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Referrals, Status and Discharges Messaging Standard

HISO 10011.2

To be used in conjunction with HISO 10011.1 Referrals, Status, and Discharge Business Process Standard and 10011.3 Referrals, Status and Discharge implementation guide

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Updates

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Contents

Tables and Figures

Committee Representation

Committee 10011 was responsible for the preparation of this document. It comprised representatives of the following nominating organisations:

Representative	Nominating Organisation
Doug Neilson	Accident Compensation Corporation
Jennie Michel	Age Concern New Zealand Incorporated
Shayne Hunter	Genesis Consulting Group Limited
David Hay	Health Alliance
Edwin Ng	HealthLink Limited
Paula Campbell	Hutt Valley District Health Board
Richard Medlicott	Independent Practitioners Association of New Zealand
Peter Sergent	Medtech Software Limited
Angela Pidd	Ministry of Health
Stephen Chu	New Zealand HL7 User Group
Martin Wilson	Pegasus Health Group
Muir Hutchison	Pharmacy Guild of New Zealand
Kim Wong	Waikato District Health Board

Related Documents

The documents listed below were referred to in developing this Standard. These documents should be consulted to clarify this Standard, if required.

AS/NZS

AS/NZS 4700.3:2002 Implementation of Health Level Seven (HL7) version 2.3.1 - Electronic messages for exchange of information on drug prescription

AS/NZS 4700.3:2005 Implementation of Health Level Seven (HL7) version 2.4 - Electronic messages for exchange of information on drug prescription

AS

AS 4700.1:1998 Implementation of Health Level Seven (HL7) version 2.3 - Patient administration

AS/NZS 4700.1-2005 Implementation of Health Level Seven (HL7) version 2.4 - Patient administration

AS 4700.2-2004 Implementation of Health Level Seven (HL7) version 2.3.1 - Pathology orders and results

AS 4700.6-2004 Implementation of Health Level Seven (HL7) version 2.3.1 - Referral and discharge summary

AS 4700.7-2005 Implementation of Health Level Seven (HL7) version 2.3.1 - Diagnostic imaging orders and results

Other standards

Health Level Seven Inc., HL7 Standard version 2.4 - An Application Protocol For Electronic Data Exchange in Healthcare Environments[1]

HISO: 10005 HPI Data Set. Wellington: Ministry of Health, 2004

HISO: 10006 HPI Code Set. Wellington: Ministry of Health, 2004

ISO

ISO 3166**:** ISO 3166-1:1997 Codes for the representation of names of countries and their subdivisions 14 – Part 1: Country Codes

NZS

SNZ HB 8169:2002 - New Zealand Handbook Health Network Code of Practice
Health Information Privacy Code 1994

[1] This is the document referred to throughout this suite of Standards as “HL7 v2.4”.

1 INTRODUCTION

1.1 Background

The health and disability sector in New Zealand has identified a need for nationally endorsed Standards, which can improve health outcomes for patients and the cost-effectiveness of care, through more efficient management of health information. This Referral, Status and Discharge (RSD) Messaging Standard is primarily targeted at electronic interactions between primary, secondary/tertiary and other health care providers, when patients receive care from more than one provider.

In New Zealand there are currently a variety of approaches for implementing RSD, and no mandatory or legislative requirements for national RSD Standards. The development of this suite of RSD Standards aligns with the Health Information Strategy for New Zealand (HIS-NZ), a major policy initiative. This RSD Project will address the need for Messaging, Implementation and Business Process Standards for the health and disability sector.

This Standard seeks to address a number of issues in electronic referral practices that have arisen in recent years. The main advantages of this implementation over earlier versions are as follows.

(a) There are fewer departures from the substantive Standard (HL7 v2.4).

(b) Variances to HL7 in fields described in this Standard are noted in the text and a full list of variances in tables and chapters is contained in Appendix C.

(c) This implementation includes specific segments for the communication of critical medication information in structured format, rather than in notes and comments.

(d) Field lengths have increased, considerably in some cases, allowing for the transmission of more information.

1.2 Backward Compatibility

This Standard is not generally compatible with previous RSD Standards operated in New Zealand. Occasionally it will be necessary to maintain backward compatibility. These instances are noted in the text.

1.3 Scope

This Standard provides guidance to ensure that the right information is provided at the right time to the right person in the right place. With the appropriate security, continuity of patient information with a reduction in the risk for miscommunication within a secure system and at the right cost will be achieved.

This RSD Messaging Standard may be used by other groups in the health and disability sector, provided the validity of use is proven.

1.3.1 *Inclusions for this Messaging Standard*

Health care provider to health care provider, for example:

(a) Primary health care practitioner to a hospital specialist or another specialist or health care provider;

(b) Specialist or health care provider to primary health care practitioner;

(c) Specialist or health care provider to another specialist or health care provider;

(d) Primary health care provider to primary health care provider.

1.3.2 *Exclusions for this Messaging Standard*

(a) Health event summaries;

(b) Funding of services;

(c) Self referrals.

1.4 Interpretation

Within the text of this document, the words ‘shall’ and ‘will’ refer to practices that are mandatory for compliance with this Standard. The words ‘should’ and ‘may’ refer to practices that are advised or recommended.

The terms ‘normative’ and ‘informative’ are used in Standards to define the application of an appendix. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is for information and guidance. Informative provisions do not form part of the mandatory requirements of the Standard. Appendix A: Glossary defines the terms used in this Standard.

2 HL7 ISSUES

2.1 Separators

HL7 allows for considerable flexibility in the selection of separator characters used in generating and parsing messages.

Operating systems in general separate lines in the manner shown in the table below. These systems often use the line separators of their operating system to separate HL7 segments.

The use of both a carriage return character (ASCII Hex $0D_{16}$) and a line feed (ASCII Hex $0A_{16}$) character to separate segments is strongly discouraged, as this will cause processing errors on some systems. . The carriage return character (ASCII Hex $0D_{16}$, published in this document as <cr>) is reserved by HL7 for the segment terminator and shall not be altered by any implementation.

Operating System	Line Separators
DOS and Windows	Carriage Return and Line Feed
Macintosh	Carriage Return
UNIX	Line Feed

Table 1: Operating Systems

Please take care to use only this carriage return character to separate segments.

For further details concerning message construction and separator characters refer to HL7 v2.4 Chapters 2.10 (Message Construction Rules) and 2.7 (Message Delimiters).

This implementation allows for the possibility of using message defined delimiters. However, it is recommended that HL7 characters continue to be used for delimiting, as some implementations may not support alternatives. Delimiters are listed in the table below.

Description	Character	Symbol	ASCII Hex
Field separator	"Vertical bar" or "Pipe"	“|“	$7C^{16}$
Component separator	"Hat" or "caret"	“^“	$5E^{16}$
Sub-component separator	"Ampersand"	“ &“	26^{16}
Repetition separator	"Tilde"	“~“	$7E^{16}$
Escape character	"Back-slash"	“ \“	$5C^{16}$

Table 2: Delimiters

These separators are used in the example messages throughout this Standard.

The system generating a message does not need to place field separators for empty fields that occur at the end of the segment. Instead, the final field that contains data may be terminated with a carriage return. Examples, 1 and 2 below are technically permissible, while Example 3 illustrates the preferred usage.

Example 1 - Don't need trailing field separators where fields do not contain data:

```
...2.4^NZL|||||||<cr>
```

Example 2 - Don’t need to separate the final field with a field separator:

```
...2.4^NZL|<cr>
```

Example 3 - Preferred option. Final field containing data terminated with carriage return:

```
...2.4^NZL<cr>
```

2.2 Field Content - Blanks and Nulls

When constructing a message, sometimes no information is available to be sent in a field. If the information is unknown or irrelevant then an empty field is sent. An empty field in a HL7 message is represented by "nothing" between the two delimiters, e.g. ...||.... The receiving system shall ignore this field and leave any information it already has unchanged. For example, if the PID-11 (patient address field) is empty, the existing patient address in the receiving system shall remain unchanged.

If a field is null, the effect on the receiving system is quite different. A value of null is represented in HL7 by a pair of double-quotes (...|""|...). When a receiving system receives a field containing null, it shall erase the value is has currently stored. For example, if PID-11 is null (e.g. .|""|...), then the patient address in the receiving system is erased.

> ***NOTE**: Mandatory fields must be populated. Spaces and blanks must not be used to circumvent this requirement.*

2.3 Use of Escape Sequences in Test Fields

2.3.1 *Formatting Codes*

When a field of type TX, FT, or ST is being encoded, the escape character may be used to signal certain special characteristics of portions of the text field. The escape character is whatever display ASCII character is specified in the <escape character> component of the MSH-2 (encoding characters field). For the purposes of this section, the character "\" will be used to represent the character so designated in a message. An escape sequence consists of the escape character followed by an escape code ID of one character, zero ("0") or more data characters, and another occurrence of the escape character. The table below defines the escape sequences:

Symbol	Description
\H\	Start highlighting
\N\	Normal text (end highlighting)
\F\	Field separator
\S\	Component separator
\T\	Sub component separator
\R\	Repetition separator
\E\	Escape character
\Xdddd…\	Hexadecimal data
\Zdddd…\	Locally defined escape sequence

Table 3: Escape Sequences

The escape sequences for field separator, component separator, subcomponent separator, repetition separator, and escape character are also correct within an ST data field. No escape sequence may contain a nested escape sequence.

2.3.2 *Formatted Text*

If the field is the FT data type, the escape character may also surround formatting commands. Each command begins with the "*.x*" character. The following formatting commands are available:

Value	Description
.sp <number>	End current output line and skip <number> vertical spaces. <number> is a positive integer or absent. If <number> is absent, skip one space. The horizontal character position remains unchanged. Note that for purposes of backward compatibility, "^\.sp\" is equivalent to "\.br\".
.br	Begin new output line. Set the horizontal position to the current left margin and increment the vertical position by 1.
.fi	Begin word wrap or fill mode. This is the default state. It can be changed to a no-wrap

Value	Description
	mode using the .nf command.
.nf	Begin no-wrap mode.
.in <number>	Indent <number> of spaces, where <number> is a positive or negative integer. This command cannot appear after the first printable character of a line.
.ti <number>	Temporarily indent <number> of spaces where number is a positive or negative integer. This command cannot appear after the first printable character of a line.
.sk < number>	Skip <number> spaces to the right.
.ce	End current output line and centre the next line.

Table 4: Formatted Text

The component separator that marks each line defines the extent of the temporary indent command (.ti), and the beginning of each line in the no-wrap mode (.nf). Examples of formatting instructions that are NOT included in this data type include: width of display, position on page or screen and type of output devices. Here are two examples:

Example 1 - FT data type from a radiology impression section of a radiology report showing formatted text as transmitted:

```
\.in+4\\.ti-4\ 1. The cardiomediastinal silhouette is now within normal
limits.^\.sp\\.ti-4\ 2. Lung fields show minimal ground glass
appearance.^\.sp\\.ti-4\ 3. A loop of colon visible in the left upper
quadrant is distinctly abnormal with the appearance of mucosal effacement
suggesting colitis.\.in-4\|
```

Example 2 - Another way of presenting the data in Example 1. The receiving system can create many other interpretations by varying the right margin:

```
1. The cardiomediastinal silhouette is now within normal limits.
2. Lung fields show minimal ground glass appearance.
3. A loop of colon visible in the left upper quadrant is distinctly
abnormal with the appearance of mucosal effacement suggesting
colitis.Conventions
```

The message segments in this Standard are defined by the alphabetical order of their three-letter tag. The definitions begin with a table of fields, followed by a section of field notes. The aim here is to clarify HL7 by only commenting on the fields with direct relevance to this implementation. Fields not commented on may still be used. Their usage is governed by HL7.

In the tables that define the fields of the segments, shaded rows indicate entries not used in this implementation.

The following values will be listed in the column labelled “Opt” (Optional):

Value	Description	Explanation
R	Required	This field must always contain data
O	Optional	This field does not have to contain data
C	Conditional	This field must contain data in certain situations that will be described in the field notes
X	Not Used	This field is not used in this implementation. Data sent in this field may be ignored by the receiving application.

Table 5: Options

The following values will be listed in the column labelled “Rpt” (Repetitions):

Value	Description	Explanation
N	No repetition	This field does not repeat (default)
Y	Allow repetition	This field may repeat as many times as necessary
Yn	Allow "n" repetitions	This field may repeat the number of times specified by "n"

Table 6: Repetitions

If the value in the Rpt column is a number, then the field will be allowed to repeat up to that number of times. If the Rpt column is blank, then a value of “N” should be assumed.

Values in the Length (Len) column always refer to the total length of the field. So if a field contains a composite data type such as XPN (patient name), then the length will refer to the entire field including any separators.

Example:

```
...|Fyodor^I^Dostoevsky|...
```

This field contains 19 characters including the separators. This data would be sufficient if the length of the patient name field was 19 characters or more, but would fail if the length was any less than 19 even though there are only 17 characters of actual data.

> ***NOTE:*** *The length always refers to a single instance of an item. Thus, if an item repeats then it is allowed up to the maximum length for each individual repeat. The repetition delimiter (tilde "~", unless re-defined in* MSH-2*) is not counted for the purposes of length validation.*

3 MESSAGE DEFINITION

3.1 Conventions

In message definition, any segment surrounded by parentheses '{ }' is allowed to repeat, and shall have at least one occurrence. A segment surrounded by square brackets '[ ]' is an optional segment. A segment without the surrounding square brackets should be considered as required. Segments that are both repeating and optional shall be surrounded by both square brackets and parentheses. Examples of parentheses and brackets are shown in the table below.

	Cardinality	HL7 Notation
Required	1..1	MSH
Required, may repeat	1..n	{OBR}
Optional	0..1	[PV1]
Optional, may repeat	0..n	[{OBX}]

Table 7: Segment Parentheses and Brackets

Groups of segments that operate as complete units in the message (known as segment groups) shall also be surrounded by square brackets to indicate that the entire group is optional, and by parentheses to indicate that the entire group may repeat. If a segment is required (i.e. it has no square brackets) inside a group that is optional, then that segment is only required if the group is present. Wherever possible, segment groups are indicated by indentation of the segments that belong to that segment group.

3.2 Supported Messages

The implementation of this Standard in New Zealand supports the use of a Referral Message (REF^I12), Referral Cancellation Message (REF^I14), Status Request (REF^I15) and a Matching Response (RRI^I12, RRI^14 and RRI^15 respectively). The trigger points for these messages are shown in Figure 1 and are detailed in the HISO 10011.1 Referrals, Status Reports and Discharges Business Process Standard.

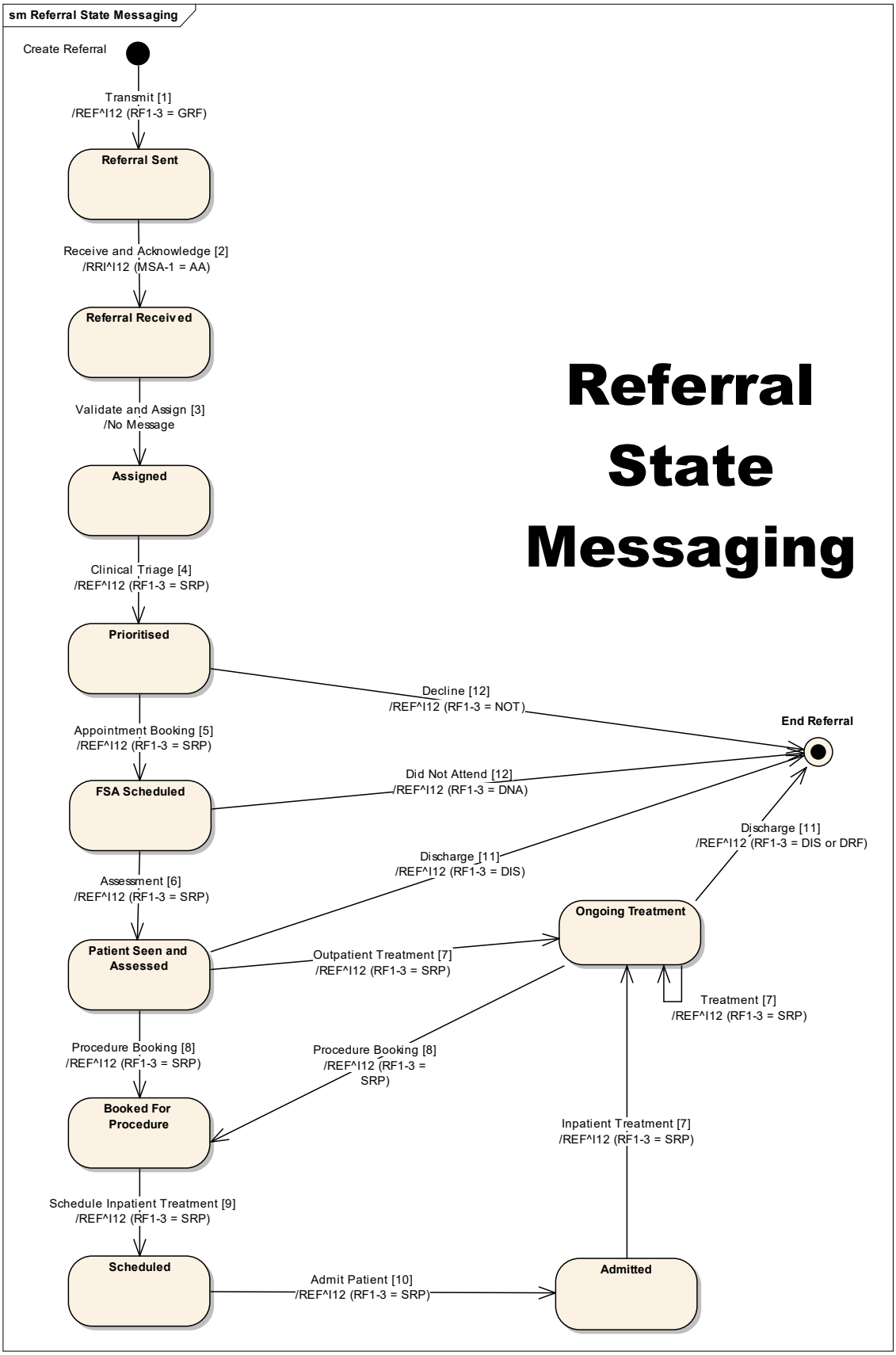

Figure 1: Referral State Messaging Diagram

While the HL7 Return Referral Information (RRI) response message is the acknowledgement for the REF message, the simple general Acknowledgment (ACK) may be used where the application does not define a special application level acknowledgment message, or where there has been an error that precludes acknowledgment of application processing. Figure 2 depicts the typical exchange of messages between the referrer and the recipient.

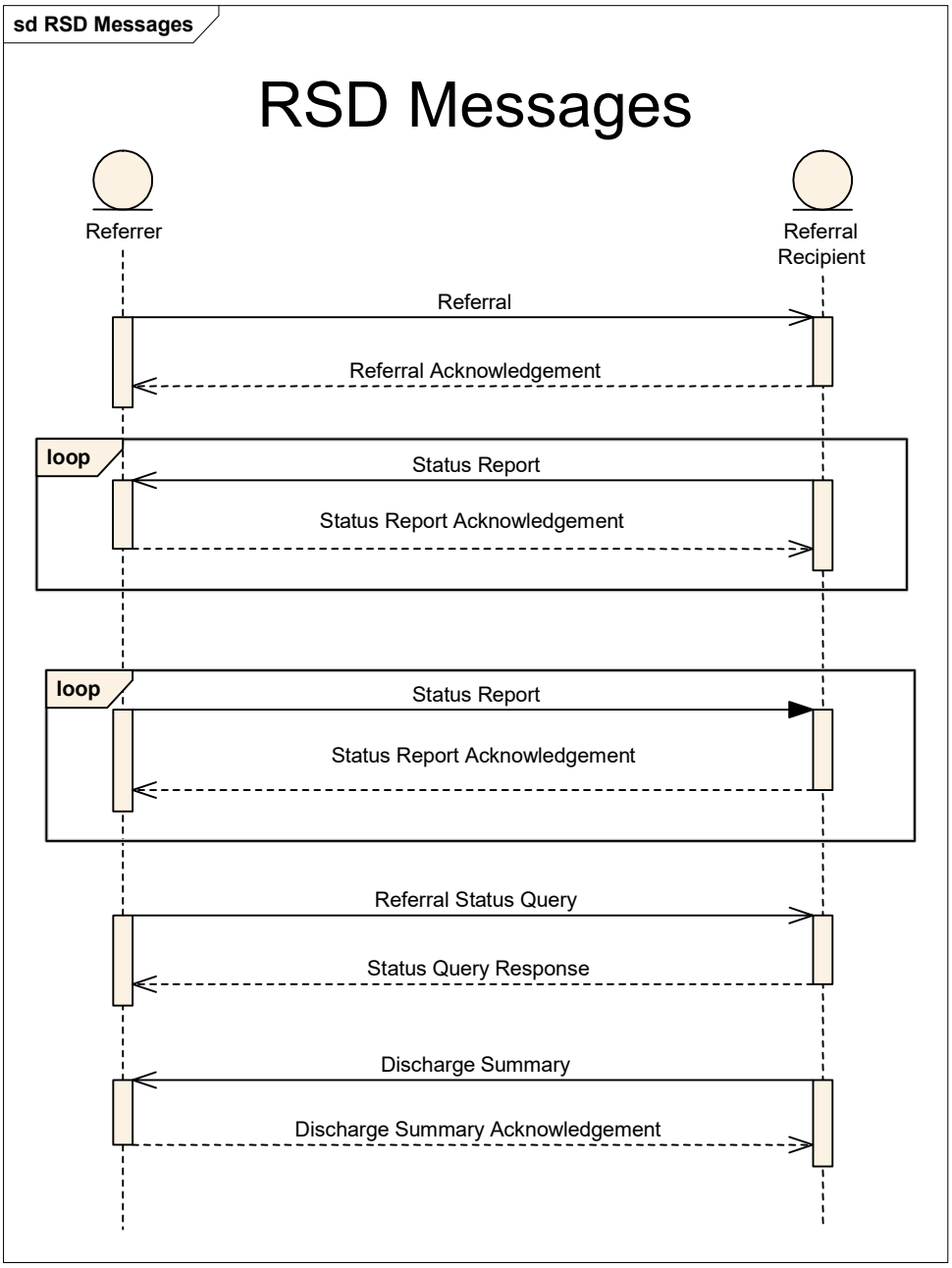

Figure 2: RSD Messages

This Standard does not cover the generic HL7 message processing procedures. Chapter 2.13 of HL7 v2.4 outlines generic message exchanges between the initiator and the receiver, as well as the processes to be followed with regard to accepting or rejecting messages and the creation of responses.

3.3 Message Exchange Principles

The following basic principles should be considered:

(a) The mandatory segments identified in the message definitions shall always be sent, or the message will be rejected as invalid.[2]

(b) The mandatory data identified in the segment definitions shall always be sent, or the message will be rejected as invalid.

(c) The sending system should send as much relevant information as possible in structured format. The receiving system can then select the data elements it requires. Unstructured free-form text should be avoided as much as possible.

(d) The responding system should send back as much relevant information as possible, as this acts as a 'safety check' on the data of the sent message. The sending system can decide if it wants to compare the returned data with the original data sent or discard it.

The RRI message must have five minimum segments: MSH, MSA, RF1, PRD and PID.

If no RRI or ACK message is received by the sending system or the RRI or ACK message is invalid, it is assumed that the message was never successfully received by the destination system and therefore needs to be re-sent.

While the need for a message response is clearly defined by HL7, the amount of time allowed for a response message to be returned ('message latency') is not specified by HL7. The latency depends on the nature of the sending and responding application and the communication mechanisms between both systems.[3]

3.4 REF^I12 – Patient Referral Message

The referral message is used to request that a referral is to take place, or to indicate that an event has occurred and the receiver needs to be aware of it. The table below describes the structure of the patient referral message:

Segment Name	Description
MSH	Message Header
RF1	Referral Information
{PRD}	Provider Data
PID	Patient Identification
[PD1]	Additional Demographics
[{NK1}]	Next of Kin
[{	
DG1	Diagnosis
[{NTE}]	
}]	
[{IAM}]	Patient Adverse Reaction or Allergy
[{	Procedure Data
PR1	
[{ROL}]	
}]	
[{	Segment Group: Accident Information, Administrative Alerts and

[2] It may not only be the receiving application that rejects messages missing one or more required data items. Incomplete messages may be rejected by intermediate systems, such as message transport systems or interface engines.

[3] More specifically, the allowed message response latency could range from seconds or minutes for two applications linked by a TCP/IP 'socket', up to a few days if the messages are transported by floppy disk or tape.

Segment Name	Description
	Warnings, Attachments, Family History and Images
ORC	Order Common Segment
OBR	Observation Request
[{NTE}]	Notes and Comments on OBR
[{	
OBX	Observation Result
[{NTE}]	Notes and Comments on OBX
}]	
}]	
[	
PV1	Patient Visit
[PV2]	Patient Visit Additional Data
]	
[{	
ORC	Order Comment Segment
{RXO	Pharmacy/Treatment Orders
[{NTE}]	Notes and Comments for RXO
{RXR}	Pharmacy/Treatment Route
[{RXA}]	Start and Stop dates
[	
RXC	Pharmacy/treatment Component
[{NTE}]	Notes and Comments for RXC
]	
[	
OBX	Observation Result
[{NTE}]	Notes and Comments for OBX
]	
}	
}]	

Table 8: REF^I12 - Patient Referral Message

***NOTES**:*

1. Only segments that are used in this message have been documented here.

2. Where a patient did not attend, this is identified by the code DNA in the RF1-3 segment.

3.5 RRI^I12 – Patient Referral Response Message

A response message is generated by the receiver as an acknowledgement of a REF^I12 referral, status report or discharge message.

