field, with different values of the Name/Address Type and/or Name/Address Representation component.

**Note:** This new component remains in “alphabetic” representation with each repetition of the field using these data types. That is, even though the name may be represented in an ideographic character set, this component will remain represented in an alphabetic character set.

HL7 Table 0465 - Name/address representation

Value	Description	Comment
I	Ideographic (i.e., Kanji)	
A	Alphabetic (i.e., Default or some single-byte)	
P	Phonetic (i.e., ASCII, Katakana, Hiragana, etc.)	

In general this component provides an indication of the representation provided by the data item. It does not necessarily specify the character sets used. Thus, even though the representation might provide an indication of what to expect, the sender is still free to encode the contents using whatever character set is desired. This component provides only hints for the receiver, so it can make choices regarding what it has been sent and what it is capable of displaying.

#### 2.A.55.17 Name Context (CWE)

This component is used to designate the context in which a name is used. The main use case is in Australian healthcare: indigenous patients who prefer to use different names when attending different healthcare institutions. Another use case occurs in the US where health practitioners can be licensed under slightly different names and the reporting of the correct name is vital for administrative purposes. Refer to chapter 3, section 3.4.2.6 for more detailed information on how to use this table. Refer to [User-defined table 0448 – Name context](#) for suggested values.

User-defined Table 0448 – Name context

Value	Description	Comment
	No suggested values defined	

#### 2.A.55.18 Name Validity Range (DR)

This component contains the start and end date/times, which define the period during which this name was valid.

Retained for backward compatibility only as of v 2.5. Refer to [PPN.20 Effective Date](#) and [PPN.21 Expiration Date](#). This component cannot be fully expressed and was identified as v 2.4 erratum.

#### 2.A.55.19 Name Assembly Order (ID)

A code that represents the preferred display order of the components of this person name. Refer to [HL7 Table 0444 – Name assembly order](#) for valid values.

HL7 Table 0444 – Name assembly order

Value	Description	Comment
G	Prefix Given Middle Family Suffix	
F	Prefix Family Middle Given Suffix	

#### 2.A.55.20 Effective Date (DTM)

Definition: The first date, if known, on which the person name is valid and active.

#### 2.A.55.21 Expiration Date (DTM)

Definition: The last date, if known, on which the person name is valid and active.

#### 2.A.55.22 Professional Suffix (ST)

Definition: Used to specify an abbreviation, or a string of abbreviations, denoting qualifications that support the person’s profession, (e.g., licenses, certificates, degrees, affiliations with professional societies, etc.). The Professional Suffix normally follows the Family Name when the Person Name is used for display purposes. Please note that this component is an unformatted string and is used for

display purposes only. Detailed information regarding the contents of Professional Suffix is obtained using appropriate segments in Chapter 15, "Personnel Management".

#### 2.A.55.23 Assigning Jurisdiction (CWE)

Definition: The geo-political body that assigned the identifier in component 1.

See section 2.A.14.9, "[Assigning Jurisdiction \(CWE\)](#)" for further detail.

#### 2.A.55.24 Assigning Agency or Department (CWE)

Definition: The agency or department that assigned the identifier in component 1.

See section 2.A.14.10, "[Assigning Agency or Department \(CWE\)](#)" for further details.

### 2.A.56 PRL - parent result link

HL7 Component Table - PRL – Parent Result Link

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	705	CWE	R		Parent Observation Identifier	Defined in the OBX-3 of the parent result.	2.A.13
2	20	ST	O		Parent Observation Sub-identifier	Defined in the OBX-4 of the parent result.	2.A.74
3	250	TX	O		Parent Observation Value Descriptor	Taken from the OBX-5 of the parent result.	2.A.78

Definition: Uniquely identifies the parent result's OBX segment related to the current order, together with the information in [OBR-29 - Parent](#).

**Usage Note:** This data type is applied only to [OBR-26 - Parent Result](#) where it serves to make information available for other types of linkages (e.g., toxicology). This important information, together with the information in [OBR-29 - Parent](#), uniquely identifies the parent result's OBX segment related to this order. The value of this OBX segment in the parent result is the organism or chemical species about which this battery reports. For example, if the current battery is an antimicrobial susceptibility, the parent results identified OBX contains a result that identifies the organism on which the susceptibility was run. This indirect linkage is preferred because the name of the organism in the parent result may undergo several preliminary values prior to finalization.

We emphasize that this field does not take the entire result field from the parent. It is meant only for the text name of the organism or chemical subspecies identified. This field is included only to provide a method for linking back to the parent result for those systems that could not generate unambiguous Observation IDs and sub-IDs.

This field is present only when the parent result is identified by [OBR-29 - Parent](#) and the parent spawns child orders for each of many results. See Chapter 7 for more details about this linkage.

**Maximum Length: 977**

**Note:** Replaces the CM data type used in sections 4.5.3.26 - OBR-26 and 7.4.1.26 - OBR-26 as of v 2.5.

#### 2.A.56.1 Parent Observation Identifier (CWE)

Definition: Contains the unique identifier of the parent observation as defined in the OBX-3 of the parent result. The value is the same as the OBX-3 of the parent.

#### 2.A.56.2 Parent Observation Sub-identifier (ST)

Definition: Contains the sub-ID of the parent result as defined in the OBX-4 of the parent result. The value is the same as the OBX-4 of the parent.

#### 2.A.56.3 Parent Observation Value Descriptor (TX)

Definition: Contains a descriptor of the parent observation value as specified in the OBX-5 of the parent result.

As an example, the third component may be used to record the name of the microorganism identified by the parent result directly. The organism in this case should be identified exactly as it is in the parent culture.

### 2.A.57 PT - processing type

HL7 Component Table - PT – Processing Type

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	1	ID	O	0103	Processing ID		2.A.35
2	1	ID	O	0207	Processing Mode		2.A.35

Definition: This data type indicates whether to process a message as defined in HL7 Application (level 7) Processing rules.

**Maximum Length: 3**

#### 2.A.57.1 Processing ID (ID)

A value that defines whether the message is part of a production, training, or debugging system. Refer to [HL7 Table 0103 - Processing ID](#) for valid values.

HL7 Table 0103 - Processing ID

Value	Description	Comment
D	Debugging	
P	Production	
T	Training	

#### 2.A.57.2 Processing Mode (ID)

A value that defines whether the message is part of an archival process or an initial load. Refer to [HL7 Table 0207 - Processing mode](#) for valid values.

HL7 Table 0207 - Processing mode

Value	Description	Comment
A	Archive	
R	Restore from archive	
I	Initial load	
T	Current processing, transmitted at intervals (scheduled or on demand)	
Not present	Not present (the default, meaning <i>current</i> processing)	

### 2.A.58 PTA - policy type and amount

HL7 Component Table - PTA – Policy Type and Amount

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	5	IS	R	0147	Policy Type		2.A.36
2	9	IS	O	0193	Amount Class		2.A.36
3	16	NM	B		Money or Percentage Quantity	deprecated as of v 2.5	2.A.47
4	23	MOP	R		Money or Percentage		2.A.43

Definition: This data type specifies the policy type and amount covered by the insurance.

**Maximum Length: 56**

**Note:** Replaces the CM data type used in section 6.5.7.29 IN2-29, as of v 2.5.

#### 2.A.58.1 Policy Type (IS)

Definition: Specifies the policy type.

Refer to [User-defined Table 0147 - Policy type](#) for suggested values.

User-defined Table 0147 - Policy type

Value	Description	Comment
ANC	Ancillary	
2ANC	Second ancillary	
MMD	Major medical	
2MMD	Second major medical	
3MMD	Third major medical	

## 2.A.58.2 Amount Class (IS)

Definition: Specifies the amount quantity class.

Refer to [User-defined Table 0193 - Amount class](#) for suggested values.

User-defined Table 0193 - Amount class

Value	Description	Comment
AT	Amount	Retained for backward compatibility only as of v 2.5
LM	Limit	
PC	Percentage	Retained for backward compatibility only as of v 2.5
UL	Unlimited	

## 2.A.58.3 Money or Percentage Quantity (NM)

Definition: Specifies the currency or percentage quantity.

Retained for backward compatibility only as of v 2.5. Refer to [PTA.4](#) instead.

## 2.A.58.4 Money or Percentage (MOP)

Definition: specifies an amount that may be either currency or a percentage.

## 2.A.59 QIP - query input parameter list

HL7 Component Table - QIP – Query Input Parameter List

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	12	ST	R		Segment Field Name		2.A.74
2	199	ST	R		Values		2.A.74

**Definition:** This data type contains a segment field name and the list of values to be passed to the query processor.

**Maximum Length:** 212

Example:

```
|@PID.5.1^EVANS|
```

## 2.A.59.1 Segment Field Name (ST)

This component contains the segment field name.

Naming conventions:

Segment field names are designated by the “@” symbol concatenated with the HL7 segment ID followed by the sequence number for the field separated by a period. See sections 2.5.2, “Segments and segment groups” and 2.5.3.1, “Position (sequence within the segment)” for a definition of segment ID and sequence number. If the field is divided into components, the designation may be suffixed with “.nn”, to identify a particular component (a suffix of “.3” indicates the third component of the field); otherwise, the whole field is assumed. If the field is further divided into subcomponents, the designation is suffixed with “.nn.mm”, which identifies the component and subcomponent requested by relative position.

Site-specific segment field names may be used. In this case, the site-specific segment ID (if the field is not being added to an existing HL7 segment) and the sequence number must be defined so that they do not conflict with existing HL7 segment IDs and field sequence numbers.

Values for this field are defined in the function-specific chapters of this specification.

**Note:** If the "@" is being used as one of the delimiter characters defined in MSH-2-encoding characters, it must be "escaped." See Section 2.7.1, "Formatting Codes".

### 2.A.59.2 Values (ST)

This component contains the field value or values in the form "value1& value2 & value3..."

A single-valued parameter contains only a single subcomponent in the second component, thus no subcomponent delimiters are needed (e.g., <segment field name> ^ <value>). A simple list of values (i.e., a one-dimensional array) may be passed instead of a single value by separating each value with the subcomponent delimiter (e.g., <segment field name> ^ <value1 & value2 & . . . >).

## 2.A.60 QSC - query selection criteria

HL7 Component Table - QSC – Query Selection Criteria

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	12	ST	R		Segment Field Name		2.A.74
2	2	ID	O	0209	Relational Operator		2.A.35
3	199	ST	O		Value		2.A.74
4	3	ID	O	0210	Relational Conjunction		2.A.35

**Definition:** This field indicates the conditions that qualify the rows to be returned in the query response. Note that this field conveys the same information as the "WHERE" clause in the corresponding SQL expression of the query, but is formatted differently.

**Maximum Length:** 219

Example:

|@PID.5.1^EQ^EVANS|

### 2.A.60.1 Segment Field Name (ST)

The name of the field that is participating as a qualifier (usually the "key"). Refer to Section 2.A.59.1, "Segment Field Name (ST)," for segment field name conventions.

### 2.A.60.2 Relational Operator (ID)

Refer to [HL7 Table 0209 - Relational operator](#) for valid values.

HL7 Table 0209 - Relational operator

Relational operator	Value	Comment
EQ	Equal	
NE	Not Equal	
LT	Less than	
GT	Greater than	
LE	Less than or equal	
GE	Greater than or equal	
CT	Contains	
GN	Generic	

### 2.A.60.3 Value (ST)

The value to which the field will be compared.

### 2.A.60.4 Relational Conjunction (ID)

Refer to [HL7 Table 0210 - Relational conjunction](#) for valid values. The relational conjunction is defined as follows: If more than one comparison is to be made to select qualifying rows, a conjunction relates this repetition of the field to the next.

HL7 Table 0210 - Relational conjunction

Relational conjunction	Note	Comment
AND	Default	
OR		



- When applied to strings, the relational operators LT, GT, LE, and GE imply an alphabetic comparison.
- A "generic" comparison selects a record for inclusion in the response when the beginning of the designated field matches the select string.
- Where a repeating field is specified as an operand, a match on any instance of that field qualifies the row for inclusion in the response message.
- AND takes precedence over OR. More sophisticated precedence rules require that the query be expressed as an embedded query language message or a stored procedure query message (see chapter 5)

### 2.A.61 RCD - row column definition

HL7 Component Table - RCD – Row Column Definition

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	12	ST	O		Segment Field Name		2.A.74
2	3	ID	O	0440	HL7 Data Type		2.A.35
3	2	NM	O		Maximum Column Width		2.A.47

**Definition:** This specifies the format of a column in terms of a segment field name, a data type, and a maximum length.

**Maximum Length: 19**

Example: This defines a column containing the value of the "last name" component of PID-5, expressed as a ST data type with a maximum width of 20.

|@PID.5.1^ST^20|

#### 2.A.61.1 Segment Field Name (ST)

The HL7 segment field name, which identifies the field occupying the column. Refer to Section [2.A.59.1, "Segment Field Name \(ST\)"](#), for segment field name definition conventions.

#### 2.A.61.2 HL7 Data Type (ID)

The two or three character HL7 data type. Refer to [HL7 Table 0440 – Data Types](#) in section 2.15, "Data Types" for valid values.

#### 2.A.61.3 Maximum Column Width (NM)

The maximum width of the column, as dictated by the responding system. This may vary from the HL7-defined maximum field length.

### 2.A.62 RFR - reference range

HL7 Component Table - RFR – Reference Range

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	33	NR	R		Numeric Range		2.A.48
2	8	IS	O	0001	Administrative Sex		2.A.36
3	33	NR	O		Age Range		2.A.48
4	33	NR	O		Gestational Age Range		2.A.48
5	20	ST	O		Species		2.A.74
6	20	ST	O		Race/subspecies		2.A.74
7	199	TX	O		Conditions		2.A.78

**Definition:** Describes a reference range and its supporting detail.

**Maximum Length: 352**



**Note:** Replaces the CM data type used in sections 8.8.4.6 - OM2-6, 8.8.4.7 - OM2-7 and 8.8.4.8 - OM2-8 as of v 2.5.

Examples:

- r) A range that applies unconditionally, such as albumin, is transmitted as:  
|3.0&5.5|
- s) A normal range that depends on sex, such as Hgb, is transmitted as:  
|13.5&18^M~12.0 & 16^F|
- t) A normal range that depends on age, sex, and race (a concocted example) is:  
|10&13^M^0&2^^^B11&13.5^M^2&20^^^B~12&14.5^M^20&70^^^B~13&16.0^M^70&^^^B|
- u) When no value is specified for a particular component, the range given applies to all categories of that component. For example, when nothing is specified for race/species, the range should be taken as the human range without regard to race. If no age range is specified, the normal range given is assumed to apply to all ages.

### 2.A.62.1 Numeric Range (NR)

Definition: This component specifies the numeric interval of the reference data. Range is taken to be inclusive (i.e., the range includes the end points). Units are context sensitive and are defined in the usage note for the field where this data type is used.

### 2.A.62.2 Administrative Sex (IS)

Definition: This component specifies which gender for which the reference range is valid. Refer to [User-defined Table 0001 – Administrative Sex](#) in section 3.4.2.8, "Administrative Sex" for suggested values.

### 2.A.62.3 Age Range (NR)

Definition: This component specifies the age range for which the reference range is valid. Ages of less than one year should be specified as a fraction (e.g., 1 month = 0.0830, 1 week = 0.01920, 1 day = 0.0027300). However, for most purposes involving infants, the gestational age (measured in weeks) is preferred. The lower end of the range is not indicated; the upper end is, assuring that series of ranges do not overlap.

### 2.A.62.4 Gestational Age Range (NR)

Definition: This component specifies the gestational age range for which the reference range is valid. Gestational age is relevant only when the reference range is influenced by the stage of pregnancy. The gestational age is measured in weeks from conception. For example, |1&4| implies that the normals apply to gestational ages from 1 week to 4 weeks inclusive. The lower end of the range is not included; the upper end is, assuring that series of age ranges do not overlap.

### 2.A.62.5 Species (TX)

Definition: This component specifies the species for which the reference range is valid. Species is assumed to be human unless otherwise stated. Example values are rabbit, mouse, and rat.

### 2.A.62.6 Race/subspecies (ST)

Definition: This component specifies the race or subspecies for which the reference range is valid. In the case of humans (the default species), the race is specified when race influences the reference range. When normal ranges for animals are being described, this component can be used to describe subspecies or special breeds of animals.

### 2.A.62.7 Conditions (TX)

Definition: This component specifies any arbitrary condition for which the reference range is valid. This may include such conditions as phase of menstrual cycle or dose of a particular drug. It is provided as a way to communicate the normal ranges for special conditions. It does not allow automatic checking of these text conditions.

## 2.A.63 RI - repeat interval

HL7 Component Table - RI – Repeat Interval

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	6	IS	O	0335	Repeat Pattern		2.A.36

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
2	199	ST	O		Explicit Time Interval		2.A.74

**Definition:** contains the interval between repeated services.

**Maximum Length:** 206

Note: The reader is referred to the [RPT – Repeat pattern](#) data type, which provides a more rigorous framework for defining repeating time intervals.

### 2.A.63.1 Repeat Pattern (IS)

**Definition:** The repeating frequency with which the treatment is to be administered. It is similar to the frequency and SIG code tables used in order entry systems.

Refer to [User-defined Table 0335 - Repeat pattern](#) for suggested values.

User-defined Table 0335 - Repeat pattern

Value	Description	Comment
Q<integer>S	every <integer> seconds	
Q<integer>M	every <integer> minutes	
Q<integer>H	every <integer> hours	
Q<integer>D	every <integer> days	
Q<integer>W	every <integer> weeks	
Q<integer>L	every <integer> months (Lunar cycle)	
Q<integer>J<day#>	repeats on a particular day of the week,	From the French <i>jour</i> (day). If <integer> is missing, the repeat rate is assumed to be 1. Day numbers are counted from 1=Monday to 7=Sunday. So Q2J2 means every second Tuesday; Q1J6 means every Saturday.
BID	twice a day at institution-specified times	(e.g., 9AM-4PM)
TID	three times a day at institution-specified times	(e.g., 9AM-4PM-9PM)
QID	four times a day at institution-specified times	(e.g., 9AM-11AM-4PM-9PM)
xID	"X" times per day at institution-specified times, where X is a numeral 5 or greater.	(e.g., 5ID=five times per day; 8ID=8 times per day)
QAM	in the morning at institution-specified time	
QSHIFT	during each of three eight-hour shifts at institution-specified times	
QOD	every other day	(same as Q2D)
QHS	every day before the hour of sleep	
QPM	in the evening at institution-specified time	
C	service is provided continuously between start time and stop time	
U <spec>	for future use, where <spec> is an interval specification as defined by the UNIX cron specification.	
PRN	given as needed	
PRNxxx	where xxx is some frequency code	(e.g., PRNQ6H); given as needed over the frequency period.
Once	one time only.	This is also the default when this component is null.
Meal Related Timings	<timing>C ("cum")<meal>	
A	Ante (before)	
P	Post (after)	
I	Inter	(e.g., between this meal and the next, between dinner and sleep)
M	Cibus Matutinus (breakfast)	
D	Cibus Diurnus (lunch)	
V	Cibus Vespertinus (dinner)	

The first component may repeat, with repeat values separated by a space. The repeats are interpreted as connected by logical ANDs.

Example:

Twice per day, every other day: BID QOD

Three times per day, Monday Wednesday and Friday: TID QJ135

Because of this syntax, repeat values should never contain blanks.

### 2.A.63.2 Explicit Time Interval (ST)

Definition: This component explicitly lists the actual times referenced by the code in the first component, in the following format: HHMM,HHMM,HHMM,... This second component will be used to clarify the first component in cases where the actual times vary within an institution. If the time of the order spans more than a single day, this new component is only practical if the same times of administration occur for each day of the order. If the actual start time of the order (as given by the fourth component of the quantity/timing field) is after the first explicit time, the first administration is taken to be the first explicit time after the start time. In the case where the patient moves to a location having a different set of explicit times, the existing order may be updated with a new quantity/timing field showing the changed explicit times.

Example: 2nd component of quantity/timing field:

|QID^0230,0830,1430,2030|

## 2.A.64 RMC - room coverage

HL7 Component Table - RMC – Room Coverage

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	IS	R	0145	Room Type		2.A.36
2	20	IS	O	0146	Amount Type		2.A.36
3	16	NM	B		Coverage Amount		2.A.47
4	23	MOP	R		Money or Percentage		2.A.43

Definition: This data type specifies insurance coverage detail for a room.

**Maximum Length: 82**

**Note:** Replaces the CM data type used in section 6.5.7.28 IN2-28, as of v 2.5.

### 2.A.64.1 Room Type (IS)

Definition: Specifies the room type.

Refer to [User-defined Table 0145 - Room type](#) for suggested values.

User-defined Table 0145 - Room type

Value	Description	Comment
PRI	Private room	
2PRI	Second private room	
SPR	Semi-private room	
2SPR	Second semi-private room	
ICU	Intensive care unit	
2ICU	Second intensive care unit	

### 2.A.64.2 Amount Type (IS)

Definition: Specifies amount quantity type

Refer to [User-defined Table 0146 - Amount type](#) for suggested values.

User-defined Table 0146 - Amount type

Value	Description	Comment
DF	Differential	

Value	Description	Comment
LM	Limit	
PC	Percentage	Retained for backward compatibility only as of v 2.5
RT	Rate	
UL	Unlimited	

### 2.A.64.3 Coverage Amount Quantity (NM)

Definition: Specifies amount covered by the insurance as a currency or percentage quantity.

Retained for backward compatibility only as of v 2.5. Refer to [2.A.64.4](#), "[Money or Percentage](#)".

### 2.A.64.4 Money or Percentage (MOP)

Definition: specifies an amount that may be either currency or a percentage.

## 2.A.65 RP - reference pointer

HL7 Component Table - RP – Reference Pointer

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	999	ST	O		Pointer		2.A.74
2	1027	HD	O		Application ID		2.A.33
3	11	ID	O	0834	Type of Data		2.A.35
4	32	ID	O	0291	Subtype		2.A.35

**Definition:** This data type transmits information about data stored on another system. It contains a reference pointer that uniquely identifies the data on the other system, the identity of the other system, and the type of data.

**Maximum Length:** 2072

### 2.A.65.1 Pointer (ST)

Definition: A key to the referenced data assigned by the system that stores the data. The key, which is an ST data type, is used to identify and access the data, either as an object identifier, or as a hierarchical name or query string.

### 2.A.65.2 Application ID (HD)

Definition: A unique designator of the system that stores the data. It is an HD data type (See Section [2.A.33](#), "[HD - hierarchic designator](#)"). Application ID's must be unique across a given HL7 implementation.

**Usage Note:** The Application ID together with the Pointer may form a Uniform Resource Identifier (URI) in accordance with RFC 2396. In this case the Application ID shall include the Scheme and Authority parts of the URI, and the Path part if that points to an application. The Pointer shall include the Query part of the URI, or the Path part if that points to an object. All delimiters between URI parts (":", "/", "?") should be included in the components.

Referenced data may be obtained by a mechanism not defined in the HL7 standard. The Scheme part of a URI in the Application ID specifies the access protocol, e.g., HTTP or FTP.

**Example 1:** A CDA document accessed by FTP:

```
| /cdasvc/u28864099/s9076500a/e77534/d55378.xml^&ftp://www.saintelsewhe  
re.org&URI^text^x-hl7-cda-level-one|
```

**Example 2:** A DICOM image accessed by HTTP and converted to JPEG (using the ISO/DICOM WADO standard); note that ampersands in the Pointer string are escaped to "\T" to avoid conflict with the sub-component delimiter:

```
| ?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.A.65.3 Type of Data (ID)

Definition: An ID data type that declares the general type of data. Refer to [Imported Table 0834 – MIME Types](#) for valid values. Table 0834 comprises the values of MIME media types 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 type values are case-insensitive, in accordance with RFC 2045.

Imported Table 0834 - MIME Types

Value	Description	Comment
application	Application data	
audio	Audio data	
image	Image data	
model	Model data	RFC 2077
text	Text data	
video	Video data	
multipart	MIME multipart package	

*HL7 Table 0191 - Type of referenced data* is retained for backward compatibility as of v 2.6.

HL7 Table 0191 - Type of referenced data

Value	Description	Comment
AP	Other application data, typically uninterpreted binary data (HL7 V2.3 and later)	
AU	Audio data (HL7 V2.3 and later)	
FT	Formatted text (HL7 V2.2 only)	
IM	Image data (HL7 V2.3 and later)	
multipart	MIME multipart package	
NS	Non-scanned image (HL7 V2.2 only)	
SD	Scanned document (HL7 V2.2 only)	
SI	Scanned image (HL7 V2.2 only)	
TEXT	Machine readable text document (HL7 V2.3.1 and later)	
TX	Machine readable text document (HL7 V2.2 only)	

### 2.A.65.4 Subtype (ID)

Definition: An ID data type declaring the format for the referenced. Refer to [External Table 0291 – Subtype of referenced data](#) for valid values. Table 0291 comprises the values of 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.

HL7 approved "standard" extensions as defined in table 0291 are allowed.

External Table 0291 - Subtype of referenced data

Value	Description	Comment
	Source RFC 2046	
x-hl7-cda-level-one	HL7 Clinical Document Architecture Level One document	Retained for backwards compatibility only as of v2.6 and CDA R 2. Preferred value is text/xml.

Additional subtypes may be added to this Standard. All subtypes registered by IANA may be used by implementation agreement between cooperating parties. In addition, private, non-standard subtypes may be defined by agreement between cooperating parties. All private, non-standard subtypes should begin with the character combination "X-" to distinguish them from the standard subtypes, in accordance with RFC 2045.

## 2.A.66 RPT – repeat pattern

HL7 Component Table - RPT – Repeat Pattern

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	705	CWE	R	<a href="#">0335</a>	Repeat Pattern Code		2.A.13
2	2	ID	O	<a href="#">0527</a>	Calendar Alignment		2.A.35
3	10	NM	O		Phase Range Begin Value		2.A.47

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
4	10	NM	O		Phase Range End Value		2.A.47
5	10	NM	O		Period Quantity		2.A.47
6	10	IS	C		Period Units		2.A.36
7	1	ID	O	0136	Institution Specified Time		2.A.35
8	6	ID	O	0528	Event		2.A.35
9	10	NM	O		Event Offset Quantity		2.A.47
10	10	IS	C		Event Offset Units		2.A.36
11	200	GTS	O		General Timing Specification		2.A.32

Definition: The repeat pattern data type should be used where it is necessary to define the frequency at which an event is to take place. This data type provides a way to define repeat pattern codes "on the fly". The repeat pattern code is equivalent to the TQ data type, component 2, sub-component 1 (repeat pattern). The additional components define the meaning of the repeat pattern code. Components 2 - 10 are used to define relatively simple repeat patterns. Component 11 is provided to define complex repeat patterns. This data type forms a bridge between the 2.x Repeat Pattern concept from Quantity/Timing, and the Version 3.0 GTS General Timing Specification. Component 1 is the 2.x concept of repeat pattern. Components 2-7 are derived from the version 3.0 data type PIVL. Components 8-10 are derived from the version 3.0 EIVL data type. If a repeat pattern cannot be defined using components 2-10, then component 11, General Timing Specification is provided. This allows the full literal form of the version 3.0 GTS to be specified.

When using the RPT, if an application doesn't recognize the code in component 1, then it may attempt to determine the appropriate frequency using the remaining components. If the application does recognize the code in component 1, the application is not required to determine the frequency from the remaining components.

**Maximum Length:** 984

**Use Case:** The use case supporting this proposal is the need to define repeat patterns on the fly while placing an order. The TQ data type did not have the capability to define the meaning of a repeat pattern on the fly. To get around this problem, vendors have implemented a variety of solutions to solve this issue. One way was to add Z-components to the TQ data type to transmit information about the repeat pattern. Another solution was to attempt to parse the repeat pattern code in an attempt to decipher what the code meant.

Examples:

```
|Q1H&Every 1 Hour&HL7xxx^^^^1^h|
|Q2J2&Every second Tuesday&HL7xxx^DW^2^2^wk|
|BID&Twice a day at institution specified times&HL7xxx^^^^12^h^Y|
|QAM&Every morning at the institution specified time&HL7xxx^HD^00^11^1^d^Y|
|QHS&Every day before the hours of sleep&HL7xxx^^^^1^d^AHS|
|ACM&Before Breakfast&HL7xxx^^^^^^ACM|
```

#### 2.A.66.1 Repeat Pattern Code (CWE)

Definition: A code representing the repeat pattern defined by the other components of this data type. Refer to [User-defined Table 0335 – Repeat Pattern](#) for suggested values.

#### 2.A.66.2 Calendar Alignment (ID)

Definition: Specifies an alignment of the repetition to a calendar (e.g., to distinguish every 30 days from "the 5<sup>th</sup> of every month"). Refer to [HL7 Table 0527 - Calendar Alignment](#) for valid values.

HL7 Table 0527 – Calendar alignment

Value	Description	Units of Time
MY	month of the year	mo
WY	week of the year	wk
DM	day of the month	d
DY	day of the year	d
DW	day of the week (begins with Monday)	d
HD	hour of the day	h
NH	minute of the hour	min

Value	Description	Units of Time
SN	second of the minute	s

**Note:** The Units of Time in table 0527 are taken from the Unified Code for Units of Measure (UCUM) [<http://aurora.rg.iupui.edu/UCUM>].

### 2.A.66.3 Phase Range Begin Value (NM)

Definition: Used for Calendar aligned repeat patterns to determine the amount of time from the beginning of particular RPT-2 (Calendar Alignment) to the beginning of the phase. If Calendar Alignment is DW (days of week), then this would be the offset from the beginning of the week.

If Phase Range Begin Value is populated, but Phase Range End Value is not populated, then this component defines when the period (RPT-5, 6) begins.

If both Phase Range Begin Value and Phase Range End Value are populated, then this component defines the earliest point in time at which the period (RPT-5, 6) will begin.

The units of measure for this component are derived from the Calendar Alignment value in RPT-2. See [HL7 Table 0527 - Calendar Alignment](#) for the units of measure associated with a particular calendar alignment.

### 2.A.66.4 Phase Range End Value (NM)

Definition: Used for Calendar aligned repeat patterns to determine the amount of time from the beginning of particular RPT-2 (Calendar Alignment) to the end of the phase.

If Phase Range End Value is populated, but Phase Range Begin Value is not populated, then this component defines when the timing period (RPT-5, 6) begins.

If both Phase Range Begin Value and Phase Range End Value are populated, then this component defines the latest point in time at which the period (RPT-5, 6) will begin.

The units of measure for this component are derived from the Calendar Alignment value in RPT-2. See [HL7 Table 0527 - Calendar Alignment](#) for the units of measure associated with a particular calendar alignment.

### 2.A.66.5 Period Quantity (NM)

Definition: A time duration specifying the frequency at which the periodic interval repeats. RPT-6 (Period Units) defines the units of time for this component.

### 2.A.66.6 Period Units (IS)

Definition: Defines the units used for RPT-5 (Period Quantity). Constrained to units of time. The codes for unit of measure are specified in the Unified Code for Units of Measure (UCUM) [<http://aurora.rg.iupui.edu/UCUM>].

Condition Rule: This component is required if RPT-5 (Period Quantity) is populated.

### 2.A.66.7 Institution Specified Time (ID)

Definition: A code that indicates whether the exact timing is up to the party executing the schedule (e.g., to distinguish “every 8 hours” from “3 times a day”.) Refer to [HL7 Table 0136 – Yes/No Indicator](#) for valid values.

- Y - exact timing up to party executing schedule.
- N - exact timing as specified.

### 2.A.66.8 Event (ID)

Definition: A code for a common (periodical) activity of daily living. Refer to [HL7 Table 0528 - Event-Related Period](#) for valid values.

HL7 Table 0528 – Event related period

Value	Description	Comment
HS	the hour of sleep (e.g., H18-22)	
AC	before meal (from lat. <i>ante cibus</i> )	
PC	after meal (from lat. <i>post cibus</i> )	
IC	between meals (from lat. <i>inter cibus</i> )	



Value	Description	Comment
ACM	before breakfast (from lat. <i>ante cibus matutinus</i> )	
ACD	before lunch (from lat. <i>ante cibus diurnus</i> )	
ACV	before dinner (from lat. <i>ante cibus vespertinus</i> )	
PCM	after breakfast (from lat. <i>post cibus matutinus</i> )	
PCD	after lunch (from lat. <i>post cibus diurnus</i> )	
PCV	after dinner (from lat. <i>post cibus vespertinus</i> )	
ICM	between breakfast and lunch	
ICD	between lunch and dinner	
ICV	between dinner and the hour of sleep	

#### 2.A.66.9 Event Offset Quantity (NM)

Definition: An interval that marks the offsets for the beginning, width and end of the event-related periodic interval measured from the time each such event actually occurred. A positive numeric value indicates the amount of time after the event in RPT-8. A negative numeric value indicates the amount of time prior to the event in RPT-8. RPT-10 (Event Offset Units) defines the units of time for this component.

Usage Note: This component should not be valued unless there is a value in RPT-8 (Event).

#### 2.A.66.10 Event Offset Units (IS)

Definition: Defines the units used for RPT-9 (Event Offset Quantity). Constrained to units of time. The codes for unit of measure are specified in the Unified Code for Units of Measure (UCUM) [<http://aurora.rg.iupui.edu/UCUM>].

Condition Rule: This component is required if RPT-9 (Event Offset Quantity) is populated.

#### 2.A.66.11 General Timing Specification (GTS)

Definition: The General Timing Specification as defined by the Version 3 Data Types document.

### 2.A.67 SAD – street address

HL7 Component Table - SAD – Street Address

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	120	ST	O		Street or Mailing Address		2.A.74
2	50	ST	O		Street Name		2.A.74
3	12	ST	O		Dwelling Number		2.A.74

Definition: This data type specifies an entity's street address and associated detail.

**Maximum Length:** 184

**Note:** Appears ONLY in the XAD data type

#### 2.A.67.1 Street or Mailing Address (ST)

Definition: This component specifies the street or mailing address of a person or institution. When referencing an institution, this first component is used to specify the institution name. When used in connection with a person, this component specifies the first line of the address.

#### 2.A.67.2 Street Name (ST)

#### 2.A.67.3 Dwelling Number (ST)

### 2.A.68 SCV - scheduling class value pair

HL7 Component Table - SCV – Scheduling Class Value Pair

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	CWE	O	0294	Parameter Class		2.A.13



SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
2	20	ST	O		Parameter Value		2.A.74

**Definition:** This data type is used to communicate parameters and preferences to the filler application regarding the selection of an appropriate time slot, resource, location, or filler override criterion for an appointment.

**Maximum Length:** 41

For use only with the scheduling chapter.

### 2.A.68.1 Parameter Class (CWE)

The first component of this field is a code identifying the parameter or preference being passed to the filler application. Refer to [User-defined Table 0294 - Time selection criteria parameter class codes](#) for suggested values.

User-defined Table 0294 - Time selection criteria parameter class codes

Value	Description	Comment
Prefstart	An indicator that there is a preferred start time for the appointment request, service or resource.	In component 2, specify any valid time in the format HHMM, using 24-hour clock notation where HH = hour and MM = minutes
Prefend	An indicator that there is a preferred end time for the appointment request, service or resource.	In component 2, specify any valid time in the format HHMM, using 24-hour clock notation where HH = hour and MM = minutes
Mon	An indicator that Monday is or is not preferred for the day on which the appointment will occur.	In component 2, specify OK or NO. OK = Preferred appointment day NO = Day is not preferred
Tue	An indicator that Tuesday is or is not preferred for the day on which the appointment will occur.	In component 2, specify OK or NO. OK = Preferred appointment day NO = Day is not preferred
Wed	An indicator that Wednesday is or is not preferred for the day on which the appointment will occur.	In component 2, specify OK or NO. OK = Preferred appointment day NO = Day is not preferred
Thu	An indicator that Thursday is or is not preferred for the day on which the appointment will occur.	In component 2, specify OK or NO. OK = Preferred appointment day NO = Day is not preferred
Fri	An indicator that Friday is or is not preferred for the day on which the appointment will occur.	In component 2, specify OK or NO. OK = Preferred appointment day NO = Day is not preferred
Sat	An indicator that Saturday is or is not preferred for the day on which the appointment will occur.	In component 2, specify OK or NO. OK = Preferred appointment day NO = Day is not preferred
Sun	An indicator that Sunday is or is not preferred for the day on which the appointment will occur.	In component 2, specify OK or NO. OK = Preferred appointment day NO = Day is not preferred

### 2.A.68.2 Parameter Value (ST)

The second component is the actual data value for that parameter.

For example, if a filler application allows preference parameters to be passed to specify a preferred start time, a preferred end time, and preferred days of the week for the appointment, it may define the following parameter class codes and valid data sets.

### 2.A.69 SI - sequence ID

HL7 Component Table - SI – Sequence ID

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
	4				Sequence ID		

**Definition:** A non-negative integer in the form of a NM field. The uses of this data type are defined in the chapters defining the segments and messages in which it appears.

**Maximum Length:** 4. This allows for a number between 0 and 9999 to be specified.

## 2.A.70 SN - structured numeric

HL7 Component Table - SN – Structured Numeric

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	2	ST	O		Comparator		2.A.74
2	15	NM	O		Num1		2.A.47
3	1	ST	O		Separator/Suffix		2.A.74
4	15	NM	O		Num2		2.A.47

**Definition:** The structured numeric data type is used to unambiguously express numeric clinical results along with qualifications. This enables receiving systems to store the components separately, and facilitates the use of numeric database queries. The corresponding sets of values indicated with the <comparator> and <separator/suffix> components are intended to be the authoritative and complete set of values. If additional values are needed for the <comparator> and <separator/suffix> components, they should be submitted to HL7 for inclusion in the Standard.

If <num1> and <num2> are both non-null, then the separator/suffix must be non-null. If the separator is "-", the data range is inclusive; e.g., <num1> - <num2> defines a range of numbers x, such that: <num1> <=x<= <num2>.

**Maximum Length:** 36

## 2.A.70.1 Comparator (ST)

Defined as greater than, less than, greater than or equal, less than or equal, equal, and not equal, respectively (= ">" or "<" or ">=" or "<=" or "=" or "<>")

If this component is not valued, it defaults to equal ("=").

## 2.A.70.2 Num1 (NM)

A number.

## 2.A.70.3 Separator/Suffix (ST)

"-" or "+" or "/" or "." or ":"

Examples:

>^100	(greater than 100)
^100^-^200	(equal to range of 100 through 200)
^1^: ^228	(ratio of 1 to 128, e.g., the results of a serological test)
^2^+	(categorical response, e.g., occult blood positivity)

## 2.A.70.4 Num2 (NM)

A number or null depending on the measurement.

## 2.A.71 SPD – specialty description

HL7 Component Table - SPD – Specialty Description

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	50	ST	R		Specialty Name		2.A.74
2	50	ST	O		Governing Board		2.A.74
3	1	ID	O	0337	Eligible or Certified		2.A.35
4	8	DT	O		Date of Certification		2.A.21

**Definition:** This data type specifies the practitioner's specialty and related information.

**Maximum Length:** 112

**Note:** Replaces the CM data type used in 15.4.5.5 PRA-5 as of v 2.5.

**2.A.71.1 Specialty Name (ST)**

Definition: Identifies the provider's specialty.

**2.A.71.2 Governing Board (ST)**

Definition: Identifies the governing body providing for the specialty.

**2.A.71.3 Eligible or Certified (ID)**

Definition: Specifies the certification status. Refer to [HL7 Table 0337 – Certification status](#) for valid values.

HL7 Table 0337 - Certification status

Value	Description	Comment
C	Certified	
E	Eligible	

**2.A.71.4 Date of Certification (DT)**

Definition: Specifies when certification occurred.

**2.A.72 SPS – specimen source**

HL7 Component Table - SPS – Specimen Source

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	705	CWE	O		Specimen Source Name or Code		2.A.13
2	705	CWE	O	0371	Additives		2.A.13
3	200	TX	O		Specimen Collection Method		2.A.78
4	705	CWE	O	0163	Body Site		2.A.13
5	705	CWE	O	0495	Site Modifier		2.A.13
6	705	CWE	O		Collection Method Modifier Code		2.A.13
7	705	CWE	O	0369	Specimen Role		2.A.13

Definition: This data type identifies the site where the specimen should be obtained or where the service should be performed.

**Maximum Length:** 4436

**Note:** Replaces the CM data type used in 4.5.3.15 OBR-15, 7.4.1.15 OBR-15, 13.4.3.6 SAC-6 and 13.4.9.3 TCC-3 as of v 2.5. This data type is retained for backward compatibility only as on v 2.5. The reader is referred to the SPM segment defined in chapter 4.

**2.A.72.1 Specimen Source Name or Code (CWE)**

Definition: contains the specimen source name or code (as a CWE data type component). (Even in the case of observations whose name implies the source, a source may be required, e.g., blood culture-heart blood.)

A nationally recognized coding system is to be used for this field. Valid coding sources for this field include:

- [HL7 Table 0487 – Specimen Type](#) (replaces HL7 table 0070 – Specimen source codes)
- SNOMED, etc.
- Veterinary medicine may choose the tables supported for the components of this field as decided by their industry.

**2.A.72.2 Additives (CWE)**

Definition: identifies an additive introduced to the specimen before or at the time of collection. Refer to [HL7 Table 0371 – Additive](#) in chapter 7 for valid values. The table's values are taken from NCCLS AUTO4. The value set can be extended with user specific values.

### 2.A.72.3 Specimen Collection Method (TX)

Definition: describes the method of collection when that information is a part of the order. When the method of collection is logically an observation result, it should be included as a result segment (i.e., OBX segment).

### 2.A.72.4 Body Site (CWE)

Definition: This component specifies the body site from which the specimen was obtained. A nationally recognized coding system is to be used for this field. Valid coding sources for this field include:

- [HL7 Table 0163 - Body site](#)
- SNOMED

### 2.A.72.5 Site Modifier (CWE)

Definition: modifies body site. For example, the site could be antecubital fossa, and the site modifier "right." Refer to [HL7 Table 0495 - Body Site Modifier](#) for allowed values.

### 2.A.72.6 Collection Method Modifier Code (CWE)

Definition: Indicates whether the specimen is frozen as part of the collection method. Suggested values are F (Frozen); R (Refrigerated). If the component is blank, the specimen is assumed to be at room temperature.

### 2.A.72.7 Specimen Role (CWE)

Definition: indicates the role of the sample. Refer to [User-defined Table 0369 – Specimen role](#) for suggested values. Each of these values is normally identifiable by the systems and its components and can influence processing and data management related to the specimen.

## 2.A.73 SRT – sort order

HL7 Component Table - SRT – Sort Order

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	12	ST	R		Sort-by Field		2.A.74
2	2	ID	O	<a href="#">0397</a>	Sequencing		2.A.35

Definition: Specifies those parameters by which the response will be sorted and by what method.