Segment Name	Description
MSH	Message Header
MSA	Message Acknowledgement
[ERR]	Error Detail
RF1	Referral Information
{PRD}	Provider Data (one for each provider/role)
PID	Patient Identification (for further identification of correct referral)

Table 9: RR1^I12 - Patient Referral Response Message

NOTES:

1. Only segments that are used in this message have been documented here.

2. Where a patient did not attend, this is identified by the code "DNA" in the RF1-3 segment.

3.6 REF^I14 – Cancel Patient Referral

This event triggers a message to be sent between health care providers to cancel a previous referral request.

Segment Name	Description
MSH	Message Header
RF1	Referral Information
{PRD}	Provider Data (one for each provider/role)
PID	Patient Identification (for further identification of correct referral)

Table 10: REF^I14 - Cancel Patient Referral

NOTE: *Only segments that are used in this message have been documented here.*

3.7 RRI^I14 – Cancel Patient Referral Response

This response message is generated by the receiver as a result of processing the Cancel Patient Referral message (REF^I14). The RF1-1 (referral status) field should have a status value of “C” if the cancellation has been processed successfully by the recipient system.

Segment Name	Description
MSH	Message Header
MSA	Message Acknowledgement
[ERR]	Error Detail
RF1	Referral Information
{PRD}	Provider Data (one for each provider/role)
PID	Patient Identification (for further identification of correct referral)

Table 11: RRI^I14 - Cancel Patient Referral Response

NOTE: *Only segments that are used in this message have been documented here.*

3.8 REF^I15 – Request Patient Referral Status

This event triggers a message to be sent between health care providers regarding the status of a patient referral request. A previous referral has been made and acknowledged; however, no response has been received to indicate results and/or procedures performed, or a further update is required.

Segment Name	Description
MSH	Message Header
RF1	Referral Information
{PRD}	Provider Data (one for each provider/role)
PID	Patient Identification (for further identification of correct referral)

Table 12: REF^I15 - Request Patient Referral Status

NOTE: *Only segments that are used in this message have been documented here.*

3.9 RRI^I15 – Request Response Message

This response message is generated by the receiver as a result of a referral or status request message.

Segment Name	Description
MSH	Message Header
MSA	Message Acknowledgement
[ERR]	Error Detail
RF1	Referral
{PRD}	Provider Data
PID	Patient Identification
[PD1]	Additional Demographics
[{NK1}]	Next of Kin
[{	
DG1	Diagnosis
[NTE]	
}]	
[{IAM}]	Patient Adverse Reaction or Allergy
[{	Procedure Data
PR1	
[{ROL}]	
}]	
[{	Segment Group: Accident Information, Administrative Alerts and Warnings, Attachments, Family History and Images
ORC	Order Common Segment
OBR	Observation Request
[{NTE}]	Notes and Comments on OBR
[{	
OBX	Observation Result
[{NTE}]	Notes and Comments on OBX
}]	
}]	
[	
PV1	Patient Visit
[PV2]	Patient Visit Additional Data
]	
[{	Medications
ORC	Order Comment Segment
{RXO	Pharmacy/Treatment Orders
[{NTE}]	Notes and Comments for RXO
[{RXR}]	Pharmacy/Treatment Route
[{RXA}]	Start and Stop dates

Segment Name	Description
[	
RXC	Pharmacy/treatment Component
[{NTE}]	Notes and Comments for RXC
]	
[	
OBX	Observation Results
[{NTE}]	Notes and Comments for OBX
]	
}	
}]	

Table 13: RRI^I15 - Request Response Message

NOTES:

1. Only segments that are used in this message have been documented here.

2. The PV1 and PV2 are also included in the RRI message definition. It should be noted that these segments do not merely mirror the segments in the originating REF message. Rather, they may contain information regarding the visit or encounter that resulted from the referral.

4 SEGMENT GROUPS

4.1 Conventions

The following sections describe the use of use of ORC/OBR/OBX segments for accident information, administrative alerts and warnings, attachments, family history, and medications.

Inclusion of the ORC segment, optional in HL7 v2.4 Chapter 11, will be mandatory for these segment groups, in order to express information contained in subsequent OBR/OBX segments. Every ORC must be followed by an OBR.

4.2 ACC – Accident Information

Example:

```
ORC|IN|RSD Z:05555|||||||20051027|||12346^Woods^D^^^Dr||||ACC

OBR|1|RSD Z:05555||ACC|||20051027091513

OBX|1|TX| ACCDCR^Accident Description^99NZACC ||Fell over - broke
toe.|||N|||F
```

The sequence comprises the ORC (common order header), which precedes accident items defined in OBR segments. These are optionally followed by a number of segments providing further details.

The order control codes in ORC-1 will be extended for New Zealand to include historic medical items. The use of “IN” will indicate that the ORC does not specify a new order/request but instead carries historic information. ORC-16 contains the code “ACC”.

There shall be one “ACC” ORC for each reported accident. The OBR and OBX segments will use the following fields:

(a) OBR-4 - Contains the code “ACC”.

(b) OBX-2 - Contains a standard HL7 data type code, specifying the type of data to follow in OBX-5.

(c) OBX-3 - Contains a code from the table below, indicating that the following section contains an accident event.

(d) OBX-5 - Contains the actual description of this accident event.

Value	Element Name	Type (OBX-2)	Opt	Rpt
ACCDTE	Accident Date/Time	TS	O	N
ACCCDE	Accident Code	CE	O	N
ACCLOC	Accident Location	ST	O	N
AUTOST	Auto Accident State	CE	O	N
ACCJOB	Accident Job Related Indicator	ID	O	N
ACCDTH	Accident Death Indicator	ID	O	N
DTHOTH	Accident Death Indicator - Others	ID	O	N
ENTRBY	Entered By	XCN	O	N
ACCDCR	Accident Description	ST	O	N
BRGTBY	Brought in By	ST	O	N
PLCNTD	Police Notified Indicator	ID	O	N
CLMNBR	ACC Claim Number	ST	O	N
CLMSTS	ACC Claim Status	CE	O	N

Value	Element Name	Type (OBX-2)	Opt	Rpt
SCNCDE	Accident Scene Code	CE	O	N
OCCCDE	Occupation Code	CE	O	N
ACTVTY	Activity at Time of Accident	CE	O	N

Table 14: User Defined Table 99NZACC - Accident Information

4.2.1 *ACCDTE - Accident Date/Time*

This field contains the date and time of the accident.

4.2.2 *ACCCDE - Accident Code*

This field contains the type of accident. Any diagnostic coding system may be used, as different types of facilities in New Zealand have their own preferences for these, e.g. SNOMED, Read, ICD10. Refer to Table 25 for these acronyms.

4.2.3 *ACCLOC - Accident Location*

This field contains the location of the accident - city/town code.

4.2.4 *AUTOST - Auto Accident State*

This field indicates whether the accident involved a motor vehicle.

4.2.5 *ACCJOB - Accident Job Related Indicator*

This field indicates whether the accident was job related. The values for this field are below:

Value	Description
Y	Yes
N	No

Table 15: HL7 Table 0136 Yes/No Indicator

4.2.6 *ACCDTH - Accident Death Indicator*

This field indicates whether death occurred in the accident. The values for this field are in Table 15.

4.2.7 *DTHOTH – Accident Death Indicator – Others*

This field indicates whether death occurred in the accident for others. The values for this field are in Table 15.

4.2.8 *ENTRBY - Entered By*

This field is used to identify the person who entered the information.

4.2.9 *ACCDCR - Accident Description*

This field is used to give a description of the accident.

4.2.10 *BRGTBY - Brought in By*

This field indicates who brought the patient in.

4.2.11 *PLCNTD - Police Notified Indicator*

This field indicates if the Police have been advised. The values for this field are in Table 15.

4.2.12 *CLMNBR - ACC Claim Number*

This free text field contains the accident identifier/unique claim number.

4.2.13 *CLMSTS - ACC Claim Status*

This field contains the ACC claim status code.

4.2.14 *SCNCDE - Accident Scene Code*

This field contains the ACC scene code, e.g. home, sports event, road.

4.2.15 *OCCCDE - Occupation Code*

This field contains the ACC occupation code.

4.2.16 *ACTVTY - Activity at Time of Accident*

This field contains the ACC activity code.

4.3 ALRT – Administration Alerts and Warnings

Example:

```
ORC|IN|||||||||||||||ALRT...

OBR|1|||ALRT|||||||||||||P030^SMITH^MARTIN^""^""^""^MD

OBX|1|TX|03^Social/Behavioural^99NZALRT||Uncommunicative
```

As the IAM segment (Chapter 5.4) is intended for reporting adverse reactions only, an additional section is required for general alerts. An ORC section is used for this, containing an OBR and one or more OBX segments which each hold the details of a particular alert.

The order control codes in ORC-1 will be extended for New Zealand to include historic medical items. The use of “IN” indicates that the ORC does not specify a new order/request but instead carries historic information. ORC-16 will contain the code “ALRT”.

There shall only be one “ALRT” ORC per message.

The OBR and OBX segments will use the following fields:

(a) OBR-4 - Contains the code “ALRT”.

(b) OBX-3 - Will contain a code from the table below, indicating a specific warning or alert, or a code indicating “Other”, in the standard CE coding format.

Value	Element Name
00	Other
01	Infection
02	Drug Sensitivity
03	Social/Behavioural
04	Non Drug Allergy
05	Patient Requirements

Table 16: User Defined Table 99NZALRT: Administration Alerts and Warnings

NOTE: *This list is not comprehensive.*

(c) OBX-5 - Blank if the code in OBX-3 requires no further explanation, otherwise may contain free text.

(d) OBX-14 - May contain the date/time that the alert was recorded.

(e) OBX-16 - May contain a standard provider identity, identifying the person that recorded the alert.

4.4 ATT – Attachments

Example 1:

```
ORC|IN|RSD Z:05555|||||||20051027|||12346^Woods^D^^^Dr||||ATT

OBR|1|RSD Z:05555||GENERAL|||20051027091513

OBX|1|ED|PDF^Display format in
PDF^99NZATF||^PDF^Base64^AAEIHEiwoMGDCBMqX+...||||||F
```

Example 2:

```
ORC|IN|RSD Z:05555|||||||20051027|||12346^Woods^D^^^Dr||||ATT

OBR|1|RSD Z:05555||XMLATTACH|||20051027091513

OBX|1|FT|XML^Display format in XML^99NZATF|| <?xml version="1.0"
encoding="UTF-8" ?>...||||||F
```

If the referral requires attachments, they shall be included as an ORC/OBR/OBX group.

The order control codes in ORC-1 will be extended for New Zealand to include historic medical items. The use of “IN” indicates that the ORC does not specify a new order/request but instead carries historic information. ORC-16 will contain the code “ATT”.

The OBX may be followed by a NTE segment describing the attachment.

4.4.1 *OBR-4 - Universal Service ID*

This may contain a value from the table below, describing the function of the attachment; whether the attachment is supplementary data or alternative representations of the data.

Value	Description
GENERAL	Contains information that may be required for the clinician for this referral
LIT	Use if there is a requirement to include, within the message, a copy of how the referral appeared visually to the referrer
XMLATTACH	An attachment that contains XML data and refers to the XSD

Table 17: User Defined Table 99NZATT: Attachment Types

4.4.2 *OBX-2 - Value Type*

This field contains the data type for the data in OBX-5, e.g. ED, FT.

4.4.3 *OBX-3 - Observation Identifier*

This field contains a code taken from the table below, describing the original format of the data in OBX-5.

Value	Description	Type (OBX-2)
PDF	Document file format developed by Adobe Systems	ED
TIFF	File format for mainly photographic images	ED
JPEG	Compression file format for photographic images	ED
MSWORD	Document file format developed by Microsoft	ED
RTF	Document file format developed by Microsoft	ED
TXT	Plain-text file format	FT
HTML	HyperText Markup Language is a markup language for the creation of web pages	FT
XML	Extensible Markup Language is a markup language capable of describing different kinds of data for systems	FT

Table 18: User Defined Table 99NZATF - Format Codes

4.4.4 *OBX-5 - Observation Value*

This field contains the actual attachment. The format is defined by OBX-2 and OBX-3.

4.5 FAM – Family History

Example:

```
ORC|IN||||||||||||||FAM...

OBR|1|||H33.00^Asthma^RC|||||||||||P030^SMITH^MARTIN^""^""^""^MD

OBX|1|CE|FHRELN^Relationship^99NZFAM||02^Father^99NZREL

OBX|2|TX| FHCOND^Condition^99NZFAM||supplementary information about the
condition
```

The ORC (common order header) precedes family history items, defined in OBR segments optionally followed by a number of segments providing further details. There will be one ORC per related person.

The order control codes in ORC-1 will be extended for New Zealand to include historic medical items. The use of “IN” indicates that the ORC does not specify a new order/request but instead carries historic information. ORC-16 will contain “FAM”. One OBR segment is used for each condition, with one or more additional OBX segments detailing the condition.

4.5.1 *OBR-4 - Universal Service ID*

This contains the code for the condition.

4.5.2 *OBX-3 - Family History Elements*

When local codes are used then OBX-2 and OBX-3 are populated from the table below:

Value	Element Name	Type (OBX-2)	Opt	Rpt	Table
FHRELN	Relationship	CE	O	N	Table 81
FHCOND	Condition	TX	O	N	
FHSERV	Severity	CE	O	N	Table 20
FHSTAG	Age at Onset	NM	O	N	
FHDETH	Condition Attributable to Death	TX	O	N	
FHDHAG	Age at Death	NM	O	N	
FHNOTE	Notes	TX	O	N	

Table 19: User Defined Table 99NZFAM: Family History Elements

Value	Description
01	Mild
02	Moderate
03	Severe

Table 20: User Defined Table 99NZFH1: Condition Severity

NOTE: *This list is not comprehensive.*

4.6 MED – Medication Information

Example:

```
ORC|IN|RSD Z:0000000555555|||||||20051019||||||20051019|MEDLT^Long term
medication details^99NZIN


RXO|||||^Tab^L|^19/Oct 2005 Accupril Tab 20 mg {P} SIGS 2 tab, Once Daily;
QTY 180|||N


RXR|PO^Oral
```

The ORC (common order header) precedes a medication item, defined in a RXO (prescription order), optionally followed by a number of segments providing further details of the medication type and its administration.

The order control codes in ORC-1 will be extended for New Zealand to include historic medical items. The use of “IN” indicates that the ORC does not specify a new order/request but instead carries historic information. ORC-16 will contain a code from the table below.

Value	Description
MEDLT	Long term medication details
MEDCU	Current medication
MEDIP	Inpatient medication (not continued after discharge)
MEDDS	Discharge prescription
MEDHS	Historical medication

Table 21: NZ Specific “IN” Code for Medical History Information

There will be one ORC for each drug transmitted in the message and it may be selected from any of the categories in the table above.

The RXA segment is used to specify the start and end dates for when the medication is administered, if the data is available. The duration of a course of prescribed medication should be specified in ORC-7.

It is also valid to follow this group with an NTE segment containing notes or comments, though this should not be used in place of explicit data elements in the appropriate data segments.

4.6.1 *ORC-1 - Order Control*

The standard code table for ORC-1 provides for approximately 45 control modes (e.g. 'new order', 'cancel request', 'order cancelled', etc). When using this group of segments in New Zealand for the purpose of reporting historical medication information, an additional code "IN" will be used.

4.6.2 *ORC-5 - Order Status*

The table below provides the status codes for ORC-5:

Value	Description
A	Some, but not all, results available
CA	Order was cancelled
CM	Order is completed
DC	Order was discontinued
ER	Error, order not found
HD	Order is on hold
IP	In process, unspecified
RP	Order has been replaced
SC	In process, scheduled

Table 22: HL7 Table 0038 - Order Status

When the order control code "IN" is used for medical history information, these codes are not applicable. In this situation the order status field will use a custom set of codes, which specify the nature of the historical information.

5 SEGMENT DEFINITIONS

5.1 Conventions

The following table structure has been defined for the fields within each segment. Fields that have been shaded are not supported in this Standard.

Seq	Element Name	Len	Type	Opt	Rpt

Table 23: Conventions

5.1.1 *Seq*

Column 1. Identifies the position of the data within the segment.

5.1.2 *Element Name*

Column 2. Descriptive name of the field.

5.1.3 *Len*

Column 3. Defines the total length of the field. So, if a multiple component field is present (e.g. “Patient Name”), then the maximum length will refer to the entire field including any separators.

5.1.4 *Opt*

Column 5. Refer to Table 5 for allowed values for the Option field.

5.1.5 *Rpt*

Column 6. Refer to Table 6 for allowed values in the Repeat field.

5.1.6 *Data – Types*

Contained in column 4 of the tables. The various types are described below.

5.1.6.1 *CE - Coded Element*

This data type transmits codes and the text associated with the code. The maximum length of this field is 250.

Sub Component	Type	Notes
<identifier>^	ST	Sequence of characters (the code) that uniquely identifies the item being referenced by the <text>. Different coding schemes will have different elements here.
<text>^	ST	Name or description of the item in question.
<name of coding system>^	IS	Each coding system is assigned a unique identifier. Table 25 contains the allowed values.
<alternate identifier>^	ST	Analogous to <identifier>, see note above.
<alternate text>^	ST	Analogous to <text>, see note above.
<name of alternate coding system>	IS	These three components are analogous to <name of coding system>, above. If the <alternate text> component is absent, and the <alternate identifier> is present, the <alternate text> will be taken to be the same as the <text> component. If the <alternate coding system> component is absent, it will be taken to mean the locally-defined system.

Table 24: CE - Coded Element Component

The most common Coding System values are provided here:

Value	Description
99zzz	Local general code, where z is an alphanumeric character.
RC	Read Classification.
NZPOC	New Zealand Pathology Order Codes.
LN	Logical Observation Identifier Names and Codes (LOINC®).
DSM4	Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition.
HL7nnnn	HL7 Defined Codes, where nnnn is the HL7 table number.
SNM-ccyy	Systemised Nomenclature of Medicine (SNOMED), where ccyy is the year of the code set version. At the time this Standard was published, these were 1986 and 1993.
BTH-ccyy	Bethesda Codes, where ccyy is the year of the code set version. At the time this standard was published, these were 1991 and 2001.
ICD-v	ICD-10 CM, where "v" is the version number. At the time this Standard was published, these were 3, 4, 5, 6.
ISOnnnn	International Standards Organisation, where nnnn is the ISO table number.
HI	Health Practitioner Index CPN
HO	Health Practitioner Index - Organisation Identifier
HF	Health Practitioner Index - Facility Identifier

Table 25: HL7 User Defined Table 0396 - Coding Systems

NOTE: *This list is not comprehensive.*

5.1.6.2 *CM - Composite*

A field that is a combination of other meaningful data fields. Each portion is called a component. The specific components of CM fields are defined within the field descriptions. Certain other composites have been separately identified and are described below.

NOTE: *No new CMs are allowed after HL7 v2.2.*

5.1.6.3 *CN - composite ID number and name*

This data type is used when identifying a person both as a coded value and with a text name.

NOTE*: CN has been replaced by XCN data type as of HL7 v2.3. There are no new components in XCN.*

5.1.6.4 *CNE - Coded with No Exceptions*

The maximum length of this field is 250. Refer to the table below:

Sub Component	Type	Notes
<identifier>^	ST	Sequence of characters (the code) that uniquely identifies the item being referenced by the <text>. Different coding schemes will have different elements here.
<text>^	ST	Name or description of the item in question. This is the corresponding text assigned by the coding system to the identifier.
<name of coding system>^	IS	Each coding system is assigned a unique identifier. Table 25 contains the allowed values.
<alternate identifier>^	ST	Analogous to <identifier>, see note above.
<alternate text>^	ST	Analogous to <text>, see note above.
<name of alternate coding system>^	IS	Analogous to <name of coding system>, see note above.
<coding system version ID>^	ST	Version ID for the coding system identified by first three sub components, above. Retained here for backward compatibility.
^ alternate coding system version ID>^	ST	Version ID for the coding system identified by the second three sub components, above. Retained here for backward compatibility.
<original text>	ST	The original text that was available to an automated process or a human before a specific code was assigned. This component is optional.

Table 26: CNE - Coded with No Expectations Components

5.1.6.5 *CQ - Composite Quantity with Units*

Refer to the table below:

Sub Component	Type	Notes
<quantity>^	NM	Sequence of characters (the code) that uniquely identifies the item being referenced by the <text>. Different coding schemes will have different elements here.
<units>^	CE	The units in which the quantity is expressed. Field-by-field, default units may be defined within the specifications.

Table 27: CQ - Composite Quantity with Units

NOTE: *In future versions, CQ fields should be avoided because the same data can usually be sent as two separate fields, one with the value and one with the units as a CE data type.*

5.1.6.6 *CWE - Coded with Exceptions*

The maximum length of this field is 250. Refer to the table below:

Sub Component	Type	Notes
<identifier>^	ST	Sequence of characters (the code) that uniquely identifies the item being referenced by the <text>. Different coding schemes will have different elements here.
<text>^	ST	Name or description of the item in question.
<name of coding system>^	IS	Each coding system is assigned a unique identifier. Table 25 contains the allowed values.
<alternate identifier>^	ST	Analogous to <identifier>, see note above.
<alternate text>^	ST	Analogous to <text>, see note above.
<name of alternate coding system>^	IS	Analogous to <name of coding system>, see note above.
<coding system version ID>^	ST	Version ID for the coding system identified by first three sub components, above. Retained for backward compatibility.
^ alternate coding system version ID>^	ST	Version ID for the coding system identified by the second three sub components, above. It belongs conceptually to the group of alternate components and appears here for backward compatibility.
<original text>	ST	The original text that was available to an automated process or a human before a specific code was assigned.

Table 28: CWE - Coded with Exceptions Components

5.1.6.7 *CX - Extended Composite ID with Check Digit*

This data type is used for specifying an identifier with its associated administrative detail. The maximum length of this field is 250. Refer to the table below:

Sub Component	Type	Notes
<ID>^	ST	The value of the identifier itself.
<check digit>^	ST	The check digit in this data type is not an add-on produced by the message processor. It is the check digit that is part

Sub Component	Type	Notes
		of the identifying number used in the sending application with ST data type allowed. If the sending application does not include a self-generated check digit in the identifying number, this component should be valued null.
<code identifying the check digit scheme employed>^	ID	Refer to Table 30.
<assigning authority>^	HD	Refer to Table 52 for values. The assigning authority is the system, application or body that actually generates the ID number. If this field is blank then the value in the first component is assumed to be the National Health Index (NHI) number. In this case the assigning authority is the Ministry of Health (NZLMOH). If another identifier is being messaged then this field must be filled in.
<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. Table B 8 contains the HPI code set as the suggested values.
<assigning facility>^	HD	The place or location identifier where the identifier was first assigned to the patient.
<effective date (DT)>^	DT	The first date, if known, on which the identifier is correct and active.
<expiration date (DT)>	DT	The last date, if known, on which the identifier is correct and active.

Table 29: CX - Extended Composite ID with Check Digit Components

Value	Description
NHI	Check digit algorithm in the NHI
ISO	ISO 7064: 1983
M10	Mod 10 algorithm
M11	Mod 11 algorithm

Table 30: HL7 Table 0061 - Check Digit Scheme

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

5.1.6.8 *DT - Date*

Sub Component	Type	Notes
YYYY[MM[DD]]	DT	The precision of a date may be expressed by limiting the number of digits used with the format specification YYYY[MM[DD]]. Thus, YYYY is used to specify a precision of “year,” YYYYMM specifies a precision of “month,” and YYYYMMDD specifies a precision of “day.”

Table 31: DT - Date Component

NOTE: *By site-specific agreement, YYYYMMDD may be used where backward compatibility has to be maintained.*

5.1.6.9 *ED - Encapsulated Data*

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.

Sub Component	Type	Notes
<source application>	HD	A unique name that identifies the system which was the source of the data.
<type of data>	ID	An ID type that declares the general type of data. Refer to Table 33 for allowed values.
<data subtype >^	ST	An ID data type declaring the format for the data of sub component types.
<encoding>	ID	The type of encoding, if present, used to represent successive octets of binary data as displayable ASCII characters. Refer to Table 34 for allowed values.
<data>	ST	Displayable ASCII characters which constitute the data to be sent from the source application to the destination application.

Table 32: Encapsulated Data Components

Value	Description
AP	Other application data, typically uninterpreted binary data (HL7 v2.3 and later)
AU	Audio data (HL7 v2.3 and later)
IM	Image data (HL7 v2.3 and later)
multipart	Multipurpose Internet Mail Extensions (MIME) multipart package
TEXT	Machine readable text document (HL7 v2.3.1 and later)

Table 33: Constrained from HL7 Table 0191 - Type of Referenced Data

Value	Description
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 “=”.

Table 34: HL7 Table 0299 – Encoding

5.1.6.10 *EI - Entity Identifier*

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

Sub Component	Type	Notes
<entity identifier>^	ST	This is usually defined to be unique within the series of identifiers created by the <assigning authority>, defined by a hierarchic designator.
<namespace ID>^	IS	Used as the HL7 identifier for the user-defined table of values for this component.
<universal ID>^	ST	A string, formatted according to the scheme defined by the <universal ID type>.
<universal ID type>	ID	Refer to Table 36 for valid values.

Table 35: EI - Entity Identifier Components

Value	Description
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 Organisation Object Identifier.
L, M, N	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 confined to the base64 character set.
UUID	The DCE Universal Unique Identifier.
x400	An X.400 MHS format identifier.
x500	An X.500 directory name.

Table 36: HL7 Table 0301 - Universal ID Type

NOTE: *X400, X500, and DNS are not technically universally valid in perpetuity. Names may be de-registered from an existing user and registered to a new user.*

5.1.6.11 *FC - Financial Class*

This component contains the financial class assigned to a person.

5.1.6.12 *FT - Formatted Text Data*

This data type is derived from the string 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 FT field is of arbitrary length (up to 64k) and may contain formatting commands enclosed in escape characters.