**Maximum Length: 15**

Example: In a tabular response query, where the return data is known by column name, the SRT might look like

|LastName^A~FirstName^A|

Example: In a segment response query, where the return data is known by segment and offset, the SRT field would use segment field name notation,

|PID.3.1^A~PID.3.2|

#### 2.A.73.1 Sort-by Field (ST)

Identifies the field by which the response will be sorted. In a tabular response, this will be the column name to sort by. In the Segment Pattern and the Display Response, this will be the segment field name to sort by. See QIP in Section [2.A.59.1](#), "[Segment Field Name \(ST\)](#)" for segment field name definition.

See Chapter 5, "Query", for a complete discussion of queries and their responses.

#### 2.A.73.2 Sequencing (ID)

Identifies how the field or parameter will be sorted; and, if sorted, whether the sort will be case sensitive (the default) or not. Refer to [HL7 Table 0397 – Sequencing](#) for valid values

HL7 Table 0397 – Sequencing

Value	Description	Comment
A	Ascending	
AN	Ascending, case insensitive	

Value	Description	Comment
D	Descending	
DN	Descending, case insensitive	
N	None	

## 2.A.74 ST - string data

HL7 Component Table - ST – String Data

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
	999				String Data		

**Maximum Length:** 999

**Definition:** The String data type is used for text data when the appearance of text does not bear meaning. This is true for formalized text, symbols and formal expressions, and all kinds of names intended for machine processing (e.g., sorting, querying, indexing, etc.)

String data is left justified (i.e., no leading blank space) with trailing blanks optional. Any displayable (printable) ACSII characters (hexadecimal values between 20 and 7E, inclusive, or ASCII decimal values between 32 and 126), except the defined escape characters and defined delimiter characters.

**Example 1:** A textual ST field:

|almost any data at all|

**Example 2:** URL encoded in an ST component:

^http://www.pacs.poupon.edu/wado.jsp^

**Example 3:** ISO OID encoded in an ST subcomponent:

&2.16.840.1.113883.1.1&

To include any HL7 delimiter character (except the segment terminator) within a string data field, use the appropriate HL7 escape sequence (see Section 2.7.1, "Formatting Codes").

**Usage note:** The ST data type is intended for short strings (e.g., less than 1000 characters). For longer strings the TX or FT data types should be used (see Sections 2.A.78, "*TX - text data*" or 2.A.31, "*FT - formatted text data*").

**Alternate character set note:** ST - string data may also be used to express other character sets. See Section 2.15.9.18, "Character set," and Section 2.15.9.20, "Alternate character set handling" for details.

## 2.A.75 TM – time

HL7 Component Table - TM –Time

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
	16				Time		

**Definition:** Specifies the hour of the day with optional minutes, seconds, fraction of second using a 24-hour clock notation and time zone.

**Maximum Length:** 16

As of v 2.3, the number of characters populated (excluding the time zone specification) specifies the precision.

Format: HH[MM[SS[S[S[S[S]]]]]] [+/-ZZZZ]

Thus:

- v) the first two are used to specify a precision of "hour"
- w) the first four are used to specify a precision of "minute"
- x) the first six are used to specify a precision of "second"
- y) the first eight are used to specify a precision of "one tenth of a second"
- z) the first eleven are used to specify a precision of "one ten thousandths of a second"

Example: |0630| specifies 6: 30 AM.

The fractional seconds could be sent by a transmitter who requires greater precision than whole seconds. Fractional representations of minutes, hours or other higher-order units of time are not permitted.

**Note:** The time zone [+/-ZZZZ], when used, is restricted to legally-defined time zones and is represented in HHMM format.

The time zone of the sender may be sent optionally as an offset from the coordinated universal time (previously known as Greenwich Mean Time). Where the time zone is not present in a particular TM field but is included as part of the date/time field in the MSH segment, the MSH value will be used as the default time zone. Otherwise, the time is understood to refer to the local time of the sender.

Examples:

Time	Description
0000	midnight
235959+1100	1 second before midnight in a time zone eleven hours ahead of Universal Coordinated Time (i.e., East of Greenwich).
0800	Eight AM, local time of the sender.
093544.2312	44.2312 seconds after Nine thirty-five AM, local time of sender.
13	1pm (with a precision of hours), local time of sender.

Prior to v 2.3, this data type was specified in the format HHMM[SS[.SSSS]][+/-ZZZZ]. As of v 2.3 minutes are no longer required. By site-specific agreement, HHMM[SS[.SSSS]][+/-ZZZZ] may be used where backward compatibility must be maintained.

### 2.A.76 TQ - timing quantity

HL7 Component Table - TQ – Timing Quantity

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	267	CQ	O		Quantity		2.A.11
2	206	RI	O		Interval		2.A.63
3	6	ST	O		Duration		2.A.74
4	24	DTM	O		Start Date/Time		2.A.22
5	24	DTM	O		End Date/Time		2.A.22
6	6	ST	O		Priority		2.A.74
7	199	ST	O		Condition		2.A.74
8	200	TX	O		Text		2.A.78
9	1	ID	O	0472	Conjunction		2.A.35
10	110	OSD	O		Order Sequencing		2.A.50
11	705	CWE	O		Occurrence Duration		2.A.13
12	4	NM	O		Total Occurrences		2.A.47

Definition: Describes when a service should be performed and how frequently.

Usage Note: As applied to Quantity/timing (ORC-7, OBR-27) provides a means of specifying when the service described by the order segment is to be performed and how frequently. It is a complex multicomponent field that can have repeats; i.e., more than one quantity/timing specification, separated by repeat delimiters, may appear.

**Note:** The TQ data type is retained for backward compatibility only as of v 2.5. Refer to the TQ1 and TQ2 segments defined in chapter 4.

**Maximum Length:** 1763

Examples of quantity/timing usage

3^Once

Perform the service at one point in time, e.g., order 3 units of blood to be given once.

1^QHS^X2

Perform the service twice at bedtime, e.g., give a unit of blood at bedtime on two sequential nights.

1^C^D3

Do a service continuously for 3 days.

1^Q1H^X4^^^^PVCs>10/min

Perform an EKG every hour up to a maximum of 4 EKGs, if patient is having more than 10 PVCs per minute.

1^Q1J2^^200005231432

Perform a service every Tuesday at 2:32 p.m. starting on 05/23/2000.

1^^^^198911210800

Perform a test before 11/21/89 0800, e.g., some preop laboratory tests.

1^Q1H^X5^198911051030

Perform a service every hour for 5 hours starting at 10:30 a.m. 11/5/89, e.g., draw a blood glucose.

1^QAM^X3^^^^^^S~1^QOD^D4^^^^if K+>5.5

Perform a service every morning for 3 days and then do it every other day for 4 days (i.e., max twice) if the serum potassium is greater than 5.5.

^^^198812120800^^T^^Trough specimen for MIC^C~^^^^^R

The first repeat instructs to draw a blood specimen exactly at 8:00 a.m. on 12/12/1988. The second repeat specifies to report results routinely.

1^QD^D7^^^^^^M20

Whirlpool ankle for twenty minutes once a day for one week.

1^^^19990301^19990331^^^^^^H1^3

Three one hour home health nursing visits within the next month.

### 2.A.76.1 Quantity component (CQ)

Definition: This component specifies the quantity of the service that should be provided at each service interval. For example, if two blood cultures are to be obtained every 4 hours, the quantity would be 2. If three units of blood are to be typed and cross-matched, the quantity would be 3. The default value is 1. When units are required, they can be added, specified by a subcomponent delimiter.

**Note:** The component contains the complex data type CQ and cannot be fully expressed. CQ cannot be legally expressed when embedded within another data type.

### 2.A.76.2 Interval component (RI)

Definition: Determines the interval between repeated services.

The default is one time only.

### 2.A.76.3 Duration component (ST)

Definition: This component indicates how long the service should continue after it is started. The default is INDEF (do indefinitely). This component is coded as follows:

Value	Description	Comment
S<integer>	<integer> seconds	
M<integer>	<integer> minutes	
H<integer>	<integer> hours	
D<integer>	<integer> days	
W<integer>	<integer> weeks	
L<integer>	<integer> months	
X<integer>	<integer> times at interval specified in the order.	A request for 2 blood cultures Q2H X3 would imply obtaining 2 blood cultures 3 different times at 2-hour intervals for a total of 6 blood cultures.
T<integer>	at the interval and amount stated until a total of <integer> "DOSAGE" is accumulated.	Units would be assumed to be the same as in the QUANTITY field.

Value	Description	Comment
INDEF	do indefinitely - also the default	

### 2.A.76.4 Start date/time component (DTM)

Definition: This component may be specified by the orderer, in which case it indicates the earliest date/time at which the services should be started. In many cases, however, the start date/time will be implied or will be defined by other fields in the order record (e.g., urgency - STAT). In such a case, this field will be empty.

The filling service will often record a value in this field after receipt of the order, however, and compute an end time on the basis of the start date/time for the filling service's internal use.

### 2.A.76.5 End date/time component (DTM)

Definition: When filled in by the requester of the service, this component should contain the latest date/time that the service should be performed. If it has not been performed by the specified time, it should not be performed at all. The requester may not always fill in this value, yet the filling service may fill it in on the basis of the instruction it receives and the actual start time.

Regardless of the value of the end date/time, the service should be stopped at the earliest of the date/times specified by either the duration or the end date/time.

### 2.A.76.6 Priority component (ST)

Definition: This component describes the urgency of the request. The following values are suggested (the default for Priority is R):

Value	Description	Comment
S	Stat	With highest priority
A	ASAP	Fill after S orders
R	Routine	Default
P	Preop	
C	Callback	
T	Timing critical	A request implying that it is critical to come as close as possible to the requested time, e.g., for a trough antimicrobial level.
PRN	As needed	

If using the value "T" (timing critical), the degree of criticality can be specified thus:

Format:

Value	Description	Comment
TS<integer>	timing critical within <integer> seconds	
TM<integer>	timing critical within <integer> minutes	
TH<integer>	timing critical within <integer> hours	
TD<integer>	timing critical within <integer> days	
TW<integer>	timing critical within <integer> weeks	
TL<integer>	timing critical within <integer> months	

For the sequential orders specification, these values specify the time criticality with which the predecessor order must be followed by the given order.

The priority component may repeat; separate repeating values with a space.

### 2.A.76.7 Condition component (ST)

Definition: This is a free text component that describes the conditions under which the drug is to be given. For example, **PRN pain**, or **to keep blood pressure below 110**. The presence of text in this field should be taken to mean that human review is needed to determine the how and/or when this drug should be given.

### 2.A.76.8 Text component (TX)

Definition: This component is a full text version of the instruction (optional).



## 2.A.76.9 Conjunction component (ID)

Definition: This non-null component indicates that a second timing specification is to follow using the repeat delimiter. Refer to [HL7 table 0472 - TQ Conjunction ID](#) for valid values

HL7 table 0472 - TQ conjunction ID

Value	Description	Comment
S	Synchronous	Do the next specification after this one (unless otherwise constrained by the following components: <a href="#">ORC-7^4-start date/time</a> and <a href="#">ORC-7^5-end date/time</a> ). An "S" specification implies that the second timing sequence follows the first, e.g., when an order is written to measure blood pressure Q15 minutes for the 1st hour, then every 2 hours for the next day.
A	Asynchronous	Do the next specification in parallel with this one (unless otherwise constrained by the following components: <a href="#">ORC-7^4-start date/time</a> and <a href="#">ORC-7^5-end date/time</a> ). The conjunction of "A" specifies two parallel instructions, as are sometimes used in medication, e.g., prednisone given at 1 tab on Monday, Wednesday, Friday, and at 1/2 tab on Tuesday, Thursday, Saturday, Sunday.
C	Actuation Time	It will be followed by a completion time for the service. This code allows one to distinguish between the time and priority at which a service should be actuated (e.g., blood should be drawn) and the time and priority at which a service should be completed (e.g., results should be reported). For continuous or periodic services, the point at which the service is actually stopped is determined by the components <a href="#">ORC-7^5-end date/time</a> and <a href="#">ORC-7^3-duration</a> , whichever indicates an earlier stopping time. Ordinarily, only one of these components would be present, but if one requested an EKG with the specification <code>^1^QAM^X3^D10</code> then the EKG would be done for only three days since the number of repeats (3) defined the earlier stopping time.

## 2.A.76.10 Order sequencing component (OSD)

Usage Note: There are many situations, such as the creation of an order for a group of intravenous (IV) solutions, where the sequence of the individual intravenous solutions (each a service in itself) needs to be specified, e.g., hyperalimentation with multi-vitamins in every third bottle.

There are other situations where part of the order's instructions contains a results condition of some type, such as "PRN pain". There is currently a free text "condition" component of [ORC-7-quantity/timing](#), which allows any condition to be specified. However, to support a fully encoded version of order sequencing, or results condition, we have defined in the following paragraphs a 10th component of [ORC-7-quantity/timing](#).

The sequencing conditions supported by this 10th component are based on the completion of a predecessor service.

## 2.A.76.11 Occurrence duration component (CWE)

Definition: This component contains the duration for a single performance of a service, e.g., whirlpool twenty minutes three times per day for three days. It is optional within TQ and does not repeat.

**Note:** The component delimiter in this CQ is demoted to a subcomponent delimiter.

## 2.A.76.12 Total occurrences component (NM)

Definition: This component contains the total number of occurrences of a service that should result from this order. It is optional within TQ and does not repeat. If both the end date/time and the total occurrences are valued and the occurrences would extend beyond the end date/time, then the end date/time takes precedence. Otherwise the number of occurrences takes precedence.

## 2.A.77 TS - time stamp

HL7 Component Table - TS – Time Stamp

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1			W		Time		2.A.22
2			W		Degree of Precision		2.A.35

**Attention:** The TS data type has been replaced by the DTM data type and the detail was withdrawn and removed from the standard as of v 2.6.

## 2.A.78 TX - text data

HL7 Component Table - TX – Text Data

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
					Text Data		

**Definition:** String data meant for user display (on a terminal or printer). Such data would not necessarily be left justified since leading spaces may contribute greatly to the clarity of the presentation to the user. Because this type of data is intended for display, it may contain certain escape character sequences designed to control the display. Escape sequence formatting is defined in Section 2.7, "Use of escape sequences in text fields". Leading spaces should be included. Trailing spaces should be removed.

Example:

```
| leading spaces are allowed. |
```

Since TX data is intended for display purposes, the repeat delimiter, when used with a TX data field, implies a series of repeating lines to be displayed on a printer or terminal. Therefore, the repeat delimiters are regarded as paragraph terminators or hard carriage returns (e.g., they would display as though a CR/LF were inserted in the text (DOS type system) or as though a LF were inserted into the text (UNIX style system)).

A receiving system would word-wrap the text between repeat delimiters in order to fit it into an arbitrarily sized display window but start any line beginning with a repeat delimiter on a new line.

**Maximum Length:** 65536

To include alternative character sets, use the appropriate escape sequence. See Section 2.14.9.18, "MSH-18 Character Set" and Section 2.14.9.20, "MSH-20 Alternate Character Set Handling Scheme".

## 2.A.79 UVC - UB value code and amount

HL7 Component Table - UVC – UB Value Code and Amount

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	20	CNE	R	0153	Value Code		2.A.8
2	20	MO	O		Value Amount		2.A.41

**Definition:** A code structure to relate amounts or values to identified data elements necessary to process this claim as qualified by the payer organization.

This data type is used to convey information defined by CMS or other regulatory agencies. It corresponds to UB fields 46A, 47A, 48A, 49A, 46B, 47B, 48B, and 49B and UB92 fields 39a, 39b, 39c, 39d, 40a, 40b, 40c, 40d, 41a, 41b, 41c, and 41d.

**Maximum Length:** 41

**Note:** Replaces the CM data type used in sections 6.5.10.10 UB1-10 and 6.5.11.6 UB2-6, as of v 2.5.

The most common semi-private room rate is used in instances where the patient is placed in a private room at their request but their insurance only covers a semi-private room rate, which can be calculated using the 01-most common semi-private room rate.

Example:

```
|01&most common semi private rate&NUBC^750&USD|
```

## 2.A.79.1 Value Code (CNE)

**Definition:** Specifies the National Uniform Billing Committee (NUBC) code itself.

Refer to [HL7-defined Table 0153 – Value code](#) for valid values. Values for this component need to come from National Uniform Billing Committee (NUBC). No extensions are allowed.

HL7-defined Table 0153 - Value code

Value	Description	comment
	See NUBC codes	

### 2.A.79.2 Value Amount (MO)

Definition: Specifies the numeric amount when needed to pair with the value.

## 2.A.80 VH - visiting hours

HL7 Component Table - VH – Visiting Hours

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	3	ID	O	0267	Start Day Range		2.A.35
2	3	ID	O	0267	End Day Range		2.A.35
3	16	TM	O		Start Hour Range		2.A.75
4	16	TM	O		End Hour Range		2.A.75

Definition: This data type contains the hours when a patient location is open for visiting. Refer to [HL7 Table 0267 - Days of the week](#) for valid values for the first two components.

**Maximum Length: 41**

### 2.A.80.1 Start Day Range (ID)

Starting day of visiting hours range. See [HL7 Table 0267 - Days of the week](#) for valid values.

### 2.A.80.2 End Day Range (ID)

Ending day of visiting hours range. Starting day of visiting hours range. See [HL7 Table 0267 - Days of the week](#) for valid values

HL7 Table 0267 - Days of the week

Value	Description	Comment
SAT	Saturday	
SUN	Sunday	
MON	Monday	
TUE	Tuesday	
WED	Wednesday	
THU	Thursday	
FRI	Friday	

### 2.A.80.3 Start Hour Range (TM)

Starting hour on starting day of visiting hours range. See first component, [2.A.80.1, "Start Day Range \(ID\)"](#).

### 2.A.80.4 End Hour Range (TM)

Ending hour on ending day of visiting hours range See second component, [2.A.80.2, "End Day Range \(ID\)"](#).

## 2.A.81 VID – version identifier

HL7 Component Table - VID – Version Identifier

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	5	ID	O	0104	Version ID		2.A.35
2	483	CWE	O	0399	Internationalization Code		2.A.13
3	483	CWE	O		International Version ID		2.A.13

**Maximum Length: 973**

### 2.A.81.1 Version ID (ID)

Used to identify the HL7 version. Refer to [HL7 Table 0104 – Version ID](#) in section 2.15.9.12 for valid values.

**2.A.81.2 Internationalization Code (CWE)**

Used to identify the international affiliate country code. The values to be used are those of ISO 3166 - 1:1977. The ISO 3166 table has three separate forms of the country code: HL7 specifies that the 3-character (alphabetic) form be used for the country code.

Refer to [HL7 Table 0399 – Country code](#) in section 2.15.9.17 for the 3-character codes as defined by ISO 3166 table.

**2.A.81.3 International Version ID (CWE)**

This field component identifies international affiliate's version; it is especially important when the international affiliate has more than a single local version associated with a single US version.

**2.A.82 VR - value range**

HL7 Component Table - VR – Value Range

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	6	ST	O		First Data Code Value		2.A.74
2	6	ST	O		Last Data Code Value		2.A.74

Definition: This data type contains the lower bound value and upper bound values that constitute a range. Either or both components may be populated.

**Maximum Length: 13.**

**Note:** Replaces the CM data type used in 5.10.5.3.11 QRD-11 as of v 2.5.

The VR differs from the Numeric Range (NR) data type only in that the values are not restricted to numbers. If the range is not numeric, the set must be orderable in some intuitive way such as alpha or the order must be defined in the field where the data type is used.

Example 1:

|+^+++|

Example 2: Colors of the rainbow

|violet^red|

**2.A.82.1 First Data Code Value (ST)**

Definition: Specifies the lower bound value.

**2.A.82.2 Last Data Code Value (ST)**

Definition: Specifies the upper bound value.

**2.A.83 WVI - channel identifier**

HL7 Component Table – WVI - Channel Identifier

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	4	NM	R		Channel Number		2.A.47
2	17	ST	O		Channel Name		2.A.74

Definition: This data type specifies the number and name of the recording channel where waveform data is transmitted.

**Maximum Length: 22**

**Note:** Replaces the CM data type used in 7.14.1.3.1 OBX-5.1 where OBX-5 Observation value (\*) is data type CD as of v 2.5.

**2.A.83.1 Channel Number (NM)**

Definition: This component specifies the number of the recording channel.

### 2.A.83.2 Channel Name (ST)

Definition: This component specifies the name of the recording channel.

## 2.A.84 WVS - waveform source

HL7 Component Table – WVS - Waveform Source

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	8	ST	R		Source One Name		2.A.74
2	8	ST	O		Source Two Name		2.A.74

Definition: This data type identifies the source of the waveform connected to a channel.

**Maximum Length: 17**

**Note:** Replaces the CM data type used in 7.14.1.4 OBX-5.2 where OBX-5 Observation value (\*) is data type CD as of v 2.5.

### 2.A.84.1 Source One Name (ST)

Definition: This component identifies the first input for the waveform source.

### 2.A.84.2 Source Two Name (ST)

Definition: This component identifies the second input for the waveform source if a differential input is used.

## 2.A.85 XAD - extended address

HL7 Component Table - XAD – Extended Address

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	184	SAD	O		Street Address		2.A.67
2	120	ST	O		Other Designation		2.A.74
3	50	ST	O		City		2.A.74
4	50	ST	O		State or Province		2.A.74
5	12	ST	O		Zip or Postal Code		2.A.74
6	3	ID	O	0399	Country		2.A.35
7	3	ID	O	0190	Address Type		2.A.35
8	50	ST	O		Other Geographic Designation		2.A.74
9	20	IS	O	0289	County/Parish Code		2.A.36
10	20	IS	O	0288	Census Tract		2.A.36
11	1	ID	O	0465	Address Representation Code		2.A.35
12	49	DR	B		Address Validity Range	deprecated as of v 2.5	2.A.20
13	24	DTM	O		Effective Date		2.A.22
14	24	DTM	O		Expiration Date		2.A.22
15	705	CWE	O	0616	Expiration Reason		2.A.13
16	1	ID	O	0136	Temporary Indicator		2.A.35
17	1	ID	O	0136	Bad Address Indicator		2.A.35
18	44	ID	O	0617	Address Usage		2.A.35
19	199	ST	O		Addressee		2.A.74
20	199	ST	O		Comment		2.A.74
21	2	NM	O		Preference Order		2.A.47
22	705	CWE	O	0618	Protection Code		2.A.13

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SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
23	427	EI	O		Address Identifier		2.A.25

Definition: This data type specifies the address of a person, place or organization plus associated information.

**Maximum Length:** 2915

**Note:** Replaces the AD data type as of v 2.3.

Example of usage for US:

|1000 Hospital Lane^Ste. 123^Ann Arbor ^MI^99999^USA^B^^WA^|

This would be formatted for postal purposes as

1000 Hospital Lane  
Ste. 123  
Ann Arbor MI 99999

Example of usage for Australia:

|14th Floor^1000 Hospital Lane^Sidney^QLD^9999|

This would be formatted for postal purposes using the same rules as for the American example as

14th Floor  
1000 Hospital Lane  
Sidney QLD 9999

**International note:** Countries typically have a standard method of formatting addresses. This data type does not specify the formatting usages, only the components of a postal address.

### 2.A.85.1 Street Address (SAD)

Definition: This component contains the house number, apartment number, street name, street direction, P.O. Box number, and similar address information.

### 2.A.85.2 Other Designation (ST)

Definition: This component contains the second line of address. In US usage, it qualifies address.

Examples: Suite 555 or Fourth Floor. When referencing an institution, this component specifies the street address.

### 2.A.85.3 City (ST)

Definition: This component specifies the city, or district or place where the addressee is located depending upon the national convention for formatting addresses for postal usage.

### 2.A.85.4 State or Province (ST)

Definition: This component specifies the state or province where the addressee is located. State or province should be represented by the official postal service codes for that country.

### 2.A.85.5 Zip or Postal Code (ST)

Definition: This component specifies the zip or postal code where the addressee is located. Zip or postal codes should be represented by the official codes for that country. In the US, the zip code takes the form 99999[-9999], while the Canadian postal code takes the form A9A9A9, and the Australian Postcode takes the form 9999.

### 2.A.85.6 Country (ID)

Definition: This component specifies the country where the addressee is located. HL7 specifies that the 3-character (alphabetic) form of ISO 3166 be used for the country code. Refer to [HL7 Table 0399 – Country code](#) in section 2.15.9.17, "MSH-17 – Country code" for valid values.

### 2.A.85.7 Address Type (ID)

Definition: This component specifies the kind or type of address. Refer to [HL7 Table 0190 - Address type](#) for valid values.

HL7 Table 0190 - Address type

Value	Description	Comment
BA	Bad address	Retained for backward compatibility only as of v2.6. Refer to XAD.17

Value	Description	Comment
BI	Billing Address	May also be used for the validation/authorization of credit cards
N	Birth (nee) (birth address, not otherwise specified)	Refers to the birth address, not otherwise specified
BDL	Birth delivery location (address where birth occurred)	Refers to the address where birth occurred.
F	Country Of Origin	
C	Current Or Temporary	Retained for backward compatibility only as of v2.6. Refer to XAD.16
B	Firm/Business	Refers to an address specific to an organization, such as an insurance company or employer, versus an individual's work location or place of employment. It would be specific to a firm or organization that has some sort of business relationship with the subject
H	Home	Refers to a residence or domicile, literally the place where the subject resides the majority of the time. Generally speaking most people will have a home address and it will represent their primary address. Home address is mutually exclusive of permanent address.
L	Legal Address	Refers to a special case address specific to the status of a subject or legal action involving the subject. For example, prisoners being treated at a healthcare facility may have home addresses, but their status mandates an address specific to their place of incarceration. Statutes may require the health information specific to a ward of the state be sent to a legal guardian, the courts, or a state or municipal agency regardless of the ward's physical location. In cases involving civil or criminal proceedings, a record may be flagged such that all correspondence is sent to any variety of legal entities.
M	Mailing	Retained for backward compatibility only as of v2.6. Refer to XAD.18
O	Office/Business	Refers to a work address specific to the subject.
P	Permanent	Refers to a place where the residents know the subject and where correspondence addressed to the subject will eventually reach the subject regardless of their physical location. A permanent address generally reflects a tax jurisdiction. Members of the military, flight attendants, and executives on rotational assignments are examples of those who typically maintain a permanent address. Although mutually exclusive of home address, in some instances, such as the executives mentioned above, it may be synonymous. In such cases upon return from assignment this address would revert to the home address.
RH	Registry home. Refers to the information system, typically managed by a public health agency, that stores patient information such as immunization histories or cancer data, regardless of where the patient obtains services.	Refers to the information system, typically managed by a public health agency that stores patient information such as immunization histories or cancer data, regardless of where the patient obtains services
BR	Residence at birth (home address at time of birth)	Refers to the home address at time of birth.
S	Service Location	Refers to the location in which service is rendered. This would be used if reimbursement is based on the location of the service (to take into account the cost of those services).
SH	Shipping Address	
V	Vacation	

### 2.A.85.8 Other Geographic Designation (ST)

Definition: This component specifies any other geographic designation. It includes county, bioregion, SMSA, etc.

### 2.A.85.9 County/Parish Code (IS)

A code that represents the county in which the specified address resides. *User-defined Table 0289 - County/parish* is used as the HL7 identifier for the user-defined table of values for this component. When this component is used to represent the county (or parish), component 8 <other geographic designation> should not duplicate it (i.e., the use of <other geographic designation> to represent the county is allowed only for the purpose of backward compatibility, and should be discouraged in this and future versions of HL7).

Allowable values: codes defined by government.



User-defined Table 0289 – County/parish

Value	Description	Comment
	No suggested values defined	

## 2.A.85.10 Census Tract (IS)

A code that represents the census tract in which the specified address resides. [User-defined Table 0288 - Census tract](#) is used as the HL7 identifier for the user-defined table of values for this component.

Allowable Values: codes defined by government.

User-defined Table 0288 – Census tract

Value	Description	Comment
	No suggested values defined	

## 2.A.85.11 Address Representation Code (ID)

Different <name/address types> and representations of the same name/address should be described by repeating of this field, with different values of the <name/address type> and/or <name/address representation> component.

**Note:** Also note that this new component remains in "alphabetic" representation with each repetition of the fields using these data types. I.e. even though the address may be represented in an ideographic character set, this component will remain represented in an alphabetic character set.

Refer to [HL7 table 0465 – Name/address representation](#) for valid values.

In general this component provides an indication of the representation provided by the data item. It does not necessarily specify the character sets used. Thus, even though the representation might provide an indication of what to expect, the sender is still free to encode the contents using whatever character set is desired. This component provides only hints for the receiver, so it can make choices regarding what it has been sent and what it is capable of displaying.

## 2.A.85.12 Address Validity Range (DR)

This component cannot be fully expressed. Identified as v 2.4 erratum. Retained for backward compatibility only as of v 2.5. Refer to 2.A.85.13, "Effective Date" and 2.A.85.14, "Expiration Date" components.

This component contains the start and end date/times, which define the period in which this address was valid.

## 2.A.85.13 Effective Date (DTM)

Definition: The first date, if known, on which the address is valid and active for the 'owning' entity.

## 2.A.85.14 Expiration Date (DTM)

Definition: The last date, if known, on which the address is valid and active for the 'owning' entity.

## 2.A.85.15 Expiration Reason (CWE)

Definition: This identifies why this address was marked as "ended".

User-defined Table 0616 - Address Expiration Reason

Value	Description	Comment
M	Moved	The individual associated with the address has moved and is no longer reachable at the address
E	Added in error	The address was incorrect and should never have been associated with the individual
R	On request	The associated individual requested that the address be removed from their record
C	Corrected	The address has been replaced with a corrected version

## 2.A.85.16 Temporary Indicator (ID)

Definition: If "Y" this indicates that the address is considered temporary. Refer to [HL7 Table 0136 – Yes/No Indicator](#).

## 2.A.85.17 Bad Address Indicator (ID)

Definition: If "Y", this indicates that it is not possible to contact the "owning" entity at this address. Refer to [HL7 Table 0136 – Yes/No Indicator](#).



**2.A.85.18 Address Usage (ID)**

Definition: This indicates how the address is intended to be used.

HL7 Table 0617 - Address Usage

Value	Description	Comment
M	Mailing	Identifies an address for mail correspondence from a healthcare provider as stipulated by the subject. For example, under the tenets of certain privacy regulations, it is exclusive to the patient and is typically maintained at the encounter or visit level versus the person level as it only has relevance to the specifics of a given encounter. This is an exception category of address in that the patient has stipulated that they want all correspondence relevant to a given encounter sent to this address in lieu of any other address on file. Providers are required to accommodate such requests under HIPAA promulgated regulation. Note that mailing and legal address may be mutually exclusive as defined below. (Implementors are reminded that although the privacy regulation requires the provider to honor such requests, it does require the provider to enquire whether the patient has a preferred address other than the one volunteered.)
V	Visit	Identifies an address at which the individual is physically located and may be visited.
C	Classification	Identifies an address used for the purpose of demographic classification or searching. Such addresses frequently contain insufficient information to be used as mailing or visit addresses. For example, they may only indicate country and postal code, without providing a street address.

**2.A.85.19 Addressee (ST)**

Definition: Identifies the name of the person or organization that should appear as part of the address. This is also known as the "Care of" or "C/O" line.

**2.A.85.20 Comment (ST)**

Definition: Descriptive information about the use of the address.

Example: "Do not ring bell"

**2.A.85.21 Preference Order (NM)**

Definition: For an entity having multiple addresses, indicates which is the 'most preferred' (lowest number) to 'least preferred' (highest number).

If the preference order is unique across all usages for a given type, then it indicates the preference across all usages, (e.g., first try my home address, then my business address). Otherwise, the preference order is assumed to only apply within a specific usage.

Preference order numbers need not be sequential (i.e., four addresses with the priority orders of 10, 1, 5 and 15 are legitimate). The preference order numbers must be non-negative.

**2.A.85.22 Protection Code (CWE)**

Definition: Identifies that an address needs to be treated with special care or sensitivity.

The specific set of codes and appropriate handling of such addresses will vary by jurisdiction and is subject to site-specific negotiation. For example, a provider address marked as 'unlisted' might not be printed in an internal address listing.

User-defined Table 0618 - Protection Code

Value	Description	Comment
LI	Listed	
UL	Unlisted (Should not appear in directories)	
UP	Unpublished	

**2.A.85.23 Address Identifier (EI)**

Definition: A unique identifier for the address.

This component allows an address to be uniquely identified, and enables the linking of a single address to multiple people and contexts. For example, each member of a family living at the same location would share the same address, having the same identifier. A correction to the address of one family member could be automatically propagated to other members of the family.

## 2.A.86 XCN - extended composite ID number and name for persons

HL7 Component Table - XCN – Extended Composite ID Number and Name for Persons

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	15	ST	O		ID Number		2.A.74
2	194	FN	O		Family Name		2.A.30
3	30	ST	O		Given Name		2.A.74
4	30	ST	O		Second and Further Given Names or Initials Thereof		2.A.74
5	20	ST	O		Suffix (e.g., JR or III)		2.A.74
6	20	ST	O		Prefix (e.g., DR)		2.A.74
7	5	IS	B	0360	Degree (e.g., MD)	deprecated as of v 2.5	2.A.36
8	4	IS	C	0297	Source Table		2.A.36
9	227	HD	O	0363	Assigning Authority		2.A.33
10	1	ID	O	0200	Name Type Code		2.A.35
11	4	ST	O		Identifier Check Digit		2.A.74
12	3	ID	C	0061	Check Digit Scheme		2.A.35
13	5	ID	O	0203	Identifier Type Code		2.A.35
14	227	HD	O		Assigning Facility		2.A.33
15	1	ID	O	0465	Name Representation Code		2.A.35
16	705	CWE	O	0448	Name Context		2.A.13
17	49	DR	B		Name Validity Range		2.A.20
18	1	ID	O	0444	Name Assembly Order		2.A.35
19	24	DTM	O		Effective Date		2.A.22
20	24	DTM	O		Expiration Date		2.A.22
21	199	ST	O		Professional Suffix		2.A.74
22	705	CWE	O		Assigning Jurisdiction		2.A.13
23	705	CWE	O		Assigning Agency or Department		2.A.13

Maximum Length: 3220

**Note:** Replaces CN data type as of v 2.3.

This data type is used extensively appearing in the PV1, ORC, RXO, RXE, OBR and SCH segments, as well as others, where there is a need to specify the ID number and name of a person.

Example without assigning authority and assigning facility:

```
|1234567^Everyman^Adam^A^III^DR^PHD^ADT01^^L^4^M11^MR|
```

Examples with assigning authority and assigning facility:

Dr. Harold Hippocrates' provider ID was assigned by the Provider Master and was first issued at Good Health Hospital within the Community Health and Hospitals System. Since IS table values (first component of the HD) were not used for assigning authority and assigning facility, components 2 and 3 of the HD data type are populated and demoted to sub-components as follows:

```
12188^Hippocrates^Harold^H^IV^Dr^MD^^&Provider Master.Community Health and  
Hospitals&L^L^9^M10^DN^&Good Health Hospital.Community Health and  
Hospitals&L^A
```

Ludwig van Beethoven's medical record number was assigned by the Master Patient Index and was first issued at Fairview Hospital within the University Hospitals System.

```
10535^van Beethoven&van^Ludwig^A^III^Dr^PHD^^&MPI.Community Health and  
Hospitals&L^L^3^M10^MR^& Good Health Hospital.Community Health and  
Hospitals&L^A
```

### 2.A.86.1 ID number (ST)

This string refers to the coded ID according to a user-defined table, defined by the 9<sup>th</sup> component. If the first component is present, either the source table or the assigning authority must be valued.

### 2.A.86.2 Family Name (FN)

This component allows full specification of the surname of a person. Where appropriate, it differentiates the person's own surname from that of the person's partner or spouse, in cases where the person's name may contain elements from either name. It also permits messages to distinguish the surname prefix (such as "van" or "de") from the surname root. See section [2.A.30, "FN - family name"](#).

### 2.A.86.3 Given Name (ST)

First name.

### 2.A.86.4 Second and Further Given Names or Initials Thereof (ST)

Multiple middle names may be included by separating them with spaces.

### 2.A.86.5 Suffix (ST)

Used to specify a name suffix (e.g., Jr. or III).

### 2.A.86.6 Prefix (ST)

Used to specify a name prefix (e.g., Dr.).

### 2.A.86.7 Degree (IS)

Retained for backward compatibility only as of v 2.5. See Professional Suffix component.

Used to specify an educational degree (e.g., MD). Refer to [User-defined Table 0360 – Degree](#) for suggested values.

### 2.A.86.8 Source Table (IS)

[User-defined Table 0297 – CN ID](#) source is used as the HL7 identifier for the user-defined table of values for this component. Used to delineate the first component.

### 2.A.86.9 Assigning Authority (HD)

The assigning authority is a unique identifier of the system (or organization or agency of department) that creates the data. [User-defined Table 0363 – Assigning authority](#) is used as the HL7 identifier for the user-defined table of values for the first sub-component of the HD component, <namespace ID>.

**Note:** When the HD data type is used in a given segment as a component of a field of another data type, [User-defined Table 0300 - Namespace ID](#) (referenced by the first sub-component of the HD component) may be re-defined (given a different user-defined table number and name) by the technical committee responsible for that segment.

By site agreement, implementors may continue to use [User-defined Table 0300 – Namespace ID](#) for the first sub-component.

### 2.A.86.10 Name Type Code (ID)

A code that represents the type of name. Refer to [HL7 Table 0200 - Name type](#) for valid values. See Section [2.A.88.7, "Name Type Code \(ID\)"](#).

### 2.A.86.11 Identifier Check Digit (ST)

Definition: This component contains the digit, or digits, exclusive of the identifier in XCN.1, usually calculated by applying an algorithm to all or some of the digits in the number, which may be used to test validity of the non-check-digit identifier.

This component may also be used to transmit information intended to validate the veracity of the supplied identifier or the presenter of the identifier. For example, this component may be used to ensure that the presenter of a credit card is an authorized user of that card.

### 2.A.86.12 Check Digit Scheme (ID)

Definition: Contains the code identifying the check digit scheme employed.

Refer to [HL7 Table 0061 - Check digit scheme](#) for valid values.

### 2.A.86.13 Identifier Type Code (ID)

A code corresponding to the type of identifier. In some cases, this code may be used as a qualifier to the <assigning authority> component. Refer to [HL7 Table 0203 - Identifier type](#) for suggested values.

### 2.A.86.14 Assigning Facility (HD)

The place or location identifier where the identifier was first assigned to the person. This component is not an inherent part of the identifier but rather part of the history of the identifier: as part of this data type, its existence is a convenience for certain intercommunicating systems.

**Note:** When the HD data type is used in a given segment as a component of a field of another data type, [User-defined Table 0300 - Namespace ID](#) (referenced by the first sub-component of the HD component) may be re-defined (given a different user-defined table number and name) by the technical committee responsible for that segment.

### 2.A.86.15 Name Representation Code (ID)

Different <name/address types> and representations of the same <name/address> should be described by repeating of this field, with different values of the <name/address type> and/or <name/address representation> component.

**Note:** This new component remains in “alphabetic” representation with each repetition of the field using these data types. I.e., even though the name may be represented in an ideographic character set, this component will remain represented in an alphabetic character set.

Refer to [HL7 Table 0465 – Name/address representation](#) for valid values.

In general this component provides an indication of the representation provided by the data item. It does not necessarily specify the character sets used. Thus, even though the representation might provide an indication of what to expect, the sender is still free to encode the contents using whatever character set is desired. This component provides only hints for the receiver, so it can make choices regarding what it has been sent and what it is capable of displaying.

### 2.A.86.16 Name Context (CWE)

This component is used to designate the context in which a name is used. The main use case is in Australian healthcare for indigenous patients who prefer to use different names when attending different healthcare institutions. Another use case occurs in the US where health practitioners can be licensed under slightly different names and the reporting of the correct name is vital for administrative purposes. Refer to [User-defined Table 0448 – Name context](#) for suggested values.

### 2.A.86.17 Name Validity Range (DR)

Retained for backward compatibility only as of v 2.5. Refer to XCN.19 Effective Date and XCN.20 Expiration Date instead. This component cannot be fully expressed and has been identified as v 2.4 erratum.

This component contains the start and end date/times that define the period during which this name was valid.

### 2.A.86.18 Name Assembly Order (ID)

A code that represents the preferred display order of the components of this person name. Refer to [HL7 Table 0444 - Name Assembly Order](#) for valid values.

**2.A.86.19 Effective Date (DTM)**

Definition: The first date, if known, on which the person name is valid and active.

**2.A.86.20 Expiration Date (DTM)**

Definition: The last date, if known, on which the person name is valid and active.

**2.A.86.21 Professional Suffix (ST)**

Definition: Used to specify an abbreviation, or a string of abbreviations denoting qualifications that support the person's profession, (e.g., licenses, certificates, degrees, affiliations with professional societies, etc.). The Professional Suffix normally follows the Family Name when the Person Name is used for display purposes. Please note that this component is an unformatted string and is used for display purposes only. Detailed information regarding the contents of Professional Suffix is obtained using appropriate segments in Chapter 15, Personnel Management.

**2.A.86.22 Assigning Jurisdiction (CWE)**

Definition: The geo-political body that assigned the identifier in component 1.

See section [2.A.14.9](#), "[Assigning Jurisdiction \(CWE\)](#)" for further detail.

**2.A.86.23 Assigning Agency or Department (CWE)**

Definition: The agency or department that assigned the identifier in component 1.

See section [2.A.14.10](#), "[Assigning Agency or Department \(CWE\)](#)" for further details.

**2.A.87 XON - extended composite name and identification number for organizations**

HL7 Component Table - XON – Extended Composite Name and Identification Number for Organizations

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	50	ST	O		Organization Name		2.A.74
2	20	IS	O	<a href="#">0204</a>	Organization Name Type Code		2.A.36
3	4	NM	B		ID Number		2.A.47
4	4	NM	O		Identifier Check Digit		2.A.47
5	3	ID	O	<a href="#">0061</a>	Check Digit Scheme		2.A.35
6	227	HD	O	<a href="#">0363</a>	Assigning Authority		2.A.33
7	5	ID	O	<a href="#">0203</a>	Identifier Type Code		2.A.35
8	227	HD	O		Assigning Facility		2.A.33
9	1	ID	O	<a href="#">0465</a>	Name Representation Code		2.A.35
10	20	ST	O		Organization Identifier		2.A.74

**Maximum Length: 570**

This data type is used in fields (e.g., PV2-23, NK1-13, PD1-3, OBR-44) to specify the name and ID number of an organization.

### Example 1:

The ID for Good Health Hospital was assigned by the Community Health and Hospitals enterprise's Hospital Master and was first issued at the Central Offices.