5.1.6.13 *HD - Hierarchic Designator*

This field identifies an entity, either an administrative, system, application or other, with responsibility for managing or assigning a defined set of instance identifiers (e.g. placer or filler number, patient identifiers, provider identifiers, etc.). This entity may 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.

Sub Component	Type	Notes
<namespace ID>^	IS	Used as the HL7 identifier for the user-defined table of values for this component.
<universal ID>^	ST	A string, formatted according to the scheme defined by the <universal ID type>.
<universal ID type>	ID	Refer to Table 36.

Table 37: HD - Hierarchic Designator Component

5.1.6.14 *ID - Coded Value for HL7 Defined Tables*

Follows the formatting rules for an ST field, except that this value is drawn from a table of valid values. There will be a HL7 table number associated with ID data types.

5.1.6.15 *IS - Coded Value for User Defined Tables*

Follows the formatting rules for a ST field, except that this value is drawn from a site defined (or user defined) table of valid values. There will be a HL7 table number associated with IS data types.

5.1.6.16 *JCC - Job Code/Class*

Sub Component	Type	Notes
<job code>^	IS	This component contains the person's job code.
<job class>	IS	This component contains the person's employee classification.

Table 38: JCC - Job Code/Class Component

5.1.6.17 *NM - Numeric*

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.

5.1.6.18 *PL - Person Location*

This data type is used to specify a patient location within a particular health care institution. Which components are valued depends on the requirements of each site.

Sub Component	Type	Notes
<point of care>^	IS	Conditional on person location type (e.g. nursing unit, department, clinic). After <floor>, the most general patient location designation.
<room>^	IS	Patient room. After <point of care>, the most general person location designation.
<bed>^	IS	Patient bed. After <room>, the most general person location designation.
<facility>^	HD	Subject to site interpretation, but generally describes the highest level physical designation of an institution, medical centre or enterprise.
< location status>^	IS	Location (e.g. bed) status.
<person location type>^	IS	Categorisation of the person's location defined by <facility>,

Sub Component	Type	Notes
		<building>, <floor>, <point of care>, <room>, or <bed>. Although not a required field, when used, it may be the only populated field. Refer to Table 40.
<building>^	IS	After <facility>, the most general person location designation.
<floor>^	IS	After <building>, the most general person location designation.
<location description>	ST	A free text description of the location.

Table 39: PL - Person Location Components

Value	Description
C	Clinic
D	Department
H	Home
N	Nursing Unit
O	Provider's Office
P	Phone
S	SNF

Table 40: HL7 User Defined Table 0305 - Person Location Type

5.1.6.19 *PT - Processing Type*

This data type indicates whether to process a message as defined in HL7 Application (level 7) Processing rules.

Sub Component	Type	Notes
<processing ID>^	ID	A value that defines whether the message is part of a production, training, or debugging system. Refer to Table 42, below.
<processing mode>	ID	A value that defines whether the message is part of an archival process or an initial load. Refer to Table 43, below.

Table 41: PT - Processing Type Component

Value	Description
P	Process this message as normal.
D	This message is being used for debugging purposes. It should be properly acknowledged but all data contained within this message should be ignored.
T	This message is being used for training purposes. It should be properly acknowledged and data may be used to populate a training database (optional).

Table 42: HL7 Table 0103 - Processing ID

Value	Description
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 *current* processing)

Table 43: HL7 Table 0207 - Processing Mode

5.1.6.20 *SI - Sequence ID*

A non-negative integer in the form of a NM field. The uses of this data type are defined in the chapters describing the segments and messages in which the data type appears.

5.1.6.21 *ST - String Data*

String data is left justified 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.

> ***NOTE:*** *The ST data type is intended for short strings (e.g. less than 200 characters). For longer strings the TX or FT data types should be used.*

5.1.6.22 *TQ - Timing Quantity*

Describes when a service should be performed and how frequently.

Component	Type	Notes
<quantity>^	CQ	The quantity of the service that should be provided at each service interval, e.g. if three units of blood are to be typed and cross-matched, the quantity would be "3". The default value would be "1". See definition of CQ data type in Table 27.
<interval>^	CM	Determines the interval between repeated services. See Table 45, below.
<duration>^	ST	Indicates how long the service should continue after it is started. E.g.: W3 - "3 weeks".
<start date/time>^	TS	The earliest date/time from which the services should be started.
<end date/time>^	TS	The last date/time at which the services should be performed.
<priority>^	ST	The urgency of the request. E.g.: R - "Routine is the default".
<condition>^	ST	Free text field that describes the conditions under which a drug is to be given or service performed.
<text>^	TX	Free text field for an optional full text version of the instruction.
<conjunction>	ST	This non-null component indicates that another timing specification is to follow using the repeat delimiter, and gives the relationship to this other specification.
<order sequencing>	CM	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. Refer to Table 46, below. Also used to support a fully encoded version of order sequencing, or of a results condition, instead of the text <condition> component, above.

Table 44: TQ - Quantity/Timing Components

Value	Description
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 *jour* (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

Value	Description
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)

Table 45: Timing/Quantity Intervals

Sub Component	Contains	Notes
1	Sequence/Results Flag	S for sequence conditions; C for cyclical; R is reserved for possible future use. The C will be used for indicating a repeating cycle of orders; for example, individual intravenous solutions used in a cyclical sequence (a.k.a. “Alternating IVs”). This value would be compatible with linking separate orders or with having all cyclical order components in a single order. Likewise, the value would be compatible with either Parent-Child messages or a single order message to communicate the orders’ sequencing.
2.3	Placer Order Number, first two components	Required/Optional: Contains the first two components of the placer order number: *entity identifier* (ST) and *namespace ID* (IS) (respectively). Uses two subcomponents since the placer order number is an EI data type. Sub components are not defined.
4, 5	Filler Order Number, first two components	Required/Optional: Contains the first two components of the filler order number: *entity identifier* (ST) and *namespace ID* (IS) (respectively). Uses two subcomponents since the filler order number is an EI data type. Sub components are not defined
6	Sequence Condition Value	The acceptable condition values have the form commonly used in project planning methodologies: <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

Sub Component	Contains	Notes
		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: 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
7	Maximum Number of Repeats.	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.
8, 9	Placer Order Number, last two components.	Required/Optional: Contains the last two components of the placer order number: *universal ID* (ST) and *universal ID type* (ID) (respectively). Uses two subcomponents since the placer order number is an EI data type. Sub components are not defined
10, 11	Filler Order Number, last two components.	Required/Optional: Contains the last two components of the filler order number: *universal ID* (ST) and *universal ID type* (ID) (respectively). Uses two subcomponents since the filler order number is an EI data type. Sub components are not defined.

Table 46: Timing/Quantity Sequencing

5.1.6.23 *TS - Time Stamp*

Contains the exact time of an event, including the date and time.

By site-specific agreement, `YYYY[MM[DD[HHMM[SS[.S[S[S[S]]]]]]]][+/-ZZZZ].`

All HL7 compliant systems are required to accept the time zone offset `(+/-ZZZZ)`, but its implementation is application specific.

5.1.6.24 *TX - Text Data*

String data meant for user display (on a terminal or printer). 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.

A receiving system would word-wrap the text between repeat delimiters in order to fit it into an arbitrarily sized display window and start any line beginning with a repeat delimiter on a new line.

The TX field is of arbitrary length (up to 64k).

5.1.6.25 *VID - Version Identifier*

Sub Component	Type	Notes
<Version ID>^	ID	Used to identify the HL7 version. This implementation is based on HL7 v2.4. Use “2.4” in this field.
<Internationalisation Code>^	CE	Used to identify the international affiliated country code. This implementation is for New Zealand, use “NZL”.
<International Version ID>	CE	This specification is local version “1.0”.

Table 47: VID - Version Identifier Components

5.1.6.26 *XAD - Extended Address*

The maximum length of this field is 250.

Sub Component	Type	Notes
<Street address>^	ST	Address. All address information up to the suburb fits in here.
<Other designation>^	ST	Suburb
<City>^	ST	City
<State or Province>^	ST	
<Post code>^	ST	
<Country>^	ID	Country. If left blank, the country is assumed to be New Zealand. Otherwise, use values from ISO3166 Country Codes in Table B 1.
<Type>^	ID	“C” - current or temporary “P” - permanent “M” - mailing “B” - business
<Other geographic designation>^	ST	GeoCode X:Y coordinates. Both are entered here, separated by a colon.
<County Code>^	IS	Not used
<Census Tract>^	IS	New Zealand domicile code
<Address Representation code>^	ID	Not used
<Address Validity Range>	DR	Contains a date range for the validity of this address

Table 48: XAD - Extended Address Components

Variance to HL7*: The extended Street Address type in the first component is not used in New Zealand (this should follow HPI).*

5.1.6.27 *XCN - Extended Composite ID Number and Name for Persons*

This field is usually reserved for the identification of health care providers. The maximum length of this field is 250.

Sub Component	Notes
<ID number>^	CPN, NZMC, NZNC or APC number
<Family Name>^	
<Given Name>^	
<Middle Initial or Name>^	
<Suffix>^	
<Prefix>^	
<Degree>^	
<Source Table>^	Not used
<Assigning Authority>^	A code corresponding to the type of identifier. In some cases, this code may be used as a qualifier to the <Assigning authority> component. Table B 8 includes the HPI code set as the suggested values.
<Name type code>^	Not used
<Identifier check digit>^	Not used
<Code identifying the check digit scheme employed>^	Not used
<Identifier type code>^	Not used
<Assigning facility>^	Not used
<Name representation code >^	Not used
<Name context>^	Not used
<Name validity range>^	Not used
<Name assembly order>	Not used

Table 49: XCN - Extended Composite ID Number and Name for Persons Components

5.1.6.28 *XON - Extended Composite Name and Identification Number for Organisations*

This data type is used in fields (e.g. PV2-23) to specify the name and ID number of an organisation. The maximum length of this field is 250.

Sub Component	Type	Notes
<organisation name>^	ST	The name of the specified organisation.
<organisation name type code>^	IS	A code that represents the type of name, i.e. legal name, display name. Refer to Table 51 for suggested values.
<ID number>^	NM	
<check digit>^	NM	This data type is not an add-on produced by the message processor. It is part of the identifying number used in the sending application. If the sending application does not include a self-generated check digit in the identifying number, this component should be valued null.
<code identifying the check digit scheme	ID	The check digit scheme codes are defined in Table 30.

Sub Component	Type	Notes
employed>^		
<assigning authority>^	HD	The 'assigning authority' is a unique identifier of the system (or organisation, agency or department) that creates the data. Assigning authorities are unique across a given HL7 implementation. Refer to Table 52 for suggested values for the first sub component of the HD component <namespace ID>.
<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. Table B 8 contains the HPI code set as the suggested values.
<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 (referenced by the first sub-component of the HD component), it may be re-defined (assigned a different user defined table number and name) by the technical committee responsible for that segment.*
<name representation code>	ID	Different <name/address types> and representations of the same <name/address> should be described by repeating 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 Table 53 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 may make choices regarding what it has been sent and what it is capable of displaying.

Table 50: XON - Extended Composite Name and ID Number for Organisations Components

Value	Description
A	Alias Name
L	Legal Name
D	Display Name
SL	Stock Exchange Listing Name

Table 51: HL7 User Defined Table 0204 - Organisation Name Type

Value	Description
AUSDVA	Australia – Department of Veterans Affairs
AUSHIC	Australia – Health Insurance Commission
NZLACC	New Zealand – Accident Compensation Commission
NZLMOH	New Zealand – Ministry of Health
LOCAL	Local to Sender

Table 52: HL7 User Defined Table 0363 - Assigning Authority

Value	Description
I	Ideographic (i.e. Kanji)
A	Alphabetic (i.e. Default or some single-byte)
P	Phonetic (i.e. ASCII, Katakana, Hiragana, etc.)

Table 53: HL7 Table 0465 - Name/Address Representation

5.1.6.29 *XPN - Extended Person Name*

The XPN composite is governed by the NHI naming standard. The maximum length of this field is 250.

Sub Component	Notes
<Family Name>^	ST
<Given Name>^	ST
<Second and Further Given names or initials thereof >^	Multiple names entered here should be separated with space
<Suffix>^	Optional
<Prefix>^	Optional
<Degree>^	Not used
<Name Type Code>^	A code that represents the type of name. Refer Table 55 for valid values.
<Name Representation Code>^	Not used
<Name Context>^	Not used
<Name Validity Range>^	Not used
<Name Assembly Order>	Not used

Table 54: XPN - Extended Person Name Component

Variance to HL7: *This definition uses an ST, whereas HL7 uses the FN composite type for Family Name.*

Value	Description
A	Alias Name
B	Name at Birth
C	Adopted Name
D	Display Name
I	Licensing Name
L	Legal Name
M	Maiden Name

Value	Description
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

Table 55: HL7 Table 0200 - Name Type Code

5.1.6.30 *XTN - Extended Telecommunications Number*

Examples:

Home phone number:

```
...|^PRN^PH^^64^9^3456789|...
```

Email address:

```
...|^NET^Internet^a.bloke@myisp.co.nz|...
```

Work phone number. Note use of text field to qualify number:

```
...|^WPN^PH^^64^9^3456789^320^Afternoons only|...
```

Work fax number:

```
...|^WPN^FX^^64^9^3456059|...
```

The maximum length of this field is 250. Refer to the table below.

Sub Component	Notes
<Phone Number String>^	Not used
<Telecommunication Use Code>^	Table 57
<Telecommunication Equipment Type>^	Table 58
<Email Address>^	
<Country Code>^	
<Area Code>^	
<Number>^	
<Extension>^	
<Any Text>	

Table 56: XTN Extended Telecommunications Number Component

5.1.6.31 *Telecommunication Use Codes*

Use one of the values from the table below. The most common values used are provided here:

Value	Description
PRN	Primary Residence Number
ORN	Other Residence Number
WPN	Work Phone Number
NET	Network Address (use for email addresses)

Table 57: HL7 Table 0201 - Telecommunication Use Codes

NOTE: *This list is not comprehensive.*

5.1.6.32 *Telecommunication Equipment Types*

Use one of the following values from the table below. The most common values used are provided here:

Value	Description
PH	Phone
FX	Fax
CP	Cellular Phone
Internet	Internet (use for email addresses or domain names)

Table 58: HL7 Table 0202 - Telecommunication Equipment Types

NOTE: *This list is not comprehensive.*

5.2 DG1 – Diagnosis

The DG1 segment contains patient diagnosis information of various types, e.g. admitting, primary, etc. The DG1 segment is used to send multiple diagnoses (e.g. for medical records encoding).

This diagnosis coding should be distinguished from the clinical problem segment used by caregivers to manage the patient. Coding methodologies are also defined.

Seq	Element Name	Len	Type	Opt	Rpt	Table
1	Set ID	4	SI	R		
2	Obsolete (Diagnosis Coding Method)			X		
3	Diagnosis Code	250	CE	R		Table 25
4	Obsolete (Diagnosis Description)			X		
5	Diagnosis Date Time	26	TS	O		
6	Diagnosis Type	2	IS	R		Table 60
7	Obsolete (Major Diagnostic Category)			X		
8	Obsolete (Diagnostic Related Group)			X		
9	Obsolete (DRG approval Indicator)			X		
10	Obsolete (DRG Grouper Review Code)			X		
11	Obsolete (Outlier Type)			X		
12	Obsolete (Outlier Days)			X		
13	Obsolete (Outlier Cost)			X		
14	Obsolete (Grouper Version and Type)			X		
15	Diagnosis Priority	2	ID	O		Table 61
16	Diagnosing Clinician	250	XCN	O	Y	
17	Diagnosis Classification	3	IS	O		Table 62
18	Confidential Indicator	1	ID	O		Table 63
19	Attestation Date Time	26	TS	O		

Table 59: DG1 – Diagnosis

5.2.1 *DG1-1 - Set ID*

The Set ID of the first DG1 will be 1 and this will increase incrementally for each subsequent DG1 segment.

NOTE: *This field is required by HL7.*

5.2.2 *DG1-3 - Diagnosis Code*

This field replaces DG1-2 and DG1-4 for reporting coding method and diagnosis description. Refer to Table 25 for valid codes.

Variance to HL7: *This field is required in this implementation, whereas HL7 does not require this field.*

5.2.3 *DG1-5 - Diagnosis Date and Time*

This field holds the date and time that the diagnosis in DG1-3 was first identified.

5.2.4 *DG1-6 - Diagnosis Type*

This field contains the code that identifies the type of diagnosis being sent.

Value	Description
A	Admitting Diagnosis
W	Working Diagnosis
F	Final Diagnosis

Table 60: HL7 User Defined Table 0052 - Diagnosis Type

NOTE: *HL7 requires this field.*

5.2.5 *DG1-15 - Diagnosis Priority*

This field contains the number that identifies the significance or priority of the diagnosis code.

Value	Description
0	Not included in diagnosis ranking
1	The primary diagnosis
2….	For ranked secondary diagnoses

Table 61: HL7 Table 0359 - Diagnosis Priority

5.2.6 *DG1-16 - Diagnosing Clinician*

This field contains the details for the clinician responsible for generating the diagnosis. This field repeats to report multiple identifiers for a single clinician. It is not designed to report multiple clinicians.

5.2.7 *DG1-17 - Diagnosis Classification*

This field indicates if the patient information is for a diagnosis or a non-diagnosis code.

Value	Description
C	Consultation
D	Diagnosis
M	Medication (antibiotic)
O	Other
R	Radiological scheduling
S	Sign and symptom
T	Tissue diagnosis
I	Invasive procedure not classified elsewhere (IV, catheter, etc.)

Table 62: HL7 User Defined Table 0228 - Diagnosis Classification

5.2.8 *DG1-18 - Confidential Indicator*

This field indicates whether the diagnosis is confidential.

Value	Description
Y	Yes, the diagnosis is a confidential diagnosis
N	No, the diagnosis does not contain a confidential diagnosis

Table 63: HL7 Table 0136 Yes/No Indicator

5.2.9 *DG1-19 - Attestation Date/Time*

This field contains the time stamp that indicates the date and time that the attestation was signed.

5.3 ERR – Error Detail

The ERR segment is used to add error details to acknowledgement messages.

Example:

```
ERR|RF1||6|101^RF1- required field missing – OriginatingReferralIdentifier
```

Seq	Element Name	Len	Type	Opt	Rpt	Table
1	Error Code and Location	80	CM	R	Y	Table 65

Table 64: ERR Attribute Table – Error

5.3.1 *ERR-1 - Error Code and Location*

This field identifies an error in the system or in the message.

Sub Component	Type	Notes
<segment ID>^	ST	Name of segment where the problem was identified, e.g. OBR.
<sequence>^	NM	Index of segment where there is more than one of type <segment ID>.
<field position>^	NM	Index of the field that caused the problem.
<code identifying error>	CE	This references Table 66, Error Condition Codes.

Table 65: ERR-1 - Error Code and Location Component

Error Condition Code	Error Condition Text	Description/Comment
Success		
0	Message accepted	Success. Optional, as the acknowledgement code conveys success. Used for systems that must always return a status code.
Errors		
100	Segment sequence error	The message segments were not in the proper order, or required segments are missing.
101	Required field missing	A required field is missing from a segment.
102	Data type error	The field contained data of the wrong data type.
103	Table value not found	A field of data type ID or IS was compared against the corresponding table, and no match was found.
Rejection		
200	Unsupported message type	The message type is not supported.
201	Unsupported event code	The event code is not supported.
202	Unsupported processing id	The processing ID is not supported.
203	Unsupported version id	The version ID is not supported.
204	Unknown key identifier	The ID of the patient, order, etc. was not found.

Error Condition Code	Error Condition Text	Description/Comment
		Used for transactions other than additions, e.g. transfer of a non-existent patient.
205	Duplicate key identifier	The ID of the patient, order, etc., already exists. Used in response to additional transactions (Admit, New Order, etc.).
206	Application record locked	The transaction could not be performed at the application storage level, e.g. database locked.
207	Application internal error	A catchall for internal errors not explicitly covered by other codes.

Table 66: HL7 Table 0357 - Error Condition Code

5.4 IAM – Patient Adverse Reaction or Allergy

The IAM replaces the AL1 from previous versions of the referral message type. The IAM segment contains patient adverse reaction information of various types. Most of this information will be derived from user defined tables. Each IAM segment describes a single patient adverse reaction.

Seq	Element name	Len	Type	Opt	Rpt	Table
1	Set ID – IAM	4	SI	R		
2	Allergen Type Code	250	CE	O		Table 68
3	Allergen Code/Mnemonic/Description	250	CE	R		
4	Allergy Severity Code	250	CE	O		Table 69
5	Allergy Reaction Code	15	ST	O	Y	
6	Allergy Action Code	250	CNE	R		Table 70
7	Allergy Unique Identifier	80	EI	R		
8	Action Reason	60	ST	O		
9	Sensitivity to Causative Agent Code	250	CE	O		Table 71
10	Allergen Group Code/Mnemonic/Description	250	CE	O		
11	Onset Date	8	DT	O		
12	Onset Date Text	60	ST	O		
13	Reported Date/Time	8	TS	O		
14	Reported By	250	XPN	O		
15	Relationship to Patient Code	250	CE	O		Table 81
16	Alert Device Code	250	CE	O		Table 72
17	Allergy Clinical Status Code	250	CE	O		Table 73
18	Statused by Person	250	XCN	O		
19	Statused by Organisation	250	XON	O		
20	Statused at Date/Time	8	TS	O		

Table 67: IAM Attribute Table - Allergy or Adverse Reactions

5.4.1 *IAM-2 - Allergen Type Code*

This field indicates a general allergy category.

Value	Description
DA	Drug Allergy
FA	Food Allergy
LA	Pollen Allergy
MA	Miscellaneous Allergy
MC	Miscellaneous Contraindication
EA	Environmental Allergy
AA	Animal Allergy
PA	Plant Allergy

Table 68: HL7 User Defined Table 0127 - Allergen Type

5.4.2 *IAM-4 - Allergy Severity Code*

This field indicates the general severity of the allergy.

Value	Description
SV	Severe
MO	Moderate
MI	Mild
U	Unknown

Table 69: HL7 User Defined Table 0128 - Allergy Severity

5.4.3 *IAM-6 - Allergy Action Code*

This field contains a code defining the status of the record.

Value	Description
A	Add/Insert
D	Delete
U	Update

Table 70: HL7 Table 0323 - Allergy Action Code

5.4.4 *IAM-9 - Sensitivity to Causative Agent Code*

This field contains the reason why the patient should not be exposed to a substance.

Value	Description
AD	Adverse Reaction (not otherwise classified)
AL	Allergy
CT	Contraindication
IN	Intolerance

Table 71: HL7 User Defined Table 0436 - Sensitivity to Causative Agent Code

5.4.5 *IAM-16 - Alert Device Code*

This field describes any type of allergy alert device the patient may be carrying or wearing.

Value	Description
B	Bracelet
N	Necklace
W	Wallet Card

Table 72: HL7 User Defined Table 0437 - Alert Device Code

5.4.6 *IAM-17 - Allergy Clinical Status*

This field indicates the verification status for the allergy.

Value	Description
U	Unconfirmed
P	Pending
S	Suspect
C	Confirmed or Verified
I	Confirmed but Inactive
E	Erroneous
D	Doubt Raised

Table 73: HL7 User Defined Table 0438 - Allergy Clinical Status

5.5 MSA – Message Acknowledgement

This segment contains information sent in acknowledging another message.

Example:

```
MSA|AR|ROY4454|Application reject - Required field missing |||
```

Seq	Element Name	Len	Type	Opt	Rpt	Table
1	Acknowledgement Code	2	ID	R		Table 75
2	Message Control ID	20	ST	R		
3	Text Message	80	ST	O		
4	Expected Sequence Number	15	NM	X		
5	Obsolete (Delayed Acknowledgement Type)	1	ID	X		
6	Error Condition	250	CE	O		Table 66

Table 74: MSA Attribute Table - Message Acknowledgement

NOTE: *The ERR segment is used to return user defined error codes to further specify AR or AE type acknowledgements.*

5.5.1 *MSA-1 - Acknowledgement Code*

This field contains the acknowledgement code. The most common values used are provided here:

Value	Description
AA	Application Accept
AE	Application Error
AR	Application Reject

Table 75: HL7 Table 0008 - Acknowledgement Code

NOTES:

1. This system will not use the HL7 enhanced acknowledgment system.

2. This table is not comprehensive.

5.5.2 *MSA-2 - Message Control ID*

This field contains the control ID of the message to which this message is the response. This field allows the sending system to keep track of the messages that it has processed.

5.5.3 *MSA-3 - Text Message*

Further describes an error condition. This text may be printed in error logs or presented to an end user. This field should contain general error or processing information.

All other specific error information should be entered into ERR-1 (error code and location field).

5.6 MSH – Message Header

The MSH segment contains the information about the message including, sender, recipient and some syntactical information.

Example:

```
MSH|^~\&|Healthnet
6.5.1|midcendr|PMS5|Taurhosp|20051027091513|PKI|REF^I12^REF_I12|ROY4454|P|
2.4^1201&New Zealand&ISO3166^1.0
```

Seq	Element Name	Len	Type	Opt	Rpt	Table
1	Field Separator	1	ST	R		
2	Encoding Characters	4	ST	R		
3	Sending Application	180	HD	O		
4	Sending Facility	180	HD	R		
5	Receiving Application	180	HD	O		
6	Receiving Facility	180	HD	R		
7	Date/Time of Message	26	TS	R		
8	Security	40	ST	O		
9	Message Type	15	CM	R		Table B 2 Table B 3 Table B 9
10	Message Control ID	20	ST	R		
11	Processing ID	3	PT	R		Table 42
12	Version ID	60	VID	R		Table 78
13	Sequence Number	15	NM	X		
14	Continuation Pointer	180	ST	X		
15	Accept Acknowledgment Type	2	ID	X		
16	Application Acknowledgment Type	2	ID	X		
17	Country Code	3	ID	X		
18	Character Set	16	ID	O	Y	Table 79
19	Principal Language Of Message	250	CE	X		
20	Alternate Character Set Handling Scheme	20	ID	X		
21	Conformance Statement ID	10	ID	X	Y	

Table 76: MSH Attribute Table - Message Header

5.6.1 *MSH-1 - Field Separator*

The field separator character will be "|".

5.6.2 *MSH-2 - Encoding Characters*

This field contains the separator characters for component, sub-component, repeat and the user defined character. It is strongly recommended that this field contains "^~\&".

5.6.3 *MSH-3 - Sending Application*

This field identifies the application responsible for generating this message.

5.6.4 *MSH-4 - Sending Facility*

This field should be filled in with the name of the sending facility. The complete facility name should be used to avoid any ambiguity in identification.

Variance to HL7: *HL7 does not require this field.*

5.6.5 *MSH-5 - Receiving Application*

This field identifies the receiving application.

5.6.6 *MSH-6 - Receiving Facility*

This field should uniquely identify the facility that will receive the message. The complete facility name should be used to avoid any ambiguity in identification.

Variance to HL7: *HL7 does not require this field.*

5.6.7 *MSH-7 - Date/Time of Message*

Date and time that the sending system created the message.

Variance to HL7: *HL7 does not require this field.*

5.6.8 *MSH-8 - Security*

HL7 does not define any requirements for this field. If the message has been secured, it is recommended that only the name of the encryption system used should be entered here.

5.6.9 *MSH-9 - Message Type*

This field identifies the message type.

Sub Component	Type	Notes
<Message Type>^	ID	Table B 2
<Trigger Event Code>^	ID	Table B 3
<Message Structure ID>	ID	Table B 9

Table 77: Message Type Component

Variance to HL7: *According to HL7 v2.4 this field should be length 13. This has been confirmed as an error and has been corrected to 15 in HL7 v2.5.*

5.6.10 *MSH-10 - Message Control ID*

This field is a number or other identifier that uniquely identifies the message. Message control IDs will be unique to messages that have come from a particular site.

5.6.11 *MSH-11 - Processing ID*

This field indicates how a receiving system should process this message. The allowed values for the first component are in Table 42. The allowed values in the second component are found in Table 43.

5.6.12 *MSH-12 - Version ID*

Used to identify the version of the message specification used.

Sub Component	Type	Notes
<Version ID>^	ID	Used to identify the HL7 version. This implementation is based on HL7 v2.4. Use “2.4” in this field.
<Internationalization Code>^	CE	Used to identify the international affiliated country code. This implementation is for New Zealand, use “NZL”.
<Internal Version ID>	CE	This specification is local version “1.0”.

Table 78: Version ID Component

5.6.13 *MSH-18 - Character Set*

This field contains the character set for the entire message.

Value	Description
ASCII	The printable 7-bit ASCII character set (the default if this field is omitted)
8859/1	The printable characters from the ISO 8859/1 Character set
8859/1	The printable characters from the ISO 8859/1 Character set
8859/2	The printable characters from the ISO 8859/2 Character set
8859/3	The printable characters from the ISO 8859/3 Character set
8859/4	The printable characters from the ISO 8859/4 Character set
8859/5	The printable characters from the ISO 8859/5 Character set
8859/6	The printable characters from the ISO 8859/6 Character set
8859/7	The printable characters from the ISO 8859/7 Character set
8859/8	The printable characters from the ISO 8859/8 Character set
8859/9	The printable characters from the ISO 8859/9 Character set
ISO IR14	Code for Information Exchange (one byte)(JIS X 0201-1976); note that the code contains a space, i.e. "ISO IR14"
ISO IR87	Code for the Japanese Graphic Character set for information interchange (JIS X 0208-1990); note that the code contains a space, i.e. "ISO IR87"
ISO IR159	Code of the supplementary Japanese Graphic Character set for information interchange (JIS X 0212-1990); note that the code contains a space, i.e. "ISO IR159"
UNICODE	The world wide character standard from ISO/IEC 10646-1-19933

Table 79: HL7 Table 0211 - Alternative Character Sets

NOTE: *The field separator character must still be chosen from the printable 7-bit ASCII character set*.

The repetitions of this field to specify different character sets apply only to fields of the FT, ST, and TX data types.

MSH-18 (character set field) is an optional, repeating field of data type ID, using IDs outlined in the table above (or equivalents from "ISO 2375").

If the field is not valued, the default single-byte character set (ASCII ("ISO IR6")) should be assumed. No other character sets are allowed in the message.

If the field repeats, but the first element is null (i.e. present but unvalued), the single-byte ASCII ("ISO IR6") is assumed as the default character set.

If the sequence is present and the first element is specified, this character set is regarded as the default character set for the message. This must be a single-byte character set (i.e. "ISO IR6", "ISO IR13", "ISO IR14", "ISO IR100", etc.).

Elements in the remainder of the sequence (i.e. elements 2..n) are alternate character sets that may be used. These may include multi-byte character sets (i.e. JIS X 0208).

The default character set should always be a single-byte character set. It should always have "ISO IR6" (ISO 646) or "ISO IR14" (JIS X 0201-1976) in the G0 area.

5.7 NK1 – Next of Kin

This segment is used in the referral and discharge context to communicate next of kin and/or caregiver information.

Example:

```
NK1|1|Hamilton^Hugh^^^Prof^MCE^L|05^Son^99NZREL|24 Jones
Road^^Tauranga|^PRN^PH^^^07^4649820^^After 5:30
Weekdays|^WPN^PH^^^07^1654846^2||||Engineer
```

Seq	Element Name	Len	Type	Opt	Rpt	Table No
1	Set ID	4	SI	R		
2	Name	250	XPN	R	Y	Table 121
3	Relationship	250	CE	R		Table 81
4	Address	250	XAD	O	Y	
5	Phone Number	250	XTN	O	Y	
6	Business Phone Number	250	XTN	O	Y	
7	Contact Role	250	CE	O		Table 82
8	Start Date	8	DT	X		
9	End Date	8	DT	X		
10	Job Title	60	ST	X		
11	Job Code/Class	20	JCC	X		
12	Employee Number	250	CX	X		
13	Organisation Name	250	XON	X		
14	Marital Status	250	CE	O		Table 124
15	Administrative Sex	1	IS	O		Table 122
16	Date/Time of Birth	26	TS	O		
17	Living Dependency	2	IS	X		
18	Ambulatory Status	2	IS	X		
19	Citizenship	250	CE	O	Y	Table B 1
20	Primary Language	250	CE	O		Table B 4
21	Living Arrangement	2	IS	X		
22	Publicity Code	250	CE	X		
23	Protection Indicator	1	ID	X		
24	Student Indicator	1	IS	X		
25	Religion	250	CE	X		
26	Mother’s Maiden Name	250	XPN	O	Y	
27	Nationality	250	CE	X		
28	Ethnic Group	250	CE	X	Y	
29	Contact Reason	250	CE	X		
30	Contact Person's Name	250	XPN	X		
31	Contact Person’s Telephone number	250	XTN	X		
32	Contact Person’s Address	250	XAD	X		

Seq	Element Name	Len	Type	Opt	Rpt	Table No
33	Identifiers	250	CX	O	Y	
34	Job Status	2	IS	X		
35	Ethnicity	250	CE	O	Y	Table 123
36	Handicap	2	IS	X		
37	Contact Person's Social Security Number	16	ST	X		

Table 80: NK1 Attribute Table - Next of Kin

5.7.1 *NK1-1 - Set ID*

This field is used to identify repeats of this segment within a message. The first segment has a value of one. Numbering then increases incrementally for the following segment.

5.7.2 *NK1-2 - Name*

This field identifies the name of the caregiver or next of kin. Where more than one name is recorded for each person, a name type code is required to distinguish the names. The first name sent in such instances will be the primary name. See Table 121 for valid name type codes. Refer also to the XPN definition in Chapter 5.1.6.29.

Variance to HL7: *HL7 does not require this field.*

5.7.3 *NK1-3 - Relationship*

This field identifies the relationship of the caregiver or next of kin to the person being treated. Use one of the following values from the NZHIS relationship tables:

Value	Description
01	Mother
02	Father
03	Sister
04	Brother
05	Son
06	Daughter
07	Uncle
08	Aunt
09	Nephew
10	Niece
11	Cousin
12	Grandfather
13	Grandmother
14	Employer
15	Other
16	Spouse
91	Foster Father
92	Foster Mother
93	Stepfather

Value	Description
94	Stepmother
99	Self

Table 81: User Defined Table 99NZREL – Relationship

Variances to HL7: *This is optional in HL7. HL7 uses values from HL7 Table 0063 in this field.*

5.7.4 *NK1-4 - Address*

Reports the address of the next of kin and/or caregiver.

5.7.5 *NK1-5 - Phone Number*

This field contains the phone number of the next of kin and/or caregiver.

5.7.6 *NK1-6 - Business Phone Number*

This field contains the business phone number of the next of kin and/or caregiver.

5.7.7 *NK1-7 - Contact Role*

This field contains the role of the next of kin and/or caregiver. Use one of the values from the table below:

Value	Description
IGR	Information Guardian or Caregiver
CSP	Clinical Service Provider
LGR	Legal Guardian
ADV	Advocate
DOM	Partner – De Facto
FCH	Foster Child
NBR	Neighbour
COL	Colleague
FND	Friend
EPOA (PCW)	Enduring Power of Attorney (Personal Care & Welfare)
WG	Welfare Guardian

Table 82: HL7 User Defined Table 0131 - Contact Role Code

5.7.8 *NK1-14 - Marital Status*

This field contains the next of kin marital status. Use one of the values from Table 124.

5.7.9 *NK1-15 - Administrative Sex*

This field contains the next of kin's sex. Use one of the values from Table 122.

5.7.10 *NK1-16 - Date/Time of Birth*

This field contains the next of kin's birth date and time of birth.

5.7.11 *NK1-19 - Citizenship*

This field contains the code to identify the next of kin's citizenship. Use one of the values from Table B 1.

5.7.12 *NK1-20 - Primary Language*

This field contains the code to identify the next of kin's primary language. Use the values from Table B 4.

5.7.13 *NK1-26 - Mother's Maiden Name*

This field indicates the maiden name of the next of kin's mother.

5.7.14 *NK1-33 - Identifiers*

If an NHI number is present for next of kin, it should be included here.

5.7.15 *NK1-35 - Ethnicity*

This field is used to record the ethnicity of the next of kin. Refer to Table 123 for allowed values.

5.8 NTE – Notes and Comments

An NTE segment always provides information regarding the segment that it immediately follows. The NTE should contain notes or comments that extend the information provided in the segment it follows.

The comment may contain multiple lines of text, using the line-break escape character to demark end-of-line. The preference should be to use a single NTE to contain the entire text where possible (see 'Set Id', below).

Seq	Element Name	Len	Type	Opt	Rpt	HL7 Table
1	Set ID	4	SI	R		
2	Source of comment	8	ID	O		Table 84
3	Comment	64k	FT	O	Y	
4	Comment Type	250	CE	O		

Table 83: NTE Attribute Table - Notes and Comments

5.8.1 *NTE-1 - Set ID*

The number system used is as follows:

When several NTE segments are used to transmit a larger block (greater than 64k) of related text these segments would use the same Set IDs. Different Set IDs indicate unrelated text.

The first NTE in a sequence will have a Set ID of one ('1') and increment sequentially for the next unrelated NTE segment that pertains to the same segment. If more comments are required for any given segment, then the subsequent NTE segments will increment the Set ID by 1.

Variance to HL7: *This implementation requires the use of Set IDs for NTE segments.*

Example 1: The following example shows the Set ID's from the same comment split across two NTE segments. Please be aware that comments of this length may not be stored on some systems.

```
OBX|…<cr>
NTE|1|L|Laboratory test performed as requested… <to 64K characters><cr>
NTE|1|L|and completed but no antibodies detected<cr>
```

Example 2: The following example shows the Set ID's from two unrelated comments for a single OBX segment.

```
OBX|…<cr>
NTE|1|L|Moderate neutrophilic leucocytosis<cr>
NTE|2|L|Mild thrombocytopenia<cr>
```

Example 3: The following example shows the Set ID's from two unrelated NTE segments pertaining to two different OBX segments.

```
OBX|…<cr>
NTE|1|L|Moderate neutrophilic leucocytosis<cr>
OBX|…<cr>
NTE|1|L|Poliomyelitis antibodies not detected<cr>
```

Note:

1. Where possible a NTE should not exceed 64k. The use of lengthy comments / notes that are required to be split is strongly discouraged

2. A NTE that has been split as shown in the example 1 above may not be supported by some systems. As a result information may be truncated

3. The use of NTEs for important information is discouraged, particularly where truncation may occur. Consideration should be given to using an OBX.

5.8.2 *NTE-2 - Source of Comment*

Identifies the source of the comment. Table 84 contains the valid codes. This table may be extended locally during implementation.

Value	Description
L	Ancillary (filler) department is source of comment. In this implementation the filler is the party responsible for the administration of the vaccine.
P	Placer is source of comment.
O	Other system.

Table 84: HL7 Table 105 - Source of Comment

5.8.3 *NTE-3 - Comment*

This field contains the comment.

5.8.4 *NTE-4 - Comment Type*

This field contains a value to identify the type of comment text being sent in the specific comment record.

Value	Description
PI	Patient Instructions
AI	Ancillary Instructions
GI	General Instructions
1R	Primary Reason
2R	Secondary Reason
GR	General Reason
RE	Remark
DR	Duplicate/Interaction Reason

Table 85: HL7 User Defined Table 0364 - Comment Type

5.9 OBR – Observation Request

This segment is used to transmit information specific to an order for a diagnostic study, observation, physical examination, or assessment. In many cases this information would be the same as that sent in the ORC segment. However, this OBR segment identifies the diagnostic specifics of the service required.

Example:

```
OBR|3|100033-1|701-336212^^L|FBE^FULL BLOOD
EXAMINATION^L|||20051026090955+1000000|||||||||12345^Smith^A^^^Dr|||||||||
F|||12346^Woods^D^^^Dr||||43210&Swagman&Delores&W&&Dr
```

Seq	Element Name	Len	Type	Opt	Rpt	Table
1	Set ID	4	SI	O		
2	Placer Order Number	50	EI	R		
3	Filler Order Number	50	EI	C		
4	Universal Service ID	250	CE	R		
5	Obsolete (Priority)		ID	X		
6	Requested Date Time	26	TS	X		
7	Observation Date/Time	26	TS	C		
8	Observation End Date/Time	26	TS	O		
9	Collection Volume	20	CQ	O		
10	Collector ID	250	XCN	O	Y	
11	Specimen Action Code	1	ID	O		Table 87
12	Danger Code	250	CE	O		
13	Relevant Clinical Info	300	ST	O		
14	Specimen Received Date/Time	26	TS	O		
15	Specimen Source	300	CM	O		Table 88
16	Ordering Provider	250	XCN	R	Y	
17	Order Callback Phone Number	250	XTN	O	Y/2	
18	Placer Field 1	60	ST	O		
19	Placer Field 2	60	ST	X		
20	Filler Field 1	60	ST	O		
21	Filler Field 2	60	ST	X		
22	Results Rpt/Status Chg - Date/Time	26	TS	C		
23	Charge to Practice	40	CM	O		Table 89
24	Diagnostic Service Sector ID	10	ID	C		Table B 12
25	Result Status	1	ID	C		Table 90
26	Parent Result	400	CM	O		Table 91
27	Quantity/Timing	200	TQ	O	Y	Table 92
28	Result Copies To	250	XCN	O	Y/5	
29	Parent	200	CM	O		Table 93
30	Transportation Mode	20	ID	O		Table 95

Seq	Element Name	Len	Type	Opt	Rpt	Table
31	Reason for Study	250	CE	O	Y	
32	Principal Result Interpreter	200	CM	O		Table 96
33	Assistant Result Interpreter	200	CM	O	Y	Table 99
34	Technician	200	CM	O	Y	Table 100
35	Transcriptionist	200	CM	O	Y	Table 101
36	Scheduled Date/Time	26	TS	O		
37	Number of Sample Containers	4	NM	O		
38	Transport Logistics of Collected Sample	250	CE	X	Y	
39	Collector's Comment	250	CE	X	Y	
40	Transport Arrangement Responsibility	250	CE	O		
41	Transport Arranged	30	ID	O		Table 102
42	Escort Required	1	ID	O		Table 103
43	Planned Patient Transport Comment	250	CE	O	Y	
44	Procedure Code	250	CE	O		
45	Procedure Code Modifier	250	CE	O	Y	
46	Placer Supplemental Service Information	250	CE	X	Y	
47	Filler Supplemental Service Information	250	CE	X	Y	

Table 86: OBR Attribute Table - Observation Request

***NOTE**: OBR-24 is required when reporting results.*

***Variance to HL7:** The length of OBR-2 and OBR-3 are extended to 50 for New Zealand use.*

5.9.1 *OBR-1 - Set ID*

Used to identify repeats of this segment within a message.

5.9.2 *OBR-2 - Placer Order Number*

This field uniquely identifies an individual order from the application responsible for placing the order.

5.9.3 *OBR-3 - Filler Order Number*

This field uniquely identifies an individual order from the application responsible for filling the order. The ORC-3 is the same as the OBR-3. If the filler order number is not present in the ORC, it must be present in the associated OBR. This rule is the same for other identical fields in the ORC and OBR. It promotes compatibility going forward, including compatibility with the ASTM (American Society for Testing and Materials).

5.9.4 *OBR-4 - Universal Service ID*

This field contains the identifier code for the requested service (observation/test/battery). This may be based on local and/or universal codes. Where possible it is recommended that a universal procedure identifier be used. This specification recommends the use of LOINC or the NZPOCS. Refer to Glossary for acronyms.

5.9.5 *OBR-7 - Observation Date/Time*

This field is the clinically relevant date/time of the observation. In the case of observations taken directly from a subject, it is the actual date and time the observation was made. In the case of a specimen-associated study, this field shall represent the date and time the specimen was collected or obtained.

This field will only be sent with an order if the party responsible for placing the order has collected the sample, otherwise this field will be empty.

5.9.6 *OBR-8 - Observation End Date/Time*

This field contains the end date and time of a study or timed specimen collection. If an observation takes place over a period of time, it will indicate when the observation period ended. If the observation occurred at a specific point in time, then this field will be empty.

This field should only be sent by the placer if a party other than the filler is (or was) responsible for collecting samples.

5.9.7 *OBR-9 - Collection Volume*

This field contains the collection volume of the specimen.

5.9.8 *OBR-10 - Collector ID*

This field will identify the person, department, or facility that collected the specimen. In most order cases for outpatient orders, a collection room will be responsible for the collection of the sample and this field will remain blank in both the order and the response; and the collector ID will be reported with the results of the test.

5.9.9 *OBR-11 - Specimen Action Code*

This field contains the action to be taken with respect to the specimens that accompany or precede the order. Usually it informs the laboratory whether to take the specimens (“L”), or that the specimens have been taken by some other means (“O”).

Value	Description
A	Add ordered tests to the existing specimen
G	Generated order; reflex order
L	Laboratory to obtain specimen from patient
O	Specimen obtained by service other than laboratory
P	Pending specimen; order sent prior to delivery
R	Revised order
S	Schedule the tests specified below

Table 87: HL7 Table 0065 - Specimen Action Code

5.9.10 *OBR-12 - Danger Code*

This field contains the code and/or text indicating any known or suspected patient or specimen hazards, e.g. “patient with active tuberculosis”, or “blood from a hepatitis patient”.

5.9.11 *OBR-13 - Relevant Clinical Info.*

This field contains additional clinical information about the patient or specimen. It may be used to report the suspected diagnosis and clinical findings on requests for interpreted diagnostic studies. If a more structured form of information is required a series of OBX segments should be used instead.

5.9.12 *OBR-14 - Specimen Received Date/Time*

This field represents the date/time that the specimen was received at the diagnostic service. This field must contain a value when the order is accompanied by a specimen, or when the observation required a specimen and the message is a report.

5.9.13 *OBR-15 - Specimen Source*

This field contains the site from where the specimen was or should be obtained. It comprises the following components:

Sub Component	Type	Notes
<Specimen source name or code>^	CE	Refer to Table B 7 valid entries. This field is required.
<Additives>^	TX	Additive to the specimen
<Free text>^	TX	Description of collection method
<Body site>^	CE	Body site from which specimen was obtained. Refer to Table 175 for values.
<Site modifier>^	CE	Not used
<Collection method modifier code>^	CE	Indicates the specimen collection method. Suggested values are: “F” – Frozen “R” – Refrigerated Blank – Room temperature
<Specimen role>	CE	Not used

Table 88: Specimen Source Components

5.9.14 *OBR-16 - Ordering Provider*

This field is the identity of the person who ordered the test and is exactly the same as ORC-12.

Variance to HL7: *This field is required in this implementation, whereas it is optional in HL7.*

5.9.15 *OBR-17 - Order Callback Phone Number*

This field is the telephone number for reporting a status, result or for clarification of the order. It is identical to ORC-14.

5.9.16 *OBR-18 - Placer Field 1*

This field may be put to any use by the placer. The filler should return it with results or a reply.

5.9.17 *OBR-20 - Filler Field 1*

This field may be put to any purpose by the filler.

5.9.18 *OBR-22 - Results Report/Status Change - Date/Time*

This field specifies the date/time when the results were reported or status changed. This field is used to indicate the date and time that the results are composed into a report and released, or that a status, as defined in ORC-5 (order status field), is entered or changed. This is a results field only.

5.9.19 *OBR-23 - Charge to Practice*

This field is the charge to the ordering entity for the studies performed, when applicable. The first component is a dollar amount when known by the filler. The second is a charge code when known by the filler (results only).

Component	Type	Notes
<dollar amount>	MO	The dollar amount when known by the filler
<charge code>	CE	The charge code used by the filler (results only).

Table 89: Charge to Practice Components

5.9.20 *OBR-24 - Diagnostic Service Section ID*

This field contains information on the section of the diagnostic service where the observation was performed. If the study was performed by an outside service, the identification of that service should be recorded here. Refer to Table B 12 for details.

5.9.21 *OBR-25 - Result Status*

This field gives the status of the order result.

Value	Description
O	Order received; specimen not yet received.
I	No results available; specimen received, procedure incomplete.
S	No results available; procedure scheduled, but not done.
A	Some, but not all, results available.
P	Preliminary; a verified early result is available, final results not yet obtained.
C	Correction to results.
R	Results stored; not yet verified.
F	Final results; results stored and verified. This shall only be changed with a corrected result.
X	No results available; order cancelled.
Y	No order on record for this test. Used only on queries.
Z	No record of this Patient. Used only on queries.

Table 90: HL7 Table 0123 - Result Status

5.9.22 *OBR-26 - Parent Result*

The information in this field may be linked to various departments (e.g. toxicology). This important information, together with the information in OBR-29 (parent field), uniquely identifies the OBX segment related to this order.

The information in this field may be linked to various departments (e.g. toxicology). This important information, together with the information in OBR-29 (parent field), uniquely identifies the parent result's OBX segment related to this order. .

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.

Component	Type	Notes
<OBX-3-observation identifier of parent result>	CE	
<OBX-4-sub-ID of parent result)>	ST	
<part of OBX-5 observation result from parent (TX)see discussion>	TX	The third component may be used to record the name of the micro organism identified by the parent result directly

Table 91: Parent Result Components

5.9.23 *OBR-27 - Quantity/Timing*

This field contains information about the timing, repetition and intervals of the test to be performed. In cases where timing is not important, this component should be left out. In such cases the quantity is always assumed to be one (“1”).

This field is a composite, consisting of the following items:

Sub Component	Type	Notes
<Quantity>^	CQ	
<Interval>^	CM	
<Duration>^	TX	
<Start Date/Time>^	TS	
<End Date/Time >^	TS	
<Priority>^	ST	“A” - ASAP “R” - Routine (assumed if this field is not present) “T” - Timing Critical “S” - Stat
<Condition>^	ST	
<Text>^	TX	
<Conjunction>^	ID	“S” - Synchronous “A” - Asynchronous “C” - Actuation Time
<Order Sequencing>^	CM	
<Occurrence Duration>^	CE	
<Total Occurrences>	NM	

Table 92: Quantity/Timing Components

5.9.24 *OBR-28 - Result Copies To*

This field contains a list of people who are to receive copies of the results. It consists of up to five repeating XCN data types.

5.9.25 *OBR-29 - Parent*

This field relates a child to its parent when a parent-child relationship exists. For observations spawned by previous observations, e.g. antimicrobial susceptibilities spawned by blood cultures; record the parent (blood culture) filler order number here.

Parent is a two-component field. The components of the placer order number and the filler order number are transmitted in subcomponents of the two components of this field.

Component	Type	Notes
<parent's placer order number>	EI	Refer Table 94 for sub components
<parent's filler order number>	EI	Refer Table 94 for sub components

Table 93: OBR-29 Parent Components

Sub-Component	Type	Notes
<entity identifier (ST)>	ST	
<namespace ID (IS) >	EI	
<universal ID (ST)>	ST	
<universal ID type (IS)>	IS	

Table 94: OBR-29 Parent Sub Components

5.9.26 *OBR-30 - Transportation Mode*

This field identifies how to transport the patient where applicable. Refer to the table below, for allowed values:

Value	Description
CART	Patient travels on a bed or trolley
PORT	The examining device goes to Patient's location
WALK	Patient walks to diagnostic service
WHLC	Patient travels in a wheelchair

Table 95: HL7 Table 0124 - Transportation Mode

Variance to HL7: *The value "CART" is described as a cart or gurney in HL7.*

5.9.27 *OBR-31 - Reason for Study*

Use the convention for coded fields to enter a code or text here.