```
Good Health Hospital^L^716^9^M10^&Hospital Master.Community Health and  
Hospitals&L^XX^&Central Offices.Community Health and Hospitals&L^A
```

### Example 2:

Good Health Hospital has another ID that was issued by CMS. Assigning Authority, CMS, values only the first HD component, an IS data type and assigning facility is not relevant. This information might be transmitted accordingly:

```
Good Health Hospital^L^4544^3^M10^CMS^XX^^A
```

#### 2.A.87.1 Organization Name (ST)

The name of the specified organization.

#### 2.A.87.2 Organization Name Type Code (IS)

A code that represents the type of name i.e., legal name, display name. Refer to [User-defined Table 0204 - Organizational Name Type](#) for suggested values.

User-defined Table 0204 - Organizational name type

Value	Description	Comment
A	Alias name	
L	Legal name	
D	Display name	
SL	Stock exchange listing name	

#### 2.A.87.3 ID Number (NM)

This component has been retained for backward compatibility only as of v 2.5. It is recommended to use component 10 Organization identifier that accommodates alphanumeric identifiers.

#### 2.A.87.4 Identifier Check Digit (NM)

Definition: This component contains the digit, or digits, exclusive of the identifier in XON.1, usually calculated by applying an algorithm to all or some of the digits in the number, which may be used to test validity of the non-check-digit identifier.

This component may also be used to transmit information intended to validate the veracity of the supplied identifier or the presenter of the identifier. For example, this component may be used to ensure that the presenter of a credit card is an authorized user of that card.

#### 2.A.87.5 Check Digit Scheme (ID)

Definition: Contains the code identifying the check digit scheme employed.

The check digit scheme codes are defined in [HL7 Table 0061 - Check digit scheme](#).

#### 2.A.87.6 Assigning Authority (HD)

The assigning authority is a unique identifier of the system (or organization or agency or department) that creates the data. Assigning authorities are unique across a given HL7 implementation. Refer to [User-defined Table 0363 - Assigning Authority](#) for suggested values.

**Note:** When the HD data type is used in a given segment as a component of a field of another data type, [User-defined Table 0300 - Namespace ID](#) (referenced by the first sub-component of the HD component) may be re-defined (given a different user-defined table number and name) by the technical committee responsible for that segment.

By site agreement, implementers may continue to use [User-defined Table 0300 - Namespace ID](#) for the first sub-component.

#### 2.A.87.7 Identifier Type Code (ID)

A code corresponding to the type of identifier. In some cases, this code may be used as a qualifier to the "Assigning authority" component. Refer to [HL7 Table 0203 - Identifier type](#) for suggested values.

**2.A.87.8 Assigning Facility ID (HD)**

The place or location identifier where the identifier was first assigned to the person. This component is not an inherent part of the identifier but rather part of the history of the identifier: as part of this data type, its existence is a convenience for certain intercommunicating systems.

**Note:** When the HD data type is used in a given segment as a component of a field of another data type, [User-defined Table 0300 - Namespace ID](#) (referenced by the first sub-component of the HD component) may be re-defined (given a different user-defined table number and name) by the technical committee responsible for that segment.

**2.A.87.9 Name Representation Code (ID)**

Different <name/address types> and representations of the same <name/address> should be described by repeating of this field, with different values of the <name/address type> and/or <name/address representation> component.

**Note:** This new component remains in “alphabetic” representation with each repetition of the field using these data types, i.e. even though the name may be represented in an ideographic character set, this component will remain represented in an alphabetic character set.

Refer to [HL7 Table 0465 – Name/address representation code](#) for valid values.

In general this component provides an indication of the representation provided by the data item. It does not necessarily specify the character sets used. Thus, even though the representation might provide an indication of what to expect, the sender is still free to encode the contents using whatever character set is desired. This component provides only hints for the receiver, so it can make choices regarding what it has been sent and what it is capable of displaying.

**2.A.87.10 Organization identifier (ST)**

Definition: This component contains the sequence of characters (the code) that uniquely identifies the item being referenced by XON.1 Organization Name. This component replaces XON.3 ID Number as of v 2.5.

**Note:** The check digit and code identifying check digit scheme are null if Organization identifier is alphanumeric.

**2.A.88 XPN - extended person name**

HL7 Component Table - XPN– Extended Person Name

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1	194	FN	O		Family Name		2.A.30
2	30	ST	O		Given Name		2.A.74
3	30	ST	O		Second and Further Given Names or Initials Thereof		2.A.74
4	20	ST	O		Suffix (e.g., JR or III)		2.A.74
5	20	ST	O		Prefix (e.g., DR)		2.A.74
6	6	IS	B	0360	Degree (e.g., MD)		2.A.36
7	1	ID	O	0200	Name Type Code		2.A.35
8	1	ID	O	0465	Name Representation Code		2.A.35
9	705	CWE	O	0448	Name Context		2.A.13
10	49	DR	B		Name Validity Range		2.A.20
11	1	ID	O	0444	Name Assembly Order		2.A.35
12	24	DTM	O		Effective Date		2.A.22
13	24	DTM	O		Expiration Date		2.A.22
14	199	ST	O		Professional Suffix		2.A.74

**Maximum Length:** 1317

**Note:** Replaces PN data type as of v 2.3.

Internationalization Note: In countries using ideographic or syllabic (phonetic) character sets, it is sometimes necessary to send the name in one or both of these formats, as well as an alphabetic format. The switching between the different character sets can be accomplished using a character set such as JIS X 0202 - ISO 2022 which provides an escape sequence for switching among different character sets and among single-byte and multi-byte character representations. When the name field is repeated, the different repetitions of the name may be represented by these different character sets. The details are as follows. (See also Section 2.9.2, "Escape sequences supporting multiple character sets for PN, XPN, XCN, XON, XAD, FT, ST and TX data types.")

HL7 supports the following standards for Japanese characters:

JIS X 0201 for ISO-IR 13 (Japanese Katakana)

JIS X 0201 for ISO-IR 14 (Japanese Romaji)

JIS X 0208 for ISO-IR 87 (Japanese Kanji, Hiragana and Katakana)

JIS X 0212 for ISO-IR 159 (supplementary Japanese Kanji)

HL7 supports the following standards for European characters:

ISO 8859 (1-9) for ISO-IR 100, 101, 109, 110, 144, 127, 126, 138 and 148.

Character sets are referenced in HL7 as ASCII, 8859/1, 8859/2, ISO IR14, ISO IR87, and ISO IR159. DICOM uses codes laid out in ISO 2375, of the form 'ISO-IR xxx'. HL7 supports this naming as well, to facilitate interoperability.

HL7 uses the Basic G0 Set of the International Reference Version of ISO 646:1990 (ISO IR-6) as the default character repertoire for character strings. This is a single-byte character set, identical to ASCII.

Each repetition of a XPN, XON, XCN, or XAD field is assumed to begin with the default character set. If another character set is to be used, the HL7 defined escape sequence used to announce that character set must be at the beginning of the repetition, and the HL7 defined escape sequence used to start the default character set must be at the end of the repetition. Note also that several character sets may be intermixed within a single repetition as long as the repetition ends with a return to the default character set.

An application must specify which character sets it supports in the field [MSH-18 Character Sets](#) and which character set handling scheme it supports in the field [MSH-20-Alternate character set handling scheme](#). It is assumed that the sending and receiving applications are aware of how to map character set names (i.e., ISO-IR xxx) to escape sequences.

For example, in many Japanese messages there is a mix of Romaji (i.e., Roman characters), Katakana (phonetic representation of foreign words), Hiragana (phonetic representation of Japanese words) and Kanji (pictographs). Such a message would require 4 character sets be specified in the MSH.

### References for Internationalization of Name

	Reference	Description
1.	"Understanding Japanese Information Processing" by Ken Lunde, O'Reilly Press	
2.	NEMA PS3.5 - DICOM Part 5: Data Structure and Semantics	
3.	ANSI X3.4:1986	ASCII character set
4.	ISO 646:1990	Information Processing - ISO 7-bit coded character set for information interchange
5.	ISO/IEC 2022:1994	Information Technology - Character code structure and extension techniques
6.	ISO 2375:1986	Data Processing - Procedure for the registration of escape sequences
7.	ISO 6429:1990	Information Processing - Control functions for 7-bit and 8-bit coded character sets
8.	ISO 8859 (1-9)	Information Processing - 8-bit single-byte coded graphic character sets - parts 1-9
9.	ENV 41 503:1990	Information systems interconnection - European graphic character



		repertoires and their coding
10.	ENV 41 508:1990	Information systems interconnection - East European graphic character repertoires and their coding
11.	JIS X 0201-1976	Code for Information Exchange
12.	JIS X 0212-1990	Code of the supplementary Japanese Graphic Character set for information interchange
13.	JIS X 0208-1990	Code for the Japanese Graphic Character set for information interchange
14.	RFC 1468	Japanese Character Encoding for Internet Messages

Character Repertoires supported by DICOM are defined in Part 5, section 6.1. The DICOM Standard is available free on the Internet at <http://medical.nema.org/>.

### Examples of names requiring only one iteration of the field where the XPN is applied:

Example 1: Adam A. Everyman III PhD

|Everyman^Adam^A^III^DR^L^PHD|

Example 2: Ludwig van Beethoven

|Beethoven&van^Ludwig^L|

Example 3: Hermann Egon Mayer zur alten Schildesche

|Mayer^Hermann^Egon^zur alten Schildesche|

Example 4: Sister Margot

|^Margot^^Sister^C|

Example 5: Dr Harold Henry Hippocrates AO. MBBS. ASCTS. A physician who holds an Honorarium, an academic degree and a board certificate. Professional suffixes are displayed as concatenated. (AO = Order of Australia (Honorarium), MBBS = Bachelor of Medicine and Bachelor of Surgery, ASCTS = Australian Society of Cardiothoracic Surgeons

|Hippocrates^Harold^Henry^Dr^L^AO.MBBS.ASCTS|

Example 6: Nancy N. Nightingale, RN, PHN, BSN, MSN. A registered nurse who is a Public Health Nurse with 2 academic degrees, BSN and MSN.

|Nightingale^Nancy^N^RN, PHN, BSN, MSN|

Example 7: H.Horrace Helper Jr., RN, CNP. A registered nurse who is a certified nurse practitioner.

|Helper^H^Horrace^Jr^RN, CNP|

Example 8: Mevrouw Irma Jongeneel de Haas. An individual whose birth name (geboortenaam) is de Haas and whose partner's name is Jongeneel.

|Jongeneel-de Haas&deHaas&&Jongeneel^Irma^^Mevrouw^L|

### Examples of names requiring more than one iteration of the field where the XPN is applied:

Example 9: Herr Prof. Dr. med. Joachim W. Dudeck

|Dudeck^Joachim^W.^Dr.med.^L^MD ~Dudeck^J.W.^Herr Prof.Dr.^D|

Example 10: Herr Dr. Otto Graf Lambsdorff mdB a.D. According to German law "Adelstitel" like "Graf" or "Baron" belongs to the family name and therefore must be encoded in the family name field separated by blanks.

|Graf Lambsdorff&Graf&Lambsdorff^Otto^Dr.^L~Graf  
Lambsdorff&Graf&Lambsdorff^Otto^mdB a.D.^Herr Dr.^D|

Example 11: Walter Kemper genannt (named) Mölleken

|Kemper^Walter^L~Mölleken^Walter^A|

Example 12: Herr Dr. med. Dr. h.c. Egon Maier

|Maier^Egon^Dr.med. Dr.h.c.^L^MD~Maier^Egon^Herr Dr.med. Dr.h.c.^D|

Example 13: Herr Dipl.Ing. Egon Maier

|Maier^Egon^L^DIPL~Maier^Egon^Herr Dipl.Ing.^D|

Example 14: Frau Gerda Müller geb. Maier, verheiratet seit 16.2.2000

|Müller^Gerda^^Frau^L^20000216~Maier^Gerda^^Frau^M|

Example 15: President Adam A Everyman III, president from 1997 until 2001, aka Sonny Everyman

|Everyman^Adam^A.^III^President^L~Mr.  
President^D^19970816^20010320~Everyman^Sonny^A|

### Example 16: Michio Kimura

This example doesn't use title and degrees, but shows the repetition of this name for different purposes. The first iteration is the legal name in Kanji; the second, Katakana; the third, alphabetic.

日本太郎~~~~L^I~につぽん^たろう~~~~L^P~Nippon^Tarou~~~~L^A

#### 2.A.88.1 Family Name (FN)

This component allows full specification of the surname of a person. Where appropriate, it differentiates the person's own surname from that of the person's partner or spouse, in cases where the person's name may contain elements from either name. It also permits messages to distinguish the surname prefix (such as "van" or "de") from the surname root. See section [2.A.30](#), "*FN - family name*".

#### 2.A.88.2 Given Name (ST)

First name.

#### 2.A.88.3 Second and Further Given Names or Initials Thereof (ST)

Multiple middle names may be included by separating them with spaces.

#### 2.A.88.4 Suffix (ST)

Used to specify a name suffix (e.g., Jr. or III).

#### 2.A.88.5 Prefix (ST)

Used to specify a name prefix (e.g., Dr.).

#### 2.A.88.6 Degree (IS)

Retained for backward compatibility only as of v 2.5. See Professional Suffix component.

Used to specify an educational degree (e.g., MD). Refer to [User-defined Table 0360 – Degree](#) for suggested values.

#### 2.A.88.7 Name Type Code (ID)

A code that represents the type of name. Refer to [HL7 Table 0200 - Name type](#) for valid values.

HL7 Table 0200 - Name Type

Value	Description	Comment
A	Alias Name	
B	Name at Birth	
C	Adopted Name	
D	Display Name	
I	Licensing Name	
K	Artist Name	
L	Legal Name	
M	Maiden Name	
N	Nickname /"Call me" Name/Street Name	
P	Name of Partner/Spouse (retained for backward compatibility only)	
R	Registered Name (animals only)	
S	Coded Pseudo-Name to ensure anonymity	
T	Indigenous/Tribal/Community Name	
U	Unspecified	

**Note:** The content of Legal Name is country specific. In the US the legal name is the same as the current married name.

#### 2.A.88.8 Name Representation Code (ID)

Different <name/address types> and representations of the same <name/address> should be described by repeating of this field, with different values of the <name/address type> and/or <name/address representation> component.

**Note:** This new component remains in "alphabetic" representation with each repetition of the field using these data types, i.e., even though the name may be represented in an ideographic character set, this component will remain represented in an alphabetic character set.

Refer to [HL7 Table 0465 – Name/address representation](#) for valid values.

In general this component provides an indication of the representation provided by the data item. It does not necessarily specify the character sets used. Thus, even though the representation might provide an indication of what to expect, the sender is still free to encode the contents using whatever character set is desired. This component provides only hints for the receiver, so it can make choices regarding what it has been sent and what it is capable of displaying.

### 2.A.88.9 Name Context (CWE)

This component is used to designate the context in which a name is used. The main use case is in Australian healthcare for indigenous patients who prefer to use different names when attending different healthcare institutions. Another use case occurs in the US where health practitioners can be licensed under slightly different names and the reporting of the correct name is vital for administrative purposes. Refer to [User-defined Table 0448 – Name context](#) for suggested values.

### 2.A.88.10 Name Validity Range (DR)

This component cannot be fully expressed. Identified as v 2.4 erratum. Retained for backward compatibility only as of v 2.5. Refer to 2.A.88.12, "Effective Date" and 2.A.88.13, "Expiration Date" components.

This component contains the start and end date/times, which define the period during which this name was valid. See section [2.A.20, "DR - date/time range"](#) for description of subcomponents.

### 2.A.88.11 Name Assembly Order (ID)

A code that represents the preferred display order of the components of this person name. Refer to [HL7 0444 – Name assembly order](#) for valid values.

### 2.A.88.12 Effective date (DTM)

Definition: The first date, if known, on which the person name is valid and active.

### 2.A.88.13 Expiration date (DTM)

Definition: The last date, if known, on which the person name is valid and active.

### 2.A.88.14 Professional Suffix (ST)

Definition: Used to specify an abbreviation, or a string of abbreviations denoting qualifications that support the person's profession, (e.g., licenses, certificates, degrees, affiliations with professional societies, etc.). The Professional Suffix normally follows the Family Name when the Person Name is used for display purposes. Please note that this component is an unformatted string and is used for display purposes only. Detailed information regarding the contents of Professional Suffix is obtained using appropriate segments in Chapter 15, Personnel Management.

## 2.A.89 XTN - extended telecommunication number

HL7 Component Table - XTN – Extended Telecommunication Number

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
1			W		Telephone Number		2.A.74
2	3	ID	O	0201	Telecommunication Use Code		2.A.35
3	8	ID	O	0202	Telecommunication Equipment Type		2.A.35
4	199	ST	O		Communication Address		2.A.74
5	3	NM	O		Country Code		2.A.47
6	5	NM	O		Area/City Code		2.A.47
7	9	NM	O		Local Number		2.A.47
8	5	NM	O		Extension		2.A.47
9	199	ST	O		Any Text		2.A.74
10	4	ST	O		Extension Prefix		2.A.74

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME	COMMENTS	SEC.REF.
11	6	ST	O		Speed Dial Code		2.A.74
12	199	ST	C		Unformatted Telephone number		2.A.74
13	24	DTM	O		Effective Start Date		2.A.22
14	24	DTM	O		Expiration Date		2.A.22
15	705	CWE	O	0868	Expiration Reason		2.A.13
16	705	CWE	O	0618	Protection Code		2.A.13
17	427	EI	O		Shared Telecommunication Identifier		2.A.25
18	2	NM	O		Preference Order		2.A.47

**Maximum Length: 2743**

Example 1: A Work fax number

^WPN^FX^^^734^6777777

Example 2: Telephone number with extension

^WPN^PH^^^734^6777777^1

Example 2: Telephone number with internal code. In this example, assume that a corporation's telephone system supports a full external telephone number (area code and telephone number). It also supports internal dialing standards that assign a code to each facility and an extension to each telephone (which happens to be the last 4 digits of the external telephone number, by convention).

So, if the Los Angeles facility were assigned code 333, and if the "outside" telephone number at the LA office is (626) 555-1234, the components would be:

Component	Value
area/city code	626
phone number	555-1234
extension	1234
extension prefix	333

The field would be transmitted as follows:

^WPN^PH^^^626^5551234^1234^333

Example 3: speed dial. In this example, assume that a corporation's telephone system supports speed dialing numbers. For example, suppose that a corporation has a contract with a travel agency, whose external number is 1-610-555-1234. Since it is so frequently dialed, the company assigns a speed code: #6098. The components would be:

Component	Value
Area/city code	610
Phone number	555-1234
Speed Dial	#6098

The field would be transmitted as follows:

^WPN^PH^^^610^5551234^^^#6098

Example 4: home e-mail address. In this example, assume that a person has a primary home e-mail address such as someone@somewhere.com. The components would be:

Component	Value
Telecommunication Use Code	PRN
Telecommunication Equipment Type	Internet
Communication Address	someone@somewhere.com

The field would be transmitted as follows:

^PRN^Internet^someone@somewhere.com

Example 5: work e-mail address. In this example, assume that a person has a work e-mail address such as someone@somewhere.com. The components would be:

Component	Value
Telecommunication Use Code	WPN
Telecommunication Equipment Type	Internet
Communication Address	someone@somewhere.com

The field would be transmitted as follows:

`^WPN^Internet^someone@somewhere.com`

### 2.A.89.1 Telephone Number

**Attention:** *The XTN-1 component was deprecated as of v2.3 and the detail was withdrawn and removed from the standard as of v 2.6.*

### 2.A.89.2 Telecommunication Use Code (ID)

Definition: A code that represents a specific use of a telecommunication number. Refer to [HL7 Table 0201 - Telecommunication use code](#) for valid values.

HL7 Table 0201 - Telecommunication use code

Value	Description	Comment
PRN	Primary Residence Number	
ORN	Other Residence Number	
WPN	Work Number	
VHN	Vacation Home Number	
ASN	Answering Service Number	
EMR	Emergency Number	
NET	Network (email) Address	Retained for backward compatibility as of v2.6
BPN	Beeper Number	Retained for backward compatibility as of v2.6
PRS	Personal	Not tied to a location or role

### 2.A.89.3 Telecommunication Equipment Type (ID)

Definition: A code that represents the type of telecommunication equipment. Refer to [HL7 Table 0202 - Telecommunication equipment type](#) for valid values.

HL7 Table 0202 - Telecommunication equipment type

Value	Description	Comment
PH	Telephone	
FX	Fax	
MD	Modem	
CP	Cellular or Mobile Phone	
SAT	Satellite Phone	
BP	Beeper	
Internet	Internet Address	
X.400	X.400 email address	
TDD	Telecommunications Device for the Deaf	
TTY	Teletypewriter	

### 2.A.89.4 Communication Address (ST)

This component is required if neither XTN.7 or XTN.12 are populated.

Note: If the @-sign is being used as a subcomponent delimiter, the HL7 subcomponent escape sequence may be used when encoding an Internet address (see section 2.7.1, "Formatting Codes").

### 2.A.89.5 Country Code (NM)

Definition: The numeric code assigned by the International Telecommunication Union in standard E.164 to access telephone services in another country.

### 2.A.89.6 Area/city Code (NM)

Definition: The numeric code to access telephone services in another area/city within a country. This number historically needs not be dialed if the caller is located in the same area/city as the phone number of the called party.

The use and size of area/city codes is however country specific: some countries don't use area/city codes, or the use of area/city codes may be mandatory when dialing, or area/city codes may be used to group phone numbers based on other criteria than geographic location, such as cell-phone area/city-codes, or free information numbers (e.g., 800 numbers).

Most countries have a prefix for Area/City codes which only has to be dialed if one doesn't use a country code. This prefix (mostly "0", sometimes "9") should be omitted from the content of this field. If the prefix for the Area/Code is also mandatory if one uses the country code (e.g., in Italy) then this field should also contain the prefix.

### 2.A.89.7 Local Number (NM)

Definition: The numeric code used to contact the called party, exclusive of country and area/city codes. The size of the Local Number is country specific.

Note that the Local Number does not include the numeric codes that have to be dialed once a connection has been established. Examples include (automated) organizational phone systems which allow external callers to dial additional numeric codes. These additional numeric codes should be specified as an extension.

### 2.A.89.8 Extension (NM)

Definition: The numeric code to contact the called party used within an organization, e.g., the number used if both caller and called party are located within the same organization. The extension is often the same as the last few digits of the Local Number. The use of extensions is country and site specific, and may depend on the type of phone system (PBX) used by the organization.

### 2.A.89.9 Any Text (ST)

Definition: Contains comments with respect to the telephone number.

Example: |^^^^^^Do not use after 5PM|

### 2.A.89.10 Extension Prefix (ST)

Definition: The characters established within a company's internal telephone system network used as a prefix to the Extension component for internal dialing. Note that the use of Extension Prefix requires that the Extension component be valued and that digits, as well as special characters (e.g., \*, #) may be used.

### 2.A.89.11 Speed Dial Code (ST)

Definition: The characters established within a company's internal telephone system used in place of the (external) telephone number to facilitate calling because its length is shorter than that of the telephone number. Note that digits, as well as special characters (e.g., \*, #) may be used.

### 2.A.89.12 Unformatted Telephone Number (ST)

Definition: An expression of the telephone number as an unparsable string.

The phone number was entered as free text and sending system does not know how to parse it.

Example: |^^^^^^^^^^1-800-Dentist|

### 2.A.89.13 Effective Start Date (DTM)

Definition: The first date, if known, on which the telecommunication number is valid and active.

### 2.A.89.14 Expiration Date (DTM)

Definition: The last date, if known, on which the telecommunication number is valid and active.

### 2.A.89.15 Expiration Reason (CWE)

Definition: Indicates why this contact number/e-mail was marked as "ended".

User-defined Table 0868 - Telecommunication expiration reason

Value	Description	Comment
M	Moved	The individual associated with the telecommunication address has moved and is no longer reachable at the address
E	Added in error	The telecommunication address was incorrect and should never have been associated with the individual
R	On request	The associated individual requested that the telecommunication address be removed from their record (though it may still be correct).
C	Corrected	The telecommunication address has been replaced with a corrected version

Value	Description	Comment
N	No longer in service	The telecommunication address is no longer connected or available

**2.A.89.16 Protection Code (CWE)**

Definition: Indicates whether this information is considered sensitive or should be protected in some way. Refer to [User-defined table 0618 - Protection Code](#) for suggested values.

The specific set of codes and appropriate handling of such telecommunications addresses will vary by jurisdiction and is subject to site-specific negotiation. For example, a provider address marked as 'unlisted' might not be printed in an internal address listing.

**2.A.89.17 Shared Telecommunication Identifier (EI)**

Definition: A unique identifier for the phone number or e-mail address.

This component allows a phone number to be uniquely identified, and enables the linking of a single phone number to multiple people and contexts. For example, each member of a family living at the same location would share the same phone number, having the same identifier. A correction to the phone number of one family member could be automatically propagated to other members of the family.

HL7 does not assume responsibility for the processing rules for this component.

**2.A.89.18 Preference Order (NM)**

Definition: For an entity having multiple telecommunication addresses, indicates which is the "most preferred" (lowest number) to "least preferred" (highest number).

If the preference order is unique across all usages for a given type, then it indicates the preference across all usages, (e.g. first try my home number, then my business number). If the preference order is unique across all usages and types, then it indicates the preference across all types of telecommunication addresses. (E.g., first try my phone. If that doesn't work, use my pager.) Otherwise, the preference order is assumed to only apply within a specific type and usage.

Preference order numbers need not be sequential, (i.e. four numbers with the priority orders of—10, 0, 5 and 15 are legitimate.) The preference order numbers must be non-negative.