5.9.28 *OBR-32 - Principal Result Interpreter*

This field identifies the physician or other clinician who interpreted the observation and who is responsible for the report content.

Component	Type	Notes
<name (CN)>	CN	CN has been replaced by XCN as of HL7 v2.3 Refer Table 97 "Name" sub component, below.
<start date/time>	TS	
<end date/time>	TS	
<point of care>	IS	
<room>	IS	
<bed>	IS	
<facility>	HD	Refer Table 98 "Facility" sub component, below.
<location status>	IS	
<patient location type>	IS	

Component	Type	Notes
<building>	IS	
<floor>	IS	

Table 96: OBR-32 Principal Result Interpreter Components

Sub-Component	Type	Notes
<ID number>	ST	
<family name>	ST	
<given name>	ST	
<middle initial or name>	ST	
<suffix>	ST	
<prefix>	ST	
<degree>	ST	
<source table>	IS	
<assigning authority>	HD	

Table 97: OBR-32 Name Sub-Components

Sub-Component	Type	Notes
<namespace ID>	IS	
<universal ID>	ST	
<universal ID type>	ST	

Table 98: Facility Sub Components

5.9.29 *OBR-33 - Assistant Result Interpreter*

This field identifies the clinical observer who assisted in the interpretation of the study.

Component	Type	Notes
<name>	CN	CN has been replaced by XCN as of HL7 v2.3. Refer Table 97 “Name” sub component, below.
<start date/time>	TS	
<end date/time>	TS	
<point of care>	IS	
<room>	IS	
<bed>	IS	
<facility>	HD	Refer Table 98 “Facility” sub component, above.
<location status>	IS	
<patient location type>	IS	
<building>	IS	
<floor>	IS	

Table 99: OBR-33 Assistant Result Interpreter

5.9.30 *OBR-34 - Technician*

This field identifies the performing technician.

Component	Type	Notes
<name>	CN	CN has been replaced by XCN as of HL7 v2.3 Refer Table 97 “Name” sub component, above.
<start date/time>	TS	
<end date/time>	TS	
<point of care>	IS	
<room>	IS	
<bed>	IS	
<facility>	HD	Refer Table 98 “Facility” sub component, above.
<location status>	IS	
<patient location type>	IS	
<building>	IS	
<floor>	IS	

Table 100: OBR-34 Technician

5.9.31 *OBR-35 - Transcriptionist*

This field identifies the report transcriber.

Component	Type	Notes
<name>	CN	CN has been replaced by XCN as of HL7 v2.3 Refer Table 97 “Name” sub component, above
<start date/time>	TS	
<end date/time>	TS	
<point of care>	IS	
<room>	IS	
<bed>	IS	
<facility>	HD	Refer Table 98 “Facility” sub component, above.
<location status>	IS	
<patient location type>	IS	
<building>	IS	
<floor>	IS	

Table 101: OBR-35 Transcriptionist Components

5.9.32 *OBR-36 - Schedule Date/Time*

This field records the date/time the filler scheduled the observation.

5.9.33 *OBR-37 - Number of Sample Containers*

This field identifies the number of containers for a given sample.

5.9.34 *OBR-40 - Transport Arrangement Responsibility*

This field is an indicator of who is responsible for arranging transport to the planned diagnostic service. For example: “Provider”, “Patient”.

5.9.35 *OBR-41 - Transport Arranged*

This field is an indicator of whether transport arrangements have been made. Refer to the table below for valid codes:

Value	Description
A	Arranged
N	Not Arranged
U	Unknown

Table 102: HL7 Table 0224 - Transport Arranged

5.9.36 *OBR-42 - Escort Required*

This field is an indicator that the patient needs to be escorted. The nature of the escort requirements should be stated in OBR-43, below. Refer to the table below for values:

Value	Description
R	Required
N	Not Required
U	Unknown

Table 103: HL7 Table 0225 - Escort Required

5.9.37 *OBR-43 - Planned Patient Transport Comment*

This field contains free text comments on special requirements for transport of the patient to the diagnostic service department.

5.9.38 *OBR-44 - Procedure Code*

This field contains a unique identifier assigned to the procedure.

5.9.39 *OBR-45 - Procedure Code Modifier*

This field contains the modifier to the procedure code reported in OBR-44.

5.10 OBX – Observation Result

The OBX segment is used to transmit a single observation or observation fragment. It represents the smallest indivisible unit of a report.

Example:

```
OBX|1|NM|717-9^HAEMOGLOBIN^LN|1|152|g/L|115-165||||F|||20051026091500000
```

Seq	Element Name	Len	Type	Opt	Rpt	Table
1	Set ID	4	SI	O		
2	Value Type	2	ED	C		Table 105
3	Observation Identifier	250	CE	R		
4	Observation Sub-ID	20	ST	O		
5	Observation Value	5,242,880 (5MB)	*	O	C	
6	Units	250	CE	O		Table B 6
7	Reference Ranges	60	ST	O		
8	Abnormal Flags	5	IS	O	Y/5	Table 106
9	Probability	5	NM	O		
10	Nature of Abnormal Test	2	ID	O	Y	Table 107
11	Observation Result Status	1	ID	R		Table 104
12	Date Last Observation Normal Values	26	TS	X		
13	User Defined Access Checks	20	ST	X		
14	Date/Time of Observation	26	TS	O		
15	Producer's ID	250	CE	O		
16	Responsible Observer	250	XCN	O	Y	
17	Observation Method	250	CE	O	Y	
18	Equipment Instance Identifier	22	EI	X	Y	
19	Date/Time of the Analysis	26	TS	X		

Table 104: OBX Attribute Table - Observation Result

5.10.1 *OBX-1 - Set ID*

This field is used to identify repeats of this segment within a message. The first segment has a value of one ("1"), which will increase by one for each subsequent OBX segment.

5.10.2 *OBX-2 - Value Type*

This field contains the format of the observation value in OBX-5. This field must contain a value unless OBX-11 contains an "X" to indicate that this segment does not report any results. The valid values for this field are listed in the table below:

Value	Description
AD	Address
CE	Coded Entry
CF	Coded Element with Formatted Values
CK	Composite ID with Check Digit (not used in New Zealand)

Value	Description
CN	Composite ID and Name
CP	Composite Price
CX	Extended Composite ID with Check Digit
DT	Date
ED	Encapsulated Data
FT	Formatted Text (Display)
MO	Money
NM	Numeric
PN	Person Name
RP	Reference Pointer
SN	Structured Numeric
ST	String Data
TM	Time
TN	Telephone Number
TS	Time Stamp (Date & Time)
TX	Text Data (Display)

Table 105: HL7 Table 0125 - Value Type

5.10.3 *OBX-3 - Observation Identifier*

This field contains a unique identifier for the observation. In most systems this identifier will point to a master observation table that will provide other attributes of the observation.

It is recommended that if local codes are used in one triplet, an equivalent universal identifier is sent in the other triplet. This will allow receivers to compare results from different providers of the same service.

Where possible, this implementation advocates the use of the LOINC or NZPOCS codes as a universal identifier.

5.10.4 *OBX-4 - Observation Sub-ID*

This field is used to distinguish between multiple OBX segments with the same observation ID, organised under one OBR. This can occur frequently when a single test measures multiple parameters, producing multiple results. Where there is only one result per test this field should remain empty.

5.10.5 *OBX-5 - Observation Value*

This field contains the value observed (the actual result). This field is formatted according to the data type in OBX-2, above.

> ***Variance to HL7:*** *The size of the OBX-5 field has been increased to 5MB to better suit New Zealand requirements, whereas it was limited to 64k in HL7.*

5.10.6 *OBX-6 - Units*

This field specifies the measurement units used within the OBX segment. Refer to Table B 6, for allowed values.

5.10.7 *OBX-7 - Reference Ranges*

The reference range is the range over which values for numerical results normally fall.

5.10.8 *OBX-8 - Abnormal Flags*

This field contains a table lookup indicating the status of the result. It is recommended, when applicable, that this value be sent. A repeat delimiter should separate multiple codes.

The most common values are listed in the table below.

Value	Description
L	Low
H	High
LL	Below lower panic limit
HH	Above upper panic limit
N	Normal, applies only to non-numerical values

Table 106: HL7 User Defined Table 0078 - Abnormal Flags

NOTE: *This list is not comprehensive.*

5.10.9 *OBX-9 - Probability*

This field contains the probability of a result being accurate for results with definitive values. It mainly applies to discrete coded results. Must be a decimal number between 0 and 1, inclusive.

5.10.10 *OBX-10 - Nature of Abnormal Test*

As many of the codes as apply may be included, separated by repeat delimiters.

Value	Description
A	An age-based population
N	None - generic normal range
R	A race-based population
S	A sex-based population

Table 107: HL7 Table 0080 - Nature of Abnormal Test

5.10.11 *OBX-11 - Observation Result Status*

This field reflects the current completion status of the results for one observation identifier. Refer to the table below for the most common values:

Value	Description
F	Final results
P	Preliminary results
R	Results entered - not verified
S	Partial results
X	Did not report any results

Table 108: HL7 Table 0085 - Observation Result Status

NOTE*: This list is not comprehensive.*

Variance to HL7: *HL7 v2.4 allows this field to take a value of 'O' to send of a prototype of an OBX segment expected in the eventual report. This usage is not allowed in this implementation.*

5.10.12 *OBX-14 - Date/Time of Observation*

This field contains the physiologically relevant date/time of the observation, or the closest approximation to that time. In the case of tests performed on specimens, the relevant date/time is the date/time of collection of the specimen. In the case of observations taken directly on the patient, the relevant date/time is the date/time that the observation was performed.

5.10.13 *OBX-15 - Producer's ID*

This field contains the unique identifier of the responsible producing service.

5.10.14 *OBX-16 - Responsible Observer*

This field contains the identity of the individual directly responsible for the observation. This is the person who either performed the test or verified the result. It is used for audit trail information.

5.10.15 *OBX-17 - Observation Method*

This field is used to transmit the method or procedure by which an observation was obtained when the sending system wishes to distinguish among one measurement obtained by different methods, and the distinction is not implicit in the test ID.

5.11 ORC – Order Common Segment

Example:

```
ORC|IN|RSD
Z:05555|||||||20051019|||12346^Woods^D^^^Dr|||20051019|MEDLT^Long term
medication details^99NZIN
```

The ORC segment is used to transmit fields that are common to all orders (all types of services that are requested).

Where the ORC Segment contains information pertaining to the ordering of pharmaceuticals, it must be followed by the RXO (prescription order) field that contains the ordered treatment and pharmacy instructions.

The RXO may be followed in turn by a number of segments providing further details of the medication type and its administration.

Seq	Element Name	Len	Type	Opt	Rpt	Table No
1	Order Control	2	ID	R		Table 110
2	Placer Order Number	50	EI	R		
3	Filler Order Control	50	EI	C		
4	Placer Group Number	50	EI	O		
5	Order Status	2	ID	O		Table 111
6	Response Flag	1	ID	O		Table 112
7	Quantity/Timing	200	TQ	O	Y	
8	Parent	200	CM	X		
9	Date/Time of Transaction	26	TS	O		
10	Entered By	250	XCN	O	Y	
11	Verified By	250	XCN	O	Y	
12	Ordering Provider	250	XCN	R	Y	
13	Enterer's Location	80	PL	X		
14	Call Back Phone Number	250	XTN	O	Y/2	
15	Order Effective Date/Time	26	TS	O		
16	Order Control Reason Code	250	CE	O		Table 113
17	Entering Organisation	250	CE	O		
18	Entering Device	250	CE	X		
19	Action By	250	XCN	O	Y	
20	Advanced Beneficiary Notice Code	250	CE	O		Table 114
21	Ordering Facility Name	250	XON	O	Y	
22	Ordering Facility Address	250	XAD	X	Y	
23	Ordering Facility Phone Number	250	XTN	X	Y	
24	Ordering Provider Address	250	XAD	X	Y	
25	Order Status Number	250	CWE	O		

Table 109: ORC Attribute Table - Order Common

Variance to HL7: *The length of ORC-2 and ORC-3 are extended to 50 for New Zealand use.*

5.11.1 *ORC-1 - Order Control Code*

The HL7 standard code table for ORC-1 provides for approximately 45 codes, such as “NW” for new order, “OK” for order/service accepted, “CA” for order cancelled. Refer to Table 98 for the most common codes. Refer to HL7 v2.4 Chapter 4.20 for the full list of order control codes.

ORC-1 is extended for New Zealand to cover specific information requirements for Medications, Alerts, Family History and Accident details. In this instance the order control code “IN” will be used.

The order control code used in ORC-1 will determine the ORC-5 (order status code field) and ORC-16 (order control reason field).

Value	Sender	Description
NW	Placer	New order
OK	Filler	New order accepted
UA	Filler	Unable to accept
CA	Placer	Request to cancel order
CR	Filler	Order cancelled as requested
IN	Placer or Filler	Information
UC	Filler	Unable to cancel
RE	Filler	Results to follow (use in the ORU message)
OC	Filler	Advising order is cancelled
RO	Placer or Filler	Replacement order
RQ	Filler	Replaced, as requested
UM	Filler	Unable to replace
RU	Filler	Replaced, unsolicited

Table 110: HL7 Table 0119 - Order Control Codes

NOTE: *This list is not comprehensive.*

Variance to HL7: *This table is extended for New Zealand usage to include the value “IN”.*

5.11.2 *ORC-2 - Placer Order Number*

This field is the order number assigned by the placer of the order.

5.11.3 *ORC-3 - Filler Order Number*

This field contains the order number as assigned by the application responsible for filling the order. In hospital contexts the filler may use the same number as the placer. If this is used then the same number should be reported in both places.

5.11.4 *ORC-4 - Placer Group Number*

Allows an order placing application to group sets of orders together and subsequently identify them.

5.11.5 *ORC-5 - Order Status*

This field specifies the status of an order and should be completed so the receiving system knows if the medication is current or historic. The following status codes are used when standard HL7 order control codes are used in ORC-1.

Value	Description
A	Some, but not all, results available
CA	Order was cancelled

Value	Description
CM	Order is completed
DC	Order was discontinued
ER	Error, order not found
HD	Order is on hold
IP	In process, unspecified
RP	Order has been replaced
SC	In process, scheduled

Table 111: HL7 Table 0038 - Order Status

NOTE: *When the New Zealand specific order control code "IN" is used, the codes in this table are not applicable.*

5.11.6 *ORC-6 - Response Flag*

This field allows the sending application to determine the amount of information to be returned from the filler.

Value	Description
E	Report exceptions only
R	Same as E, also Replacement and Parent-Child
D	Same as R, also other associated segments
F	Same as D, plus confirmations explicitly
N	Only the MSA segment is returned

Table 112: HL7 Table 0121 – Response Flag

5.11.7 *ORC-7 - Quantity Timing*

This field contains the quantity of the ordered tests and the timing information, if that is critical.

5.11.8 *ORC-9 - Date/Time of Transaction*

This field contains the date and time the current transaction was initiated.

5.11.9 *ORC-10 - Entered By*

This field identifies the person who actually keyed the request into the application. It provides an audit trail in the event that clarification of the request is required.

5.11.10 *ORC-11 - Verified By*

This field contains the identity of the person who verified the accuracy of the entered request.

5.11.11 *ORC-12 - Ordering Practitioner*

This field contains the identity of the person who is responsible for creating the request. It is used in cases where the request is entered by a technician and needs to be verified by a higher authority.

5.11.12 *ORC-14 - Call Back Phone Number*

This field contains the telephone number to call for clarification of an order.

5.11.13 *ORC-15 - Order Effective Date/Time*

This field should contain the date/time that the changes to the request took effect.

5.11.14 *ORC-16 - Order Control Reason Code*

This field contains the explanation of the reason for the order event described in ORC-1. When the ORC-1 contains the New Zealand extension “IN” then codes from the following table are used to indicate the nature of the information that follows.

Value	Description
ACC	Accident details
ALRT	Administrative alerts and warnings
ATT	Attachment
FAM	Family history
MEDLT	Long term medication details
MEDCU	Current medication
MEDIP	Inpatient medication (not continued after discharge)
MEDDS	Discharge prescription
MEDHS	Historical medication (GP-prescribed medication prior to creating referral)
REFER	Main text of the referral
OBS	Observations

Table 113: Table 99NZIN - NZ Specific ORC Groups

5.11.15 *ORC-17 - Entering Organisation*

This field identifies the organisation that the enterer belonged to at the time of entering/maintenance the order.

5.11.16 *ORC-19 - Action By*

This field identifies the person who initiated the event, represented by the corresponding order control code.

5.11.17 *ORC-20 - Advanced Beneficiary Notice Code*

This field indicates the status of the patient’s (or the patient’s representative’s) consent for responsibility to pay for potentially uninsured services.

Value	Description
1	Service is subject to medical necessity procedures
2	Patient has been informed of responsibility, and agrees to pay for service
3	Patient has been informed of responsibility, and asks that the payer be billed
4	Advanced Beneficiary Notice has not been signed

Table 114: HL7 User Defined Table 0339 - Advanced Beneficiary Notice Code

5.11.18 *ORC-21 - Ordering Facility Name*

This field contains the name of the facility placing the order. The facility identifier is identified by the HPI.

5.11.19 *ORC-25 - Order Status Modifier*

This field is a modifier or refiner of the ORC-5 (order status field). This field may be used to provide additional levels of specificity or additional information for the defined order status codes.

NOTE: *This field may only be populated if the ORC-5 (order status field) contains a value.*

5.12 PD1 – Additional Patient Demographics

This segment contains additional patient demographic information that is subject to change.

Seq	Element Name	Len	Type	Opt	Rpt	Table
1	Living Dependency	2	IS	O	Y	Table 116
2	Living Arrangement	2	IS	O	Y	Table 117
3	Patient Primary Facility	250	XON	O	Y	
4	Patient Primary Care Provider Name & ID No.	250	XCN	O	Y	
5	Student Indicator	2	IS	X		
6	Handicap	2	IS	O		Table 118
7	Living Will Code	2	IS	X		
8	Organ Donor Code	2	IS	X		
9	Separate Bill	1	ID	X		
10	Duplicate Patient	250	CX	X	Y	
11	Publicity Code	250	CE	X		
12	Protection Indicator	1	ID	X		
13	Protection Indicator Effective Date	8	DT	X		
14	Place of Worship	250	XON	X	Y	
15	Advance Directive Code	250	CE	X	Y	
16	Immunisation Registry Status	1	IS	O		Table 119
17	Immunisation Registry Status Effective Date	8	DT	O		
18	Publicity Code Effective Date	8	DT	X		
19	Military Branch	5	IS	X		
20	Military Rank/Grade	2	IS	X		
21	Military Status	3	IS	X		

Table 115: PD1 Attribute Table - Additional Patient Demographics

5.12.1 *PD1-1 - Living Dependency*

This field identifies specific living conditions relevant to an evaluation of the patient's health care needs, including discharge planning. This field repeats because, e.g. "Spouse Dependent" and "Medical Supervision Required" can apply at the same time. Refer to the table below for suggested values:

Value	Description
S	Spouse Dependent
M	Medical Supervision Required
C	Small Children Dependent
O	Other
U	Unknown

Table 116: HL7 User Defined Table 0223 - Living Dependency

5.12.2 *PD1-2 - Living Arrangement*

This field identifies the situation in which the patient lives at his residential address. Refer to the table below for suggested values:

Value	Description
A	Alone
F	Family
I	Institution
R	Relative
S	Spouse only
U	Unknown

Table 117: HL7 User Defined Table 0220 - Living Arrangement

5.12.3 *PD1-3 - Patient Primary Facility*

This field contains the name and identifier that specifies the primary care health care facility selected by the patient at the time of enrolment in an insurance plan.

5.12.4 *PD1-4 - Patient Primary Care Provider Name & ID No.*

This field is retained for backward compatibility. The ROL segment is now used to convey more complete information about the primary care provider.

5.12.5 *PD1-6 - Handicap*

This field indicates the nature of the patient's permanent physical or mental disability (e.g. deaf, blind). Refer to the table below for suggested values. For transient disabilities refer to PV1-15 (ambulatory status field).

Value	Description
A0	No functional limitations
A1	Ambulates with assistive device
A2	Wheelchair/stretcher bound
A5	Vision impaired
A6	Hearing impaired
A7	Speech impaired
A9	Functional level unknown
B3	Amputee
B4	Mastectomy
B5	Paraplegic

Table 118: HL7 User Defined Table 0295 - Handicap

NOTE: *This list is not comprehensive.*

5.12.6 *PD1-16 - Immunisation Registry Status*

This code identifies the patient's current status on (or off) the Registry. Use values from the table below:

Value	Description
A	Active
P	Provisional Opt Off

Table 119: HL7 User Defined Table 0441 - Immunisation Registry Status

NOTE: *This list is not comprehensive.*

5.12.7 *PD1-17 - Immunisation Registry Status Effective Date*

The date that the registry status in PD1-16 came into effect.

5.13 PID – Patient Identification

The PID segment is the primary means of communicating patient information.

Example:

```
PID|1||AAA1234^^^NZLMOH|Hamilton^George^^Mr||19410212||M||11^New Zealand
European/Pakeha^99NZETH|20 Cameron Road^^ Tauranga
```

Seq	Element Name	Len	Type	Opt	Rpt	Table
1	Set ID	4	SI	O		
2	Obsolete (Patient ID)			X		
3	Patient Identifier List	250	CX	R	Y	Table 29
4	Obsolete (Alternate Patient ID)			X		
5	Patient Name	250	XPN	R	Y	Table 121
6	Mother's Maiden Name	250	XPN	O	Y	
7	Date of Birth	26	TS	O		
8	Sex	1	IS	O		Table 122
9	Obsolete (Patient Alias)			X		
10	Ethnicity	250	CE	O	Y3	Table 123
11	Patient Address	250	XAD	O	Y	
12	Obsolete (Country Code)			X		
13	Home Phone	250	XTN	O	Y	
14	Business Phone	250	XTN	O	Y	
15	Primary Language	250	CE	O		
16	Marital Status	250	CE	O		Table 124
17	Religion	250	CE	O		Table B 10
18	Patient Account Number	250	CX	O		
19	Obsolete (SSN Number)			X		
20	Driver's License Number	25	DLN	X		
21	Mother's Identifier	250	CX	O	Y	Table 29
22	Ethnic Group	250	CE	O	Y	
23	Birth Place	250	ST	O		
24	Multiple Birth Indicator	1	ID	O		
25	Birth Order	2	NM	O		
26	Citizenship	250	CE	O	Y	Table B 1
27	Veterans Military Status	250	CE	X		
28	(Obsolete) Nationality	250	CE	X		
29	Patient Death Date and Time	26	TS	O		
30	Patient Death Indicator	1	ID	O		
31	Identity Unknown Indicator	1	ID	O		Table 125
32	Identity Reliability Code	20	IS	O	Y	Table 126
33	Last Update Date/Time	26	TS	X		
34	Last Update Facility	40	HD	X		

Seq	Element Name	Len	Type	Opt	Rpt	Table
35	Species Code	250	CE	C		
36	Breed Code	250	CE	C		
37	Strain	80	ST	X		
38	Production Class Code	250	CE	X	2	

Table 120: PID Attribute Table - Patient ID

***NOTE**: PID-35 (species code field) and PID-36 (breed code field) are included for veterinary purposes.*

5.13.1 *PID-1 - Set ID*

This field is used to identify repeats of this segment within a message.

5.13.2 *PID-3 - Patient Identifier List*

This field contains the list of identifiers used by the health care facility to uniquely identify a patient.

5.13.3 *PID-5 - Patient Name*

Records the names and aliases of a particular patient. Where more than one name is recorded for each patient, a name type code is required to distinguish the names. The first name sent in such instances will be the primary name. Refer to the definition of the XPN composite in Table 54.

The most common values are as follows:

Value	Description
L	Legal name
M	Maiden name
A	Alias name
B	Name at birth

Table 121: HL7 Table 0200 - Name Type

***NOTE:** This list is not comprehensive.*

5.13.4 *PID-6 - Mother's Maiden Name*

This field contains the family name under which the mother was born (i.e. before marriage). It is used to distinguish between patients with the same last name.

5.13.5 *PID-7 - Date/Time of Birth*

This field contains the patient's date and time of birth.

***NOTE:** This information should be sent where it is available.*

5.13.6 *PID-8 - Administrative Sex*

This field contains the patient's sex. It is strongly recommended that "M" or "F" be used as far as possible. Use one of the following values from the table below:

Value	Description
F	Female
M	Male
I	Indeterminate
U	Unknown

Table 122: HL7 User Defined Table 0001 - Administrative Sex

5.13.7 *PID-10 - Ethnicity*

This field is used to record the ethnicity of the patient. Use one of the following values from the table below:

Value	Description
10	European Not Further Defined
11	New Zealand European/Päkehä
12	Other European
21	New Zealand Mäori
30	Pacific Peoples Not Further Defined
31	Samoan
32	Cook Island Mäori
33	Tongan
34	Niuean
35	Tokelauan
36	Fijian
37	Other Pacific Peoples
40	Asian Not Further Defined
41	Southeast Asian
42	Chinese
43	Indian
44	Other Asian
51	Middle Eastern
52	Latin American/Hispanic
53	African (or cultural group of African origin)
54	Other
99	Not Stated

Table 123: User Defined Table 99NZETH - Ethnicity

Variances to HL7: *New Zealand usage allows only 3 repeats of this field, whereas HL7 allows this field to repeat as many times as necessary. This field is called "Race" in HL7 v2.4.*

5.13.8 *PID-11 - Patient Address*

This field contains the address information of the patient.

5.13.9 *PID-13 - Home Phone*

This field contains the patient's personal contact phone numbers.

5.13.10 *PID-14 - Business Phone*

This field contains the patient's business phone numbers. All business phone numbers for the patient are sent in this sequence. An email address may be sent if the telecommunications use code is "NET".

5.13.11 *PID-15 - Primary Language*

This field contains the patient's primary language. Refer to Table B 4 for valid values.

5.13.12 *PID-16 - Marital Status*

This field contains the patient's marital (civil) status. Use one of the following values from the table below:

Value	Description
A	Separated
D	Divorced
M	Married
V	Civil Union
S	Single
W	Widowed
C	Common Law
G	Living Together
P	Domestic Partner
R	Registered Domestic Partner
E	Legally Separated
N	Annulled
I	Interlocutory
B	Unmarried
U	Unknown
O	Other
T	Unreported

Table 124: HL7 User Defined Table 0002 - Marital Status

5.13.13 *PID-17 - Religion*

This field contains the patient's religion. Use one of the values from Table B 10.

5.13.14 *PID-18 - Patient Account Number*

This field contains the patient account number assigned by accounting to which all charges, payments, etc., are recorded. It is used to identify the patient's account.

5.13.15 *PID-21 - Mother's Identifier*

This field is used, e.g. as a link field for newborns. Typically, a patient ID or account number may be used. This field may contain multiple identifiers for the same mother. Refer to Table 29 for allowed values.

5.13.16 *PID-22 - Ethnic Group*

This field further defines the patient's ancestry, e.g. iwi. The values required for this optional field should be agreed between the parties exchanging this information.

5.13.17 *PID-23 - Birth Place*

This field indicates the location of the patient's birth. The actual address is reported in PID-11 with an identifier of "N".

5.13.18 *PID-24 - Multiple Birth Indicator*

This field indicates whether the patient was part of a multiple birth.

5.13.19 *PID-25 - Birth Order*

When a patient was part of a multiple birth, a value (number) indicating the patient's birth order is entered in this field.

5.13.20 *PID-26 - Citizenship*

This field contains the patient's country of citizenship. Refer to Table B 1 for valid values.

5.13.21 *PID-29 - Patient Death Date and Time*

This field contains the date and time at which the patient death occurred.

5.13.22 *PID-30 - Patient Death Indicator*

This field indicates whether the patient is deceased.

5.13.23 *PID-31 - Identity Unknown Indicator*

This field indicates whether or not the patient's/person's identity is known. Refer to the table below, for suggested values:

Value	Description
Y	The Patient's/person's identity is unknown
N	The Patient's/person's identity is known

Table 125: HL7 Table 0136 Yes/No Indicator - Identity Unknown Indicator

5.13.24 *PID-32 - Identity Reliability Code*

This field contains a coded value used to communicate information regarding the reliability of patient identifying data in a transmission. Values could indicate that certain fields on a PID segment for a given patient are known to be false. Refer to the table below, for suggested values:

Value	Description
US	Unknown/Default Social Security Number
UD	Unknown/Default Date of Birth
UA	Unknown/Default Address
AL	Patient/Person Name is an Alias

Table 126: HL7 User Defined Table 0445 - Identity Reliability Code

5.13.25 *PID-35 - Species Code*

This field indicates the species of living organism. HL7 recommends SNOMED. If the field contains no value, a human is assumed.

5.13.26 *PID-36 - Breed Code*

This field indicates the specific breed of animal. This field is specific to animals and cannot be generally used for all living organisms. HL7 recommends SNOMED.

5.14 PR1 – Procedure Data

The procedure segment provides information regarding procedures that were (or are to be) performed on the patient and pertain to this referral.

This segment includes data about the personnel involved in the procedures. Personnel data should be communicated in ROL segments following PR1. Refer to the table below:

Seq	Element Name	Len	Type	Opt	Rpt	Table
1	Set ID	4	SI	O		
2	Obsolete (Procedure Coding Method)	3	IS	X		
3	Procedure Code	250	CE	R		
4	Obsolete (Procedure Description)	40	ST	X		
5	Procedure Date/Time	26	TS	R		
6	Procedure Functional Type	2	IS	O		Table 128
7	Procedure Minutes	4	NM	O		
8	Anaesthesiologist	250	XCN	X		
9	Anaesthesia Code	2	IS	O		
10	Anaesthesia Minutes	4	NM	O		
11	Obsolete (Surgeon)	250	XCN	X		
12	Obsolete (Procedure Practitioner)	250	XCN	X		
13	Consent Code	250	CE	O		
14	Procedure Priority	2	ID	O		Table 129
15	Associated Diagnosis Code	250	CE	O		
16	Procedure Code Modifier	250	CE	O	Y	
17	Procedure DRG Type	20	IS	O		Table 130
18	Tissue Type Code	250	CE	O	Y	Table 131

Table 127: PR1 Attribute Table – Procedure

5.14.1 *PR1-1 - Set ID*

This field is used to identify repeats of this segment within a message.

5.14.2 *PR1-3 - Procedure Code*

This field identifies the procedure performed. It is recommended that all three of code, description and coding system are supplied.

5.14.3 *PR1-5 - Procedure Date/Time*

This field contains the date and time that the procedure was performed, or is to be performed.

5.14.4 *PR1-6 - Procedure Functional Type*

This field contains the optional code that further defines the type of procedure. Use one of the following values from the table below:

Value	Description
A	Anaesthesia
P	Procedure for treatment (therapeutic, including operations)
I	Invasive procedure not classified elsewhere (e.g. IV, catheter, etc.)
D	Diagnostic procedure

Table 128: HL7 User Defined Table 0230 - Procedure Functional Type

5.14.5 *PR1-7 - Procedure Minutes*

This field indicates the length of time in whole minutes that the procedure took to complete.

5.14.6 *PR1-9 - Anaesthesia Code*

This field contains a unique identifier of the anaesthesia used during the procedure.

5.14.7 *PR1-10 - Anaesthesia Minutes*

This field contains the length of time in minutes that the anaesthesia was administered.

5.14.8 *PR1-13 - Consent Code*

This field contains the type of consent that was obtained for permission to treat the patient.

5.14.9 *PR1-14 - Procedure Priority*

This field contains a number that identifies the significance or priority of the procedure code. Use one of the following values from the table below:

Value	Description
0	The admitting procedure
1	The primary procedure
2….	For ranked secondary procedures

Table 129: HL7 Table 0418 - Procedure Priority

5.14.10 *PR1-15 - Associated Diagnosis Code*

This field contains the diagnosis that is the primary reason this procedure was performed.

5.14.11 *PR1-16 - Procedure Code Modifier*

This field contains the procedure code modifier to the procedure code reported in PR1-3, when applicable. procedure code modifiers are defined by regulatory agencies. Multiple modifiers may be reported.

5.14.12 *PR1-17 - Procedure DRG Type*

This field indicates a procedure's priority ranking relative to its Diagnosis Related Group Segment (DRG). Use one of the following values from the table below:

Value	Description
1	1st non-Operative
2	2nd non-Operative
3	Major Operative
4	2nd Operative
5	3rd Operative

Table 130: HL7 User Defined Table 0416 - Procedure DRG Type

5.14.13 *PR1-18 - Tissue Type Code*

This field is the code representing the type of tissue removed from a patient during this procedure. Use one of the following values from the table below:

Value	Description
1	Insufficient tissue
2	Not abnormal
3	Abnormal - not categorised
4	Mechanical abnormal
5	Growth alteration
6	Degeneration & necrosis
7	Non-acute inflammation
8	Non-malignant neoplasm
9	Malignant neoplasm
0	No tissue expected
B	Basal cell carcinoma
C	Carcinoma - unspecified type
G	Additional tissue required

Table 131: HL7 User Defined Table 0417 - Tissue Type Code

5.15 PRD – Provider Data

The provider segment identifies the providers associated with the transfer of this referral.

Example:

```
PRD|GP^Primary Care Provider^99NZPRRL~ PP^Primary
Provider^HL70286|Smith^A^^^Dr|^MidCentral
Med^Tauranga||||12345^NZMC~11AAAA^HI
```

Seq	Element Name	Len	Type	R/O	Rpt	Table
1	Provider Role	250	CE	R	Y	Table 132
2	Provider Name	250	XPN	O	Y	
3	Provider Address	250	XAD	O	Y	
4	Provider Location	60	PL	X		
5	Provider Communication Information	100	XTN	O	Y	
6	Preferred Method of Contact	250	CE	O		
7	Provider Identifiers	100	CM	O	Y	Table B 8
8	Effective Start Date of Role	26	TS	O		
9	Effective End Date of Role	26	TS	O		

Table 132: PRD Attribute Table - Provider

5.15.1 *PRD-1 - Provider Role*

Use one of the following values from the table below:

Value	Description
WCP	Well Child Provider
GP	Primary Care Provider (GP)
LMC	Lead Maternity Caregiver
RP	Discharging/Referring Provider
RT	Discharged to/Referred to Provider

Table 133: User Defined Table 99NZPRRL - Provider Role

Variance to HL7: *HL7 uses values from HL7 User Defined Table 0286 in this field.*

5.15.2 *PRD-2 - Provider Name*

This field contains the name of the provider identified in this segment.

5.15.3 *PRD-3 - Provider Address*

This field contains the mailing address of the provider identified in this segment.

5.15.4 *PRD-5 - Provider Communication Information*

This field contains information such as the phone number or email address used to communicate with the provider or organisation.

5.15.5 *PRD-6 - Preferred Method of Contact*

This field contains the preferred method to use when communicating with the provider.

5.15.6 *PRD-7 - Provider Identifiers*

This field contains the provider's unique identifiers. Refer to Table B 8 for allowed values.

5.15.7 *PRD-8 - Effective Start Date of Role*

This field contains the date that the role of the provider effectively began.

5.15.8 *PRD-9 - Effective End Date of Role*

This field contains the date that the role of the provider effectively ended.

5.16 PV1 – Patient Visit

This segment is used to communicate information on a visit or account specific basis.

Example:

```
PV1||O|Renal^1654^^^^Renal^South Wing^7^Tauranga
Hospital|R|||12347^Williams^K^M^^Dr^MED^^NZMC|||M60||||1|A0|||||||||||||||
||||||DR|||||||20051026091500|200510260111500
```

Seq	Element Name	Len	Type	Opt	Rpt	Table
1	Set ID	4	SI	O		
2	Patient Class	1	IS	R		Table 135
3	Assigned Patient Location	80	PL	O		Table 136
4	Admission Type	2	IS	O		Table 137
5	Pre-admit Number	250	CX	O		
6	Prior Patient Location	80	PL	O		
7	Attending Practitioner	250	XCN	O	Y	
8	Referring Practitioner	250	XCN	O	Y	
9	Consulting Practitioner	250	XCN	O	Y	
10	Health Specialty	3	IS	O		Table B 11
11	Temporary Location	80	PL	O		
12	Pre-admit Test Indicator	2	IS	O		
13	Readmission Indicator	2	IS	O		
14	Admit Source	6	IS	O		Table 138
15	Ambulatory Status	2	IS	O	Y	Table 139
16	VIP Indicator	2	IS	X		
17	Admitting Practitioner	250	XCN	O	Y	
18	Patient Type	2	IS	O		
19	Visit Number	250	CX	O		
20	Financial Class	50	FC	O	Y	Table 140
21	Charge Price Indicator	2	IS	X		
22	Courtesy Code	2	IS	X		
23	Credit Rating	2	IS	X		
24	Contract Code	2	IS	X	Y	
25	Contract Effective Date	8	DT	O	Y	
26	Contract Amount	12	NM	X	Y	
27	Contract Period	3	NM	O	Y	
28	Interest Code	2	IS	X		
29	Transfer to Bad Debt Code	1	IS	X		
30	Transfer to Bad Debt Date	8	DT	X		
31	Bad Debt Agency Code	10	IS	X		
32	Bad Debt Transfer Amount	12	NM	X		
33	Bad Debt Recovery Amount	12	NM	X		

Seq	Element Name	Len	Type	Opt	Rpt	Table
34	Delete Account Indicator	1	IS	X		
35	Delete Account Date	8	DT	X		
36	Discharge Disposition	3	IS	O		Table 141
37	Discharged to Location	25	CM	O		Table 142
38	Diet Type	250	CE	O		
39	Servicing Facility	2	IS	O		
40	Bed Status	1	IS	O		
41	Account Status	2	IS	O		
42	Pending Location	80	PL	O		
43	Prior Temporary Location	80	PL	O		
44	Admit Date/Time	26	TS	O		
45	Discharge Date/Time	26	TS	O	Y	
46	Current Patient Balance	12	NM	X		
47	Total Charges	12	NM	O		
48	Total Adjustments	12	NM	O		
49	Total Payments	12	NM	O		
50	Alternate Visit ID	250	CX	X		
51	Visit Indicator	1	IS	X		
52	Other Health Care Provider	250	XCN	O	Y	

Table 134: PV1 Attribute Table - Patient Visit

5.16.1 *PV1-1 - Set ID*

This field is used to identify repeats of this segment within a message. The first segment has a value of one ("1"). Numbering then increases incrementally for the next segment.

5.16.2 *PV1-2 - Patient Class*

This field is used by systems to categorise patients. Allowed values are in the table below:

Value	Description
E	Emergency
I	Inpatient
O	Outpatient
P	Pre-admit
B	Obstetrics
U	Unknown
N	Not Applicable

Table 135: HL7 User Defined Table 0004 - Patient Class

***NOTE**: This table is not comprehensive.*

5.16.3 *PV1-3 - Assigned Patient Location*

This field contains the patient's assigned location.

The information for status of the bed is in <location status>, the fifth component of the PL data type and supersedes PV1-40.

Value	Description
C	Closed
H	Housekeeping
O	Occupied
U	Unoccupied
K	Contaminated
I	Isolated

Table 136: HL7 User Defined Table 0116 - Bed Status

5.16.4 *PV1-4 - Admission Type*

This field indicates the circumstances under which the patient was or will be admitted.

Value	Description
A	Accident
E	Emergency
L	Labour and Delivery
R	Routine
N	Newborn (Birth in Health Care Facility)
U	Urgent
C	Elective

Table 137: HL7 User Defined Table 0007 - Admission Type

5.16.5 *PV1-5 - Pre-admit Number*

This field uniquely identifies the patient's pre-admit account. Some systems will continue to use the Pre-admit Number as the billing number after the patient has been admitted. To maintain backward compatibility, a ST data type may be sent. However, HL7 recommends use of the CX data type, such as the account number, for new implementations. 'Assigning authority' and 'identifier' type codes are strongly recommended for all CX data types.

5.16.6 *PV1-6 - Prior Patient Location*

This field contains the prior patient location if the patient is being transferred. The old location is null if the patient is new.

5.16.7 *PV1-7 - Attending Practitioner*

This field contains the attending practitioner information.

5.16.8 *PV1-8 - Referring Practitioner*

This field contains the referring practitioner information.

5.16.9 *PV1-9 - Consulting Practitioner*

This field has been retained to maintain backward compatibility. ROL (role segment field) for consulting physicians shall be used instead. Refer to Chapter 5.19.

5.16.10 *PV1-10 - Health Specialty*

This field contains the treatment or type of surgery that the patient is scheduled to receive. Refer to Table B 11 for valid types.

5.16.11 *PV1-11 - Temporary Location*

This field contains a location other than the assigned location, if required for a temporary period of time (e.g. OR, operating theatre etc.).

5.16.12 *PV1-12 - Pre-admit Test Indicator*

This field indicates whether the patient must have pre-admission testing done in order to be admitted.

5.16.13 *PV1-13 - Readmission Indicator*

This field indicates that a patient is being re-admitted to the healthcare facility and gives the circumstances. It is suggested that "R" for re-admission is used, otherwise null.

5.16.14 *PV1-14 - Admit Source*

This field indicates where the patient was admitted. Refer to the table below:

Value	Description
1	Physician referral
2	Clinic referral
3	HMO referral
4	Transfer from a hospital
5	Transfer from a skilled nursing facility
6	Transfer from another health care facility
7	Emergency room
8	Court/law enforcement
9	Information not available

Table 138: HL7 User Defined Table 0023 - Admit Source

5.16.15 *PV1-15 - Ambulatory Status*

This field indicates permanent or transient ambulatory status. Refer to the table below:

Value	Description
A0	No functional limitations
A1	Ambulates with assistive device
A2	Wheelchair/stretcher bound
A3	Comatose; non-responsive
A4	Disoriented
A5	Vision impaired
A6	Hearing impaired
A7	Speech impaired

Value	Description
A8	Non-English speaking
A9	Functional level unknown
B1	Oxygen therapy
B2	Special equipment (tubes, IVs, catheters)
B3	Amputee
B4	Mastectomy
B5	Paraplegic
B6	Pregnant

Table 139: HL7 User Defined Table 0009 - Ambulatory Status

Variance to HL7: *HL7 uses the term 'transient handicapped condition'.*

5.16.16 *PV1-17 - Admitting Practitioner*

This field contains the admitting physician information. Multiple names and identifiers for the same physician may be sent. The field sequences are not used to indicate multiple admitting practitioners. The legal name must be sent in the first sequence. If the legal name is not sent, then a repeat delimiter must be sent in the first sequence. By local agreement, the name or ID may be absent in this field.

5.16.17 *PV1-18 - Patient Type*

This field contains site-specific values that identify patient type. No suggested values are defined.

5.16.18 *PV1-19 - Visit Number*

This field contains the unique number assigned to each patient visit/encounter.

5.16.19 *PV1-20 - Financial Class*

This field contains the financial class(es) assigned to the patient for the purpose of identifying sources of reimbursement. Refer to the table below for suggested values:

Value	Description
01	ACC
02	Private health insurance
03	Self-funded
04	Clinical trial
05	Public funded
06	Other

Table 140: HL7 User Defined Table 0064 - Financial Class

5.16.20 *PV1-25 - Contract Effective Date*

This field contains the date that the contract is to start, or has started.

5.16.21 *PV1-27 - Contract Period*

This field specifies the duration of the contract for user defined periods.

5.16.22 *PV1-36 - Discharge Disposition*

This field contains the disposition of the patient at time of discharge.

Value	Description
DA	Discharge to acute specialist facility (neonates and burns only).
DC	Psychiatric patient discharged to community care.
DD	Died.
DF	Statistical discharge for change in funder.
DI	Self discharge from hospital, indemnity signed.
DL	Committed psychiatric patient discharged to leave for more than 10 days.
DN	Psychiatric remand patient discharged without committal.
DO	Discharge of a patient for organ donation.
DP	Psychiatric patient transferred for further psychiatric care.
DR	Ended routinely.
DS	Self discharge from hospital (no indemnity).
DT	Discharge of non-psychiatric patient to another health care facility.
DW	Discharge to other service within same facility between the following specialties: Advanced Therapy & Rehabilitation (AT&R), mental health, obstetrics, and personal health. Not to be used for transfer between surgical and medical.

Table 141: User Defined 99NZDIS - Discharge Disposition

5.16.23 *PV1-37 - Discharged to Location*

This field indicates the health care facility to which the patient was discharged.

Component	Type	Notes
<discharge location>	IS	Table 143
<effective date>	TS	

Table 142: PV1-37 Discharged to Location Components

Value	Description
FXXNNN	Facility Identifier as defined by the HPI

Table 143: HL7 User Defined Table 0113 – Discharged to Location

5.16.24 *PV1-38 - Diet Type*

This field indicates a special diet type for a patient.

5.16.25 *PV1-39 - Servicing Facility*

This field is used in a multiple facility environment to indicate the health care facility with which this visit is associated.

An optional sixth component, the facility ID, may be entered in each field in PV1, instead of recording it in PV1-39.

5.16.26 *PV1-40 - Bed Status*

This field has been retained for backward compatibility. It is superseded by the fifth component of PV1-3, <location status>.

5.16.27 *PV1-41 - Account Status*

This field contains the account status.

5.16.28 *PV1-42 - Pending Location*

This field indicates the point of care, room, bed, health care facility ID, and bed status to which the patient may be moved. The first component may be the nursing station for inpatient locations, or the clinic, department, or home for locations other than inpatient.

5.16.29 *PV1-43 - Prior Temporary Location*

This field is used to reflect the patient's temporary location (such as the operating room/theatre or x-ray), prior to a transfer from a temporary location to an actual location, or from a temporary location to another temporary location. The first component may be the nursing station for inpatient locations, or the clinic, department, or home for locations other than inpatient.

5.16.30 *PV1-44 - Admit Date/Time*

This field contains the admit date/time of a patient.

5.16.31 *PV1-45 - Discharge Date/Time*

This field contains the discharge date/time of a patient.

5.16.32 *PV1-47 - Total Charges*

This field contains the total visit charges.

5.16.33 *PV1-48 - Total Adjustments*

This field contains the total adjustments for visit.

5.16.34 *PV1-49 - Total Payments*

This field contains the total payments for visit.

5.16.35 *PV1-52 - Other Health Care Providers*

This field has been retained to maintain backward compatibility. Use ROL (role segment field) to communicate providers not specified elsewhere.

5.17 PV2 – Patient Visit Additional Information

The PV2 segment is a continuation of information contained on the PV1 segment. Refer to the table below:

Seq	Element name	Len	Type	Opt	Rpt	Table
1	Prior Pending Location	80	PL	C		
2	Accommodation Code	250	CE	O		
3	Admit Reason	250	CE	O		
4	Transfer Reason	250	CE	O		
5	Patient Valuables	25	ST	O	Y	
6	Patient Valuables Location	25	ST	O		
7	Visit User Code	2	IS	O	Y	Table 145
8	Expected Admit Date/Time	26	TS	O		
9	Expected Discharge Date/Time	26	TS	O		
10	Estimated Length of InPatient Stay	3	NM	O		
11	Actual Length of InPatient Stay	3	NM	O		
12	Visit Description	50	ST	O		
13	Referral Source Code	250	XCN	O	Y	
14	Previous Service Date	8	DT	O		
15	Employment Illness Related Indicator	1	ID	O		Table 15
16	Purge Status Code	1	IS	O		Table 146
17	Purge Status Date	8	DT	O		
18	Special Program Code	2	IS	O		
19	Retention Indicator	1	ID	O		Table 15
20	Expected Number of Insurance Plans	1	NM	O		
21	Visit Publicity Code	1	IS	O		
22	Visit Protection Indicator	1	ID	O		Table 15
23	Clinic Organisation Name	250	XON	O	Y	
24	Patient Status Code	2	IS	O		
25	Visit Priority Code	1	IS	O		Table 147
26	Previous Treatment Date	8	DT	O		
27	Expected Discharge Disposition	2	IS	X		
28	Signature on File Date	8	DT	O		
29	First Similar Illness Date	8	DT	O		
30	Patient Charge Adjustment Code	250	CE	O		
31	Recurring Service Code	2	IS	O		
32	Billing Media Code	1	ID	O		
33	Expected Surgery Date	26	TS	O		

Seq	Element name	Len	Type	Opt	Rpt	Table
	and Time					
34	Military Partnership Code	1	ID	X		
35	Military Non-Availability Code	1	ID	X		
36	Newborn Baby Indicator	1	ID	O		Table 15
37	Baby Detained Indicator	1	ID	O		Table 15
38	Mode of Arrival Code	250	CE	O		Table 148
39	Recreational Drug Use Code	250	CE	O	Y	Table 149
40	Admission Level of Care Code	250	CE	O		Table 150
41	Precaution Code	250	CE	O	Y	Table 151
42	Patient Condition Code	250	CE	O		Table 152
43	Living Will Code	2	IS	O		Table 153
44	Organ Donor Code	2	IS	O		Table 154
45	Advance Directive Code	250	CE	O	Y	Table 155
46	Patient Status Effective Date	8	DT	O		
47	Expected Leave of Absence Return Date/Time	26	TS	C		

Table 144: PV2 Attribute Table - Patient Visit Additional Information

5.17.1 *PV2-1 - Prior Pending Location*

This field is required for cancel pending transfer (A26) messages. In all other events it is optional.

5.17.2 *PV2-2 - Accommodation Code*

This field indicates the specific accommodations for this patient visit.

5.17.3 *PV2-3 - Admit Reason*

This field contains the short description of the reason for patient admission.

5.17.4 *PV2-4 - Transfer Reason*

This field contains the short description of the reason for a patient location change.

5.17.5 *PV2-5 - Patient Valuables*

This field contains the short description of patient valuables checked in during admission.

5.17.6 *PV2-6 - Patient Valuables Location*

This field indicates the location of the patient's valuables.

5.17.7 *PV2-7 - Visit User Code*

This field further categorises a patient's visit with respect to an individual institution's needs, and is expected to be site-specific. Refer to the table below:

Value	Description
TE	Teaching
HO	Home
MO	Mobile Unit
PH	Phone

Table 145: HL7 User Defined Table 0130 - Visit User Code

5.17.8 *PV2-8 - Expected Admit Date/Time*

This field contains the date and time that the patient is expected to be admitted. This field is also used to reflect the date/time of an outpatient/emergency patient registration.

5.17.9 *PV2-9 - Expected Discharge Date/Time*

This field contains the date and time that the patient is expected to be discharged. This field is also used to reflect the anticipated discharge date/time of an outpatient/emergency patient, or an inpatient. It may be used by ancillaries to determine projected workloads more accurately.

5.17.10 *PV2-10 - Estimated Length of Inpatient Stay*

This field contains the estimated length of inpatient stay, in days.

5.17.11 *PV2-11 - Actual Length of Inpatient Stay*

This field contains the actual length of inpatient stays, in days. The actual length of the inpatient stay may not be calculable from the admission and discharge dates because of possible leaves of absence.

5.17.12 *PV2-12 - Visit Description*

This field contains a brief user defined description of the visit.

5.17.13 *PV2-13 - Referral Source Code*

This field contains the name and the identification numbers of the person or organisation that made the referral. This person/organisation is not the same as the referring practitioner.

5.17.14 *PV2-14 - Previous Service Date*

This field contains the date of previous service for the same recurring condition. This may be a required field for billing around certain illnesses (e.g. accident related) to a third party.

5.17.15 *PV2-15 - Employment Illness Related Indicator*

This field specifies whether a patient's illness was job-related. Refer to Table 15.

5.17.16 *PV2-16 - Purge Status Code*

This field contains the purge status code for the account. It is used by the application programme to determine purge processing. Refer to the table below:

Value	Description
P	Marked for purge. User is no longer able to update the visit.
D	The visit is marked for deletion and the user shall not enter new data against it.
I	The visit is marked inactive and the user shall not enter new data against it.

Table 146: HL7 User Defined Table 0213 - Purge Status Code

5.17.17 *PV2-17 - Purge Status Date*

This field contains the date on which the data will be purged from the system.

5.17.18 *PV2-18 - Special Programme Code*

This field designates the specific health insurance programme for a visit required for health care reimbursement. For example, “Child Health Assistance”, “Elective Surgery Program”, “Family Planning”, etc.

5.17.19 *PV2-19 - Retention Indicator*

This field allows the user to control the financial and demographic purge processes at the visit. It is used to preserve demographic and financial data on specific, high priority visits. Refer to Table 15.

5.17.20 *PV2-20 - Expected Number of Insurance Plans*

This field contains the number of insurance plans that may provide coverage for this visit.

5.17.21 *PV2-21 - Visit Publicity Code*

This field contains a user defined code indicating what level of publicity is allowed (e.g. “No Publicity”, “Family Only”), for a specific visit.

5.17.22 *PV2-22 - Visit Protection Indicator*

This field identifies the patient’s protection. This determines, in turn, whether access to information about this patient should be kept from unauthorised users, for a specific visit. Refer to Table 15.

5.17.23 *PV2-23 - Clinic Organisation Name*

This field contains the organisation name or sub-unit and identifier associated with the (visit) episode of care.

5.17.24 *PV2-24 - Patient Status Code*

This field indicates the status of the episode of care.

5.17.25 *PV2-25 - Visit Priority Code*

This field identifies the priority of the visit. Refer to the table below:

Value	Description
1	Emergency
2	Urgent
3	Elective

Table 147: HL7 User Defined Table 0217 - Visit Priority Code

5.17.26 *PV2-26 - Previous Treatment Date*

This field contains the date that the patient last had treatment for any condition prior to this visit.

5.17.27 *PV2-28 - Signature on File Date*

This field contains the date on which a signature was obtained for insurance billing purposes.

5.17.28 *PV2-29 - First Similar Illness Date*

This field is used to determine if the patient has a pre-existing condition.

5.17.29 *PV2-30 - Patient Charge Adjustment Code*

This field contains a user defined code indicating any adjustments that should be made to this patient's charges.

5.17.30 *PV2-31 - Recurring Service Code*

This field indicates whether the treatment is continuous.

5.17.31 *PV2-32 - Billing Media Code*

This field indicates if the account is to be rejected from tape billing.

5.17.32 *PV2-33 - Expected Surgery Date and Time*

This field contains the date and time on which the surgery is expected to occur.

5.17.33 *PV2-36 - Newborn Baby Indicator*

This field indicates whether the patient is a baby. Refer to Table 15.

5.17.34 *PV2-37 - Baby Detained Indicator*

This field indicates if the baby is being detained after the mother's discharge. Refer to Table 15.

5.17.35 *PV2-38 - Mode of Arrival Code*

Identifies how the patient was brought to the health care facility. Refer to the table below:

Value	Description
A	Ambulance
C	Car
F	On foot
H	Helicopter
P	Public transport
O	Other
U	Unknown

Table 148: HL7 User Defined Table 0430 - Mode of Arrival Code

5.17.36 *PV2-39 - Recreational Drug Use Code*

This field indicates what recreational drugs the patient uses. It is used for the purpose of room assignment. Refer to the table below:

Value	Description
A	Alcohol
K	Kava
M	Marijuana
T	Tobacco - smoked
C	Tobacco - chewed
O	Other
U	Unknown

Table 149: HL7 User Defined Table 0431 - Recreational Drug Use Code

5.17.37 *PV2-40 - Admission Level of Care Code*

This field indicates the acuity level assigned to the patient at the time of admission. Refer to the table below:

Value	Description
AC	Acute
CH	Chronic
CO	Comatose
CR	Critical
IM	Improved
MO	Moribund

Table 150: HL7 User Defined Table 0432 - Admission Level of Care Code

5.17.38 *PV2-41 - Precaution Code*

This field indicates non-clinical precautions that need to be taken with the patient. Refer to the table below:

Value	Description
A	Aggressive
B	Blind
C	Confused
D	Deaf
I	On IV
P	Paraplegic
O	Other
U	Unknown

Table 151: HL7 User Defined Table 0433 - Precaution Code

5.17.39 *PV2-42 - Patient Condition Code*

This field indicates the patient's current medical condition for the purpose of communicating with non-medical outside parties, e.g. family, employer, religious minister, media, etc. Refer to the table below:

Value	Description
A	Satisfactory
C	Critical
P	Poor
O	Other
U	Unknown

Table 152: HL7 User Defined Table 0434 - Patient Condition Code

5.17.40 *PV2-43 - Living Will Code*

This field indicates whether or not the patient has a living will and if so, whether a copy of the living will is on file at the health care facility. If the patient does not have a living will, the value of this field indicates whether the patient was provided with information on living wills. Refer to the table below:

Value	Description
Y	Yes, patient has a living will and it is on file
F	Yes, patient has a living will but it is not on file
N	No, patient does not have a living will and no information was provided
I	No, patient does not have a living will but information was provided
U	Unknown

Table 153: HL7 User Defined Table 0315 - Living Will Code

5.17.41 *PV2-44 - Organ Donor Code*

This field indicates whether the patient wants to donate his/her organs and whether an organ donor card or similar documentation is on file with the health care organisation. Refer to the table below:

Value	Description
Y	Yes, patient is a documented donor and documentation is on file
F	Yes, patient is a documented donor, but documentation is not on file
N	No, patient has not agreed to be a donor
I	No, patient is not a documented donor, but information was provided
R	Patient leaves organ donation decision to relatives
P	Patient leaves organ donation decision to a specific person
U	Unknown

Table 154: HL7 User Defined Table 0316 - Organ Donor Code

5.17.42 *PV2-45 - Advance Directive Code*

This field indicates the patient's instructions to the health care facility:

Value	Description
Y	Yes, patient has an Advance Directive and it is on file
F	Yes, patient has an Advance Directive and it is not on file
N	No, patient does not have an Advance Directive and no information has been provided
I	No, patient does not have an Advance Directive but information was provided
U	It is not known if the patient has an Advance Directive

Table 155: User Defined Table 0435 - Advance Directive Code

5.17.43 *PV2-46 - Patient Status Effective Date*

This field indicates the effective date for PV2-24 (patient status field).

5.17.44 *PV2-47 - Expected Leave of Absence Return Date/Time*

This field contains the date/time that the patient is expected to return from LOA. This field, when populated, is associated with a number of event triggers. These include A21 - Patient Goes on Leave of Absence; A22 - Patient Returns from LOA; A53 - Cancel LOA for a Patient; and A54 - Cancel Patient Returns from LOA. A full list of event types can be found Table B 3.

5.18 RF1 – Referral Information

This segment represents information that is used when sending referrals from the referring health care provider to the referred to health care provider.

Example:

```
RF1||R^Routine^HL70280||FI^FYI – No Action requested^HL70282|
|HnetR100029||||E^Event Summary^HL70336<cr>
```

Seq	Element Name	Len	Type	R/O	Rpt	Table
1	Referral Status	250	CE	O		Table 157
2	Referral Priority	250	CE	O		Table 158
3	Referral Type	250	CE	O		Table 159
4	Referral Disposition	250	CE	O	Y	Table 160
5	Referral Category	250	CE	X		
6	Originating Referral Identifier	30	EI	R		
7	Effective Date	26	TS	O		
8	Expiration Date	26	TS	X		
9	Process Date	26	TS	X		
10	Referral Reason	250	CE	O	Y	Table 161
11	External Referral Identifier	30	EI	O	Y	

Table 156: RF1 Attribute Table – Referral Information

5.18.1 *RF1-1 - Referral Status*

Use one of the following values from the table below. Usually this will be “P” in the REF message and “A” in the RRI message. However, for FYI referrals (FI in RF1-4), this field should be left blank. Use “F” to indicate that the referral has been completed.

Example:

```
RF1|P^Pending^HL70283|R^Routine^HL70280|...
```

Value	Description
P	Pending
A	Accepted
R	Rejected
E	Expired
C	Cancelled
F	Final

Table 157: HL7 User Defined Table 0283 - Referral Status

5.18.2 *RF1-2 - Referral Priority*

Use one of the following values from the table below. This will normally be “R”.

Example:

```
RF1|P^Pending^HL70283|R^Routine^99NZPriority|...
```

Value	Description
R	Routine
S	Semi Urgent
U	Urgent

Table 158: User Defined 99NZPriority - Referral Priority

5.18.3 *RF1-3 - Referral Type*

This field contains the type of referral. Refer to the values in the table below:

Example:

```
RF1|P^Pending^HL70283|R^Routine^HL70280| MED^Medical^HL70281|...
```

Value	Description
CAN	Cancellation
MED	Medical
SKN	Skilled Nurse
PSY	Psychiatric
HOM	Home Care
GRF	General Referral
DRF	Discharge Referral
SCU	Shared Care Update
NOT	Notification
DIS	Discharge Summary
DNA	Did not Attend
SRP	Status Report
SEU	Shared EHR Update
DSU	Decision Support System Update
APT	Appointment Details
CLN	Clinic Note

Table 159: HL7 User Defined Table 0281 - Referral Type

5.18.4 *RF1-4 - Referral Disposition*

This field identifies the type of response or action that the referring provider would expect from the referred-to provider. Use the table below:

Example:

```
RF1||R^Routine^HL70280||FI^FYI – No action requested^HL70282|...
```

Value	Description
WR	Send Written Report
RP	Return Patient after Evaluation
AM	Assume Management
SO	Second Opinion
TO	Third or Further Opinion
DS	Discharge Summary
FI	For Your Information; No Action Requested
SC	Share Care
CC	Case Conference
UCP	Update Care Plan
UHR	Update Health Record
CAN	Cancellation

Table 160: HL7 User Defined Table 0282 - Referral Disposition

5.18.5 *RF1-6 - Originating Referral Identifier*

This field identifies the ID assigned to the referral by the system that sent it. This should be a unique ID for the referral, combined with a unique identifier for the sending site itself.

It has been noted that some systems (particularly hospital discharges) use the identifier of the referral that led to the care being transferred to this system in the first place. This usage is not correct. A practitioner referring a patient to a hospital is a separate act to the referral back to the practitioner and needs to be treated as such by all parties involved in the transaction. In the case of a discharge this is the unique identifier of the discharge itself.

Example:

```
RF1||R^Routine^HL70280||FI^FYI – No Action requested^HL70282|
|HCR100029|...
```

5.18.6 *RF1-7 - Effective Date*

This field contains the date on which the referral is effective.

5.18.7 *RF1-10 - Referral Reason*

This field contains the reason for the referral/event summary. Refer to the table below:

Value	Description
S	Second Opinion
P	Patient Preference
O	Provider Ordered
W	Workload
T	Third or Further Opinion
E	Event Summary
F	For your Information

Table 161: HL7 User Defined Table 0336 - Referral Reason

Variances to HL7:

1. This field may repeat as many times as necessary to communicate all referred reasons.

2. The values "T", "E" and "F" have been added to the standard HL7 table for local usage.

5.18.8 *RF1-11 - External Referral Identifier*

This field contains an external application's permanent identifier for the referral. That is, this referral identifier does not belong to the application that originated the referral and assigned the originating referral identifier.

5.19 ROL – Role Segment

This segment contains the data necessary to add, update, correct, and delete from the record persons involved, and the nature of their involvement, with the activity being transmitted.

Seq	Element Name	Len	Type	R/O	Rpt	HL7 Table
1	Role Instance ID	60	EI	C		
2	Action Code	2	ID	R		Table 163
3	Role-ROL	250	CE	R		Table 164
4	Role Person	250	XCN	R	Y	
5	Role Begin Date/Time	26	TS	O		
6	Role End Date/Time	26	TS	O		
7	Role Duration	250	CE	O		
8	Role Action Reason	250	CE	O		
9	Provider Type	250	CE	O	Y	
10	Organisation Unit Type	250	CE	O		Table 165
11	Office/Home Address	250	XAD	O	Y	
12	Phone	250	XTN	O	Y	

Table 162: ROL Attribute Table - Role Segment

5.19.1 *ROL-1 - Role Instance ID*

This field contains a unique identifier of the specific role record. This field is required when used for patient care messages and optional if used for finance messages.

5.19.2 *ROL-2 - Action Code*

This field reveals the intent of the message. Refer to the table below:

Value	Description
AD	Add
CO	Correct
DE	Delete
LI	Link
UC	Unchanged
UN	Unlink
UP	Update

Table 163: HL7 Table 0287 Problem/Goal Action Code

NOTE: *The 'unchanged' action code is used to signify to the applications programs that this particular segment includes no information to be modified. It is supplied in order to identify the correct record for which the following modification is intended.*

5.19.3 *ROL-3 - Role-ROL*

This field indicates the functional involvement with the activity being transmitted. Refer to the table below:

Value	Description	Used with
AD	Admitting	PV1-17 Admitting Practitioner
AT	Attending	PV1-7 Attending Practitioner
CP	Consulting Provider	
FHCP	Family Health Care Professional	
PP	Primary Care Provider	
RP	Referring Provider	PV1-8 Referring Practitioner
RT	Referred to Provider	

Table 164: HL7 User Defined Table 0443 - Provider Role

5.19.4 *ROL-4 - Role Person*

This field identifies the person who is assuming the role that is being transmitted.

5.19.5 *ROL-5 - Role Begin Date/Time*

This field contains the date/time when the role began.

5.19.6 *ROL-6 - Role End Date/Time*

This field contains the date/time when the role ended.

5.19.7 *ROL-7 - Role Duration*

This field contains a description of the duration of a role (e.g. “until the next assessment”, “four days”, “until discharge”, etc.).

5.19.8 *ROL-8 - Role Action Reason*

This field indicates the reason why the person is assuming (or changing) the role (e.g. “shift change”, “new primary nurse”, etc.).

5.19.9 *ROL-9 - Provider Type*

This field contains a code identifying the provider type.

5.19.10 *ROL-10 - Organisation Unit Type*

This field identifies the environment in which the provider acts in the role specified in ROL-3. This field is included to support international requirements, and is not intended as a master file update. Refer to the table below:

Value	Description
H	Home
O	Office
1	Hospital
2	Physician Clinic
3	Long Term Care
4	Acute Care
5	Other

Table 165: HL7 User Defined Table 0406 - Organisation Unit Type

5.19.11 *ROL-11 - Office/Home Address*

This field contains the office address and home address of the provider. This is a repeating field, included to support international requirements. It is not intended as a master file update.

5.19.12 *ROL-12 - Phone*

This field contains the provider's phone number. This field is included in this segment to support international requirements, and is not intended as a master file update.

5.20 RXA – Pharmacy/Treatment Administration Segment

The RXA Segment is optional in the pharmacy order segment group. Its function is to include start and end dates and other information relevant to medication administration. The table below contains a description of the relevant fields:

Seq	Element Name	Len	Type	R/O	Rpt	Table
1	Give Sub-ID Counter	4	NM	R		
2	Administration Sub-ID Counter	4	NM	R		
3	Date/Time Start of Administration	26	TS	R		
4	Date/Time End of Administration	26	TS	R		
5	Administered Code	250	CE	O		
6	Administered Amount	20	NM	O		
7	Administered Units	250	CE	X		
8	Administered Dosage Form	250	CE	X		
9	Administration Notes	250	CE	X	Y	
10	Administering Provider	250	XCN	X	Y	
11	Administered-at Location	200	CM	X		
12	Administered Per (Time Unit)	20	ST	X		
13	Administered Strength	20	NM	X		
14	Administered Strength Units	250	CE	X		
15	Substance Lot Number	20	ST	X	Y	
16	Substance Expiration Date	26	TS	X	Y	
17	Substance Manufacturer Name	250	CE	X	Y	
18	Substance/Treatment Refusal Reason	250	CE	X	Y	
19	Indication	250	CE	X	Y	
20	Completion Status	2	ID	X		
21	Action Code-RXA	2	ID	X		
22	System Entry Date/Time	26	TS	X		

Table 166: RXA Attribute Table - Pharmacy/Treatment Administration

***Variance to HL7**: For this implementation, RXA-5 and RXA-6 are optional, whereas segments RXA-5 and RXA-6 are mandatory in HL7.*

5.20.1 *RXA-1 - Give Sub-ID Counter*

Use this field if matching this RXA segment to its corresponding RXG segment. This Standard does not use the RXG segment so the value is always zero(“0”).

5.20.2 *RXA-2 - Administration Sub-ID Counter*

This field starts with one (“1”) the first time that medication/treatment is administered for this order and increases by one with each additional administration of medication/treatment.

5.20.3 *RXA-3 - Date/Time Start of Administration*

The date and time this administration commenced. If the dosage rate was changed in the case of an IV, for example, then a further RXA segment would be provided.

5.20.4 *RXA-4 - Date/time End of Administration (if applicable)*

Example:

```
RXA|0|1|20051019091500|20051019091530
```

If null, the date/time of the RXA-3 field for the start of administration is assumed.

5.20.5 *RXA-5 - Administered Code*

This field contains the identifier of the medical substance/treatment administered. It is equivalent to OBR-4 in function. Refer to Table B 5 for valid values.

5.20.6 *RXA-6 - Administered Amount*

Example:

```
RXA|0|1|20051019091500|20051019091530|43^Hep B,adult^HL70292|1.....
```

This field contains the amount administered.

5.21 RXC – Pharmacy/Treatment Component

This segment should only be sent if the prescribed item is a specially mixed compound. In that case send one RXC segment for each component. Refer to the table below

Seq	Element Name	Len	Type	R/O	Rpt	Table
1	RX Component Type	1	ID	R		Table 168
2	Component Code	250	CE	R		
3	Component Amount	20	NM	R		
4	Component Units	250	CE	R		
5	Component Strength	20	NM	O		
6	Component Strength Units	250	CE	O		
7	Supplementary Code	250	CE	O	Y	

Table 167: RXC Attribute Table - Pharmacy/Treatment Component Details

5.21.1 *RXC-1 - Component Type*

Value	Description
A	Additive component
B	Base component

Table 168: HL7 Table 0166 - RX Component Type

NOTE: *This field is required.*

5.21.2 *RXC-2 - Component Code*

This is the code that identifies the component in the mixture.

NOTE: *This field is required.*

5.21.3 *RXC-3 - Component Amount*

This field identifies the amount of the component to be added to the base. If this component is the base then it specifies the amount of base to start with.

NOTE: *This field is required.*

5.21.4 *RXC-4 - Component Amount Units*

This field identifies the units of the value in RXC-3.

NOTE: *This field is required.*

5.21.5 *RXC-5 - Component Strength*

Use when RXC-2 does not specify the strength. This is a numerical value for the strength. Use in combination with RXC-6.

5.21.6 *RXC-6 - Component Strength Units*

Use when RXC-2 does not specify the strength. This is a unit value for the strength. Use in combination with RXC-5.

5.21.7 *RXC-7 - Supplementary Code*

This field accommodates any codes that might be associated with pharmaceuticals or other substances used in treatment.

5.22 RXO – Pharmacy/Treatment Order

Example:

```
RXO|^Aspirin^L|1||^100 Mg^L|^Tab^L|^Aspirin 100 Mg Tab SIGS : 100mg, In
the morning Scripts requested Stat QTY: 1^L|||N
```

This is the 'master' pharmacy/treatment order segment. It contains order data not specific to components or additives. Unlike the OBR, it does not contain status fields or other data that are results-only.

Seq	Element Name	Len	Type	R/O	Rpt	Table
1	Requested Give Code	250	CE	C		
2	Requested Give Amount Minimum	20	NM	C		
3	Requested Give Amount Maximum	20	NM	O		
4	Requested Give Units	250	CE	C		
5	Requested Dosage Form	250	CE	C		
6	Provider's Pharmacy/Treatment Instructions	250	CE	O	Y	
7	Provider's Administration Instructions	250	CE	O	Y	
8	Deliver to Location	200	CM	O		Table 170
9	Allow Substitutions	1	ID	O		Table 171
10	Requested Dispense Code	250	CE	O		
11	Requested Dispense Amount	20	NM	O		
12	Requested Dispense Units	250	CE	O		
13	Number of Refills	3	NM	O		
14	Ordering Provider's Authorisation Number	250	XCN	O	Y	
15	Pharmacist/Treatment Suppliers Verifier ID	250	XCN	O	Y	
16	Needs Human Review	1	ID	O		Table 172
17	Requested Give Per Time Unit	20	ST	C		
18	Requested Give Strength	20	NM	O		
19	Requested Give Strength Units	250	CE	O		
20	Indication	250	CE	O	Y	
21	Requested Give Rate Amount	6	ST	O		
22	Requested Give Rate Units	250	CE	O		
23	Total Daily Dose	10	CQ	O		
24	Supplementary Code	250	CE	O	Y	

Table 169: RXO Attribute Table - Pharmacy/Treatment Order

NOTE: *This implementation follows HL7 in allowing for free text orders to be sent in the second component of RXO-6. If the system uses free text, then RXO-1, RXO-2 and RXO-4 should not contain values. Alternatively, if the information on the substance, amount and units are not provided in RXO-6, then RXO-1, RXO-2 and RXO-4 are required.*

5.22.1 *RXO-1 - Requested Give Code*

This field contains the details of the prescribed item. It is mandatory, unless the drug is identified in RXO-6, in which case it is left blank.

5.22.2 *RXO-2 - Requested Give Amount - Minimum*

This field contains the ordered amount. In a variable dose order, this is the minimum ordered amount. In a non-varying dose order, this is the exact amount of the order.

This field is mandatory unless the prescription/treatment is transmitted as free text using RXO-6, in which case this field may be left blank.

> ***NOTE:*** *This field is not a duplication of the first component of the quantity/timing field, since in non-pharmacy/treatment orders, that component may be used to specify multiples of an ordered amount.*

5.22.3 *RXO-3 - Requested Give Amount - Maximum*

In a variable dose order, this is the maximum ordered amount. In a non-varying dose order, this field is not used.

5.22.4 *RXO-4 - Requested Give Units*

This field indicates the units for the give amount.

This field is mandatory unless the prescription/treatment is transmitted as free text using RXO-6, in which case this field may be left blank.

> ***NOTE:*** *These units may be a 'compound quantity'; i.e. the units may contain the word "per." For example, micrograms per KG (micg/kg) is an acceptable value, which means that the units are micrograms per KG (of body weight). Refer to Table B 6.*

5.22.5 *RXO-5 - Requested Dosage Form*

This field indicates the physical form of the medical substance, e.g. syrup, tablets, etc. Required when both RXO-1 and RXO-10 do not specify the form of the drug/treatment. Otherwise, this field is optional.

5.22.6 *RXO-6 - Provider's Pharmacy Treatment Instructions*

Example:

```
|^this is a free text administration instruction|.
```

This field contains any instructions that the ordering provider wishes to give to the pharmacist or the non-pharmacist treatment provider, e.g. respiratory therapy. This may be either coded or free text. If transmitted as free text, place a null in the first component and the text in the second.

If the prescription is transmitted as free text using RXO-6, then RXO-1, RXO-2, and RXO-4 may be blank. The first sub component of RXO-6 must be blank.

This field may repeat as many times as necessary to communicate the instructions.

5.22.7 *RXO-7 - Provider's Administration Instructions*

Example:

```
|^this is a free text administration instruction|.
```

This field identifies the ordering provider's instructions to the patient or to the provider administering the drug or treatment. This may be either coded or free text. If transmitted as free text, place a null in the first component and the text in the second component.

5.22.8 *RXO-8 - Deliver-to Location*

The first components, modeled after the PL data type, contain the inpatient or outpatient location to which the pharmacy provider or treatment supplier will deliver the drug or treatment device (if applicable). The default (null) value is the current census location for the patient. This component has the same form as PV1-3-assigned patient location

Component	Type	Notes
<point of care>	IS	Conditional on person location type (e.g. nursing unit, department, clinic). After <floor>, the most general patient location designation.
<room>	IS	Patient room. After <point of care>, the most general person location designation.
<bed>	IS	Patient bed. After <room>, the most general person location designation.
<facility>	HD	Subject to site interpretation, but generally describes the highest level physical designation of an institution, medical centre or enterprise.
<location status>	IS	Location (e.g. bed) status.
<person location type >	IS	Categorisation 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. Refer to Table 40.
<building>	IS	After <facility>, the most general person location designation.
<floor>	IS	After <building>, the most general person location designation.
<address>	AD	

Table 170: RXO-8 Deliver to Location Components

5.22.9 *RXO-9 - Allow Substitutions*

Refer to the table below for allowed values:

Value	Description
N	Substitutions are NOT authorised (This is the default - null)
G	Allow generic substitutions
T	Allow therapeutic substitutions

Table 171: HL7 Table 0161 - Allow Substitutions

5.22.10 *RXO-10 - Requested Dispense Code*

This field indicates what is to be/was dispensed. It may be present in the order or not, depending on the application. If not present, and values are given for RXO-11 and RXO-12, then the RXO-1 value is assumed to apply. If RXO-10 does not include the form of the dosage, then RXO-5 is required.

5.22.11 *RXO-11 - Requested Dispense Amount*

This field specifies the amount to be dispensed.

5.22.12 *RXO-12 - Requested Dispense Units*

This field identifies the units for the dispense amount. This must be in simple units that reflect the actual quantity of the substance to be dispensed. It shall not include compound units.

5.22.13 *RXO-13 - Number of Refills*

This field defines the number of times the requested dispense amount may be given to the patient, subject to local regulation. Refers to outpatient only.

5.22.14 *RXO-14 - Ordering Provider's Authorisation Number*

This field identifies the provider's controlled substance number, if required, by site. It is required when the substance being requested is a controlled substance (e.g. a narcotic).

5.22.15 *RXO-15 - Pharmacist/Treatment Supplier's Verifier ID*

Use if required by the pharmacy, treatment application, or site on any orders (or any subgroup of orders), in addition to ORC-11.

5.22.16 *RXO-16 - Needs Human Review*

Refer to the following interpretation:

Value	Description
Y	Yes - a warning is present. The pharmacist or non-pharmacist treatment supplier filling the order needs to pay special attention to the text in RXO-6.
N	No - no warning is present. This is the default (null) value.

Table 172: HL7 Table 0136 - Yes/No Indicator

5.22.17 *RXO-17 - Requested Give Per (Time Unit)*

This field identifies the time unit to use to calculate the rate at which the pharmaceutical is to be administered.

Format: S<integer> **=** <integer> seconds
M<integer> **=** <integer> minutes
H<integer> **=** <integer> hours
D<integer> **=** <integer> days
W<integer> **=** <integer> weeks
L<integer> **=** <integer> months

This field is only required when the ordered substance is to be administered continuously at a prescribed rate (e.g. certain IVs).

5.22.18 *RXO-18 - Requested Give Strength*

This field is required when RXO-1 does not specify the strength. Otherwise, it is optional.

5.22.19 *RXO-19 - Requested Give Strength Units*

This field is required when both RXO-1 and RXO-10 do not specify the strength. Otherwise, it is optional.

5.22.20 *RXO-20 - Indication*

This field identifies the condition or problem for which the drug/treatment was prescribed. It may repeat if multiple indications are relevant.

5.22.21 *RXO-21 - Requested Give Rate Amount*

This field contains the rate at which to administer a treatment.

5.22.22 *RXO-22 - Requested Give Rate Units*

This field contains the units for the requested give rate amount, RXO-21.

5.22.23 *RXO-23 - Total Daily Dose*

This field contains the total daily dose for this particular pharmaceutical as expressed in terms of actual dispensed units.

5.22.24 *RXO-24 - Supplementary Code*

This field includes the identification of any codes that might be associated with the pharmaceutical substance.

5.23 RXR – Pharmacy/Treatment Route Segment

The route information concerns how and where the pharmacy or treatment is administered. Refer to the table below.

Example:

```
RXR|IV^Intravenous^HL70162|LUA^Left Upper Arm^HL70163|IVP^Intravenous
Pump^HL70164|IVP^Intravenous Push^HL70165
```

Seq	Element Name	Len	Type	Opt	Rpt	HL7 Table
1	Route	250	CE	R		Table 174
2	Site	250	CE	O		Table 175
3	Administration Device	250	CE	O		Table 176
4	Administration Method	250	CE	O		Table 177
5	Routing Instruction	250	CE	O		

Table 173: RXR Attribute Table - Pharmacy/Treatment Route Segment

5.23.1 *RXR-1 - Route*

This field describes the route of administration.

Value	Description	Value	Description
AP	Apply Externally	MM	Mucous Membrane
B	Buccal	NS	Nasal
DT	Dental	NG	Nasogastric
EP	Epidural	NP	Nasal Prongs*
ET	Endotrachial Tube*	NT	Nasotrachial Tube
GTT	Gastrostomy Tube	OP	Ophthalmic
GU	GU Irrigant	OT	Otic
IMR	Immerse (Soak) Body Part	OTH	Other/Miscellaneous
IA	Intra-arterial	PF	Perfusion
IB	Intrabursal	PO	Oral
IC	Intracardiac	PR	Rectal
ICV	Intracervical (uterus)	RM	Rebreather Mask*
ID	Intradermal	SD	Soaked Dressing
IH	Inhalation	SC	Subcutaneous
IHA	Intrahepatic Artery	SL	Sublingual
IM	Intramuscular	TP	Topical
IN	Intranasal	TRA	Tracheostomy*
IO	Intraocular	TD	Transdermal
IP	Intraperitoneal	TL	Translingual
IS	Intrasynovial	UR	Urethral
IT	Intrathecal	VG	Vaginal
IU	Intrauterine	VM	Ventimask
IV	Intravenous	WND	Wound

Value	Description	Value	Description
MTH	Mouth/Throat	U	Unknown

Table 174: HL7 Table 0162 - Route of Administration

Variance to HL7: *Code "U" has been added to the table to indicate unknown route.*
NOTE: ** Used primarily for respiratory therapy and anaesthesia delivery.*

5.23.2 *RXR-2 - Site*

This field contains the body site affected by the administration route.

Value	Description	Value	Description
BE	Bilateral Ears	LVL	Left Vastus Lateralis
OU	Bilateral Eyes	NB	Nebulized
BN	Bilateral Nares	PA	Perianal
BU	Buttock	PERIN	Perineal
CT	Chest Tube	RA	Right Arm
LA	Left Arm	RAC	Right Anterior Chest
LAC	Left Anterior Chest	RACF	Right Antecubital Fossa
LACF	Left Antecubital Fossa	RD	Right Deltoid
LD	Left Deltoid	RE	Right Ear
LE	Left Ear	REJ	Right External Jugular
LEJ	Left External Jugular	OD	Right Eye
OS	Left Eye	RF	Right Foot
LF	Left Foot	RG	Right Gluteus Medius
LG	Left Gluteus Medius	RH	Right Hand
LH	Left Hand	RIJ	Right Internal Jugular
LIJ	Left Internal Jugular	RLAQ	Rt Lower Abd Quadrant
LLAQ	Left Lower Abd Quadrant	RLFA	Right Lower Forearm
LLFA	Left Lower Forearm	RMFA	Right Mid Forearm
LMFA	Left Mid Forearm	RN	Right Naris
LN	Left Naris	RPC	Right Posterior Chest
LPC	Left Posterior Chest	RSC	Right Subclavian
LSC	Left Subclavian	RT	Right Thigh
LT	Left Thigh	RUA	Right Upper Arm
LUA	Left Upper Arm	RUAQ	Right Upper Abd Quadrant
LUAQ	Left Upper Abd Quadrant	RUFA	Right Upper Forearm
LUFA	Left Upper Forearm	RVL	Right Vastus Lateralis
LVG	Left Ventragluteal	RVG	Right Ventragluteal

Table 175: HL7 Table 0163 - Body Site

5.23.3 *RXR-3 - Administration Device*

This field contains the mechanical device used to aid in the administration of the drug or other treatment. Common examples are IV sets of different types.

Value	Description	Value	Description
AP	Applicator	IVS	Soluset
BT	Buretrol	MI	Metered Inhaler
HL	Heparin Lock	NEB	Nebulizer
IPPB	IPPB	PCA	PCA Pump
IVP	IV Pump		

Table 176: HL7 Table 0164 - Administration Device

5.23.4 *RXR-4 - Administration Method*

This field identifies the specific method requested for the administration of the drug or treatment to the patient.

Value	Description	Value	Description
CH	Chew	NB	Nebulized
DI	Dissolve	PT	Pain
DU	Dust	PF	Perfuse
IF	Infiltrate	SH	Shampoo
IS	Insert	SO	Soak
IR	Irrigate	WA	Wash
IVPB	IV Piggyback	WI	Wipe
IVP	IV Push		

Table 177: HL7 Table 0165 - Administration Method

5.23.5 *RXR-5 - Routing Instruction*

This field provides instructions on administration routing, especially in cases where more than one route of administration is possible.

Appendix A: Glossary

(normative)

Term	Definition
Administrative Message	This is a type of Status Message and relates to the sharing of non-clinical/administrative status information about a Patient Referral. It may be manually initiated by a clinician or administrative staff.
Administrative Advice	A message that is automatically initiated by a trigger event to which administrative staff may enter additional text before submitting it for transmission. Typically the events that initiate the message are changes in status, e.g. from Referral Received to Referral Assigned.
APC	Annual Practising Certificate.
ASCII	American Standard Code for Information Interchange
ASTM	American Society for Testing and Materials.
AT & R	Advanced Therapy and Rehabilitation
Care Event	In the context of RSD, this is the health care event which precipitates or triggers a specific Referral of a Patient by a 'referring' Health Care Provider.
Collaborative Care	Sharing the care of a Patient in a shared collaborative manner.
Clinician	See 'Referred To Health Care Provider' and 'Referring Health Care Provider'. In the context of RSD a Clinician is an individual, not a Facility. E.g. a Clinician can be a Specialist, General Practitioner, radiologist or nurse practitioner.
Clinical Message	This is a type of Administrative Advice and relates to the sharing of clinical status information about a Referral. It may be manually initiated by a clinician or administrative staff.
Clinical Status Report	A collection of information about events during care, reported by a Health Care Provider, which references a Referral. ***NOTE**: A Clinical Status Report does not represent or enable the transfer of care, nor is it necessarily intended for any particular provider or organisation.*
Clinic Letter	A dictated and typed letter from a Hospital Specialist or Health Care Provider to a referring Clinician containing clinical information about a Patient following an assessment.
Comorbidity	A concomitant but unrelated pathologic or disease process; usually used in epidemiology to indicate the coexistence of two or more disease processes (Stedman 1990).
CPN	The common person number is issued from the Health Practitioner Index
CT	Computed Tomography or CT Scan.
Data Elements	An atomic piece of data, e.g. "first name", "last name", etc.
Data Group	Group of data elements of related data, e.g. "Patient identification", "demographic data".
Data Set	Collection of data groups, used for specific purposes, e.g. "Referral data set", "Discharge data set".
Discharge	The relinquishing of Patient care in whole or in part by a Health Care Provider or organisation. There are two common types of Discharge: (a) Administrative; (b) Clinical Discharge.

Term	Definition
Discharge Referral	A Referral occurring in the context of Discharge and comprising a Referral with an attached Discharge Summary.
Discharge Summary	A collection of information, reported by a provider or organisation, about events at the point of Discharge.
DNA	Did Not Attend.
DOS	Disk Operating System.
ECG	Electrocardiogram.
EEG	Electroencephalogram.
Facility	A single physical location from which health goods and/or services are provided[4]. A Health Care Provider organisation may consist of multiple Facilities.
FSA	First Specialist Assessment.
GIF (.gif)	Graphics Interchange Format.
GP	General Practitioner.
HL7	Health Level 7 – a common Standard used in health care.
HPI	Health Practitioner Index.
Health Care Provider	A person, facility or organisation that provides Patient health care services, including services to promote health, to protect health, to prevent disease or ill-health, treatment services, nursing services, rehabilitative services or diagnostic services.
Health Event Summary	A summary of an 'event' or events related to an individual's contact with a section of the health system.
Hiragana	Japanese language
Hospital Specialist	See 'Referred To Health Care Provider' and 'Referring Health Care Provider'. In the context of RSD, a Hospital Specialist is an individual administering specialist treatment or advice within a hospital environment. A Hospital Specialist cannot be a Facility.
ICD10	I10 (ICD–10 CM)
ICDA	See ICD10
JPEG (.jpeg)	Joint Photographic Experts Group.
Kanji	Japanese language
Katagana	Japanese language
LOINC	Logical Observation Identifiers Names and Codes.
MIME	Multipurpose Internet Mail Extensions
Macintosh	Type of computer
MIME Standard RFC 1521	MIME Request for Comment 1521
MRI	Magnetic Resonance Imaging.
NHI	National Health Index
NZHIS	New Zealand Health Information Service
NZMC	The New Zealand Medical Council.
NZNC	The New Zealand Nursing Council.

[4] Extracted from the HPI Data Set

Term	Definition
NZPOCS	New Zealand Pathology Observation Codes.
PDF (.pdf)	Portable document format.
Read	RC – Read Classification.
Referral	Referral may take several forms, most notably: (a) *Request* for management of a problem or provision of a service, e.g. a request for an investigation, intervention or treatment. (b) *Notification* of a problem with the expectation or assignment of its management, e.g. a Discharge Summary in a setting which imposes care responsibility on the recipient. The common factor in all Referrals is a communication whose intent is the transfer of care, in part or in whole.
Referred To Health Care Provider	The Health Care Provider to whom a Patient has been referred for advice or treatment by a Referring Health Care Provider. The Referred to Health Care Provider may be an individual or Facility.
Referring Health Care Provider	The Health Care Provider who is referring the Patient for advice or treatment. The 'Referring' Health Care Provider generally has primary care responsibilities for a Patient (typically this is a GP), but it may be a 'Referred To' Health Care Provider (see Referring Specialist).
Referring Specialist	A 'Referred To' Health Care Provider who is referring a Patient for advice or treatment but not back into the care of the Referring Health Care Provider. In the context of RSD, a Referring Specialist is an individual administering specialist treatment or advice within a hospital environment. A Referring Specialist cannot be a Facility.
RSD	Referrals, Status Reports and Discharge Summaries.
Sector	Health and Disability Sector.
SNF	Skilled Nursing Facility
SNOMED	Systemized Nomenclature of Medicine
Specialist	See 'Referred To Health Care Provider' and 'Referring Health Care Provider' above. In the context of RSD, a Specialist is an individual administering specialist treatment or advice. A Specialist cannot be a Facility.
Status Report	A message from the 'referred to' health care provider to the 'referring' health care provider to advise of the progress of the referral and the patient for whom the referral was generated
System Message	A message for machine consumption that is automatically initiated by a trigger event, e.g. electronic receipt of a Referral which is then transmitted to the originator of the event, i.e. without intervention by any user.
TCP/IP	Transmission Control Protocol/Internet Protocol
Trigger event	An activity that takes place in a software application, based on some predefined condition such as an admission, ward transfer, or placement of an order etc. that results in the compilation and transmission of a data message.
UNIX	Computer Operating System

Appendix B: Tables

ISO Country Codes

An identifier of the country or nation that forms part of the concept. NZSCC99 is the agreed national standard and is based on the ISO3166 code set. This table consists of the NZSCC99 four digit codes with mappings to ISO3166 two character alpha codes.

Table B 1: Country Codes ISO 3166

99NZSCC	ISO 3166	Description
7201	AF	Afghanistan
3201	AL	Albania
4101	DZ	Algeria
3101	AD	Andorra
9201	AO	Angola
8401	AI	Anguilla
1601	AQ	Antarctica
1601	TF	Antarctica (This includes French Southern Territories)
8402	AG	Antigua and Barbuda
8201	AR	Argentina
7202	AM	Armenia
8403	AW	Aruba
1101	AU	Australia
1199	CX	Australian External Territories nec (This includes Christmas Island)
1199	CC	Australian External Territories nec (This includes Cocos (Keeling) Islands)
2301	AT	Austria
7203	AZ	Azerbaijan
8404	BS	Bahamas
4201	BH	Bahrain
7101	BD	Bangladesh
8405	BB	Barbados
3301	BY	Belarus
2302	BE	Belgium
8301	BZ	Belize
9101	BJ	Benin
8101	BM	Bermuda
7102	BT	Bhutan
8202	BO	Bolivia
3202	BA	Bosnia and Herzegovina

99NZSCC	ISO 3166	Description
9202	BW	Botswana
8203	BR	Brazil
5201	BN	Brunei Darussalam
3203	BG	Bulgaria
9102	BF	Burkina Faso
9203	BI	Burundi
5102	KH	Cambodia
9103	CM	Cameroon
8102	CA	Canada
9104	CV	Cape Verde
8406	KY	Cayman Islands
9105	CF	Central African Republic
9106	TD	Chad
2101	GJ	Channel Islands
8204	CL	Chile
6101	CN	China, People's Republic of
8205	CO	Colombia
9204	KM	Comoros
9107	CG	Congo
9108	CD	Congo, the Democratic Republic of the
1501	CK	Cook Islands
8302	CR	Costa Rica
9111	CI	Cote d'Ivoire
3204	HR	Croatia
8407	CU	Cuba
3205	CY	Cyprus
3302	CZ	Czech Republic
2401	DK	Denmark
9205	DJ	Djibouti
8408	DM	Dominica
8411	DO	Dominican Republic
5206	TL	East Timor
8206	EC	Ecuador
4102	EG	Egypt
8303	SV	El Salvador
2102	EN	England
9112	GQ	Equatorial Guinea

99NZSCC	ISO 3166	Description
9206	ER	Eritrea
3303	EE	Estonia
9207	ET	Ethiopia
2402	FO	Faeroe Islands
8207	FK	Falkland Islands
1502	FJ	Fiji
2403	FI	Finland
3206	MK	Former Yugoslav Republic of Macedonia (FYROM)
2303	FR	France
8208	GF	French Guiana
1503	PF	French Polynesia
9113	GA	Gabon
9114	GM	Gambia
4202	PS	Gaza Strip/Palestine/West Bank
7204	GE	Georgia
2304	DE	Germany
9115	GH	Ghana
3102	GI	Gibraltar
3207	GR	Greece
2404	GL	Greenland
8412	GD	Grenada
8413	GP	Guadeloupe
1401	GU	Guam
8304	GT	Guatemala
9116	GN	Guinea
9117	GW	Guinea-Bissau
8211	GY	Guyana
8414	HT	Haiti
8305	HN	Honduras
6102	HK	Hong Kong (Special Administrative Region)
3304	HU	Hungary
2405	IS	Iceland
7103	IN	India
5202	ID	Indonesia
4203	IR	Iran
4204	IQ	Iraq
2201	IE	Ireland

99NZSCC	ISO 3166	Description
2103	IM	Isle of Man
4205	IL	Israel
3104	IT	Italy
8415	JM	Jamaica
6103	JP	Japan
4206	JO	Jordan
7205	KZ	Kazakhstan
9208	KE	Kenya
1402	KI	Kiribati
6104	KP	Korea, Democratic People's Republic of
6105	KR	Korea, Republic of
4207	KW	Kuwait
7206	KG	Kyrgyzstan
5103	LA	Laos
3305	LV	Latvia
4208	LB	Lebanon
9211	LS	Lesotho
9118	LR	Liberia
4103	LY	Libya
2305	LI	Liechtenstein
3306	LT	Lithuania
2306	LU	Luxembourg
6106	MO	Macau (Special Administrative Region)
9212	MG	Madagascar
9213	MW	Malawi
5203	MY	Malaysia
7104	MV	Maldives
9121	ML	Mali
3105	MT	Malta
1403	MH	Marshall Islands
8416	MQ	Martinique
9122	MR	Mauritania
9214	MU	Mauritius
9215	YT	Mayotte
8306	MX	Mexico
1404	FM	Micronesia, Federated States of
3208	MD	Moldova

99NZSCC	ISO 3166	Description
2307	MC	Monaco
6107	MN	Mongolia
8417	MS	Montserrat
4104	MA	Morocco
9216	MZ	Mozambique
5101	MM	Myanmar
9217	NA	Namibia
1405	NR	Nauru
7105	NP	Nepal
2308	NL	Netherlands
8418	AN	Netherlands Antilles
1301	NC	New Caledonia
1201	NZ	New Zealand
8307	NI	Nicaragua
9123	NE	Niger
9124	NG	Nigeria
1504	NU	Niue
1102	NF	Norfolk Island
2104	ND	Northern Ireland
1406	MP	Northern Mariana Islands
2406	NO	Norway
4211	OM	Oman
7106	PK	Pakistan
1407	PW	Palau
8308	PA	Panama
1302	PG	Papua New Guinea
8212	PY	Paraguay
8213	PE	Peru
5204	PH	Philippines
3307	PL	Poland
1599	PN	Polynesia (excludes Hawaii) nec (includes Pitcairn Island)
3106	PT	Portugal
8421	PR	Puerto Rico
4212	QA	Qatar
9218	RE	Reunion
3211	RO	Romania
3308	RU	Russia

99NZSCC	ISO 3166	Description
9221	RW	Rwanda
1505	WS	Samoa
1506	AS	Samoa, American
3107	SM	San Marino
9125	ST	Sao Tome and Principe
4213	SA	Saudi Arabia
2105	HI	Scotland
9126	SN	Senegal
3213	CS	Serbia and Montenegro
9223	SC	Seychelles
9127	SL	Sierra Leone
5205	SG	Singapore
3311	SK	Slovakia
3212	SI	Slovenia
1303	SB	Solomon Islands
9224	SO	Somalia
9225	ZA	South Africa
8299	GS	South America nec (includes South Georgia and the South Sandwich Islands)
9299	IO	Southern and East Africa nec (includes British Indian Ocean Territory)
3108	ES	Spain
7107	LK	Sri Lanka
9222	SH	St Helena
8422	KN	St Kitts and Nevis
8423	LC	St Lucia
8103	PM	St Pierre and Miquelon
8424	VC	St Vincent and the Grenadines
4105	SD	Sudan
8214	SR	Suriname
9226	SZ	Swaziland
2407	SE	Sweden
2311	CH	Switzerland
4214	SY	Syria
6108	TW	Taiwan
7207	TJ	Tajikistan
9227	TZ	Tanzania
5104	TH	Thailand
9128	TG	Togo

99NZSCC	ISO 3166	Description
1507	TK	Tokelau
1508	TO	Tonga
8425	TT	Trinidad and Tobago
4106	TN	Tunisia
4215	TR	Turkey
7208	TM	Turkmenistan
8426	TC	Turks and Caicos Islands
1511	TV	Tuvalu
9228	UG	Uganda
3312	UA	Ukraine
4216	AE	United Arab Emirates
2100	GB	United Kingdom (not further defined)
8104	US	United States of America
8104	UM	United States of America (includes United States Minor Outlying Islands)
8215	UY	Uruguay
7211	UZ	Uzbekistan
1304	VU	Vanuatu
3103	VA	Vatican City State
8216	VE	Venezuela
5105	VN	Viet Nam
8427	VG	Virgin Islands, British
8428	VI	Virgin Islands, United States
2106	WA	Wales
1512	WF	Wallis and Futuna
4107	EH	Western Sahara
4217	YE	Yemen
9231	ZM	Zambia
9232	ZW	Zimbabwe

Table B 1: Country Codes ISO 3166

Table B 2: HL7 Table 0076 - Message Type

Value	Description
ACK	General acknowledgment message
ADR	ADT response
ADT	ADT message
BAR	Add/change billing account
CRM	Clinical study registration message
CSU	Unsolicited study data message
DFT	Detail financial transactions
DOC	Document response
DSR	Display response
EAC	Automated equipment command message
EAN	Automated equipment notification message
EAR	Automated equipment response message
EDR	Enhanced display response
EQQ	Embedded query language query
ERP	Event replay response
ESR	Automated equipment status update acknowledgment message
ESU	Automated equipment status update message
INR	Automated equipment inventory request message
INU	Automated equipment inventory update message
LSR	Automated equipment log/service request message
LSU	Automated equipment log/service update message
MCF	Delayed acknowledgment (retained for backward compatibility only)
MDM	Medical document management
MFD	Master files delayed application acknowledgment
MFK	Master files application acknowledgment
MFN	Master files notification
MFQ	Master files query
MFR	Master files response
NMD	Application management data message
NMQ	Application management query message
NMR	Application management response message
OMD	Dietary order
OMG	General clinical order message
OML	Laboratory order message

Value	Description
OMN	Non-stock requisition order message
OMP	Pharmacy/treatment order message
OMS	Stock requisition order message
ORD	Dietary order acknowledgment message
ORF	Query for results of observation
ORG	General clinical order acknowledgment message
ORL	Laboratory acknowledgment message (unsolicited)
ORM	Pharmacy/treatment order message
ORN	Non-stock requisition - General order acknowledgment message
ORP	Pharmacy/treatment order acknowledgment message
ORR	General order response message response to any ORM
ORS	Stock requisition - Order acknowledgment message
ORU	Unsolicited transmission of an observation message
OSQ	Query response for order status
OSR	Query response for order status
OUL	Unsolicited laboratory observation message
PEX	Product experience message
PGL	Patient goal message
PIN	Patient insurance information
PMU	Add personnel record
PPG	Patient pathway message (goal-oriented)
PPP	Patient pathway message (problem-oriented)
PPR	Patient problem message
PPT	Patient pathway goal-oriented response
PPV	Patient goal response
PRR	Patient problem response
PTR	Patient pathway problem-oriented response
QBP	Query by parameter
QCK	Deferred query
QCN	Cancel query
QRY	Query, original mode
QSB	Create subscription
QSX	Cancel subscription/acknowledge message
QVR	Query for previous events
RAR	Pharmacy/treatment administration information
RAS	Pharmacy/treatment administration message
RCI	Return clinical information
RCL	Return clinical list

Value	Description
RDE	Pharmacy/treatment encoded order message
RDR	Pharmacy/treatment dispense information
RDS	Pharmacy/treatment dispense message
RDY	Display based response
REF	Patient referral
RER	Pharmacy/treatment encoded order information
RGR	Pharmacy/treatment dose information
RGV	Pharmacy/treatment give message
ROR	Pharmacy/treatment order response
RPA	Return Patient authorisation
RPI	Return Patient information
RPL	Return Patient display list
RPR	Return Patient list
RQA	Request Patient authorisation
RQC	Request clinical information
RQI	Request Patient information
RQP	Request Patient demographics
RQQ	Event replay query
RRA	Pharmacy/treatment administration acknowledgment message
RRD	Pharmacy/treatment dispense acknowledgment message
RRE	Pharmacy/treatment encoded order acknowledgment message
RRG	RRG Pharmacy/treatment give acknowledgment message
RRI	RRI Return referral information
RSP	RSP Segment pattern response
RTB	RTB Tabular response
SIU	SIU Schedule information unsolicited
SPQ	SPQ Stored procedure request
SQM	SQM Schedule query message
SQR	Schedule query response

Table B 2: HL7 Table 0076 - Message Type

HL7 Table 0003 Event Type

Table B 3: HL7 Table 0003 - Event Type

Value	Description
A01	ADT/ACK - Admit/visit notification
A02	ADT/ACK - Transfer a Patient
A03	ADT/ACK - Discharge/end visit

Value	Description
A04	ADT/ACK - Register a Patient
A05	ADT/ACK - Pre-admit a Patient
A06	ADT/ACK - Change an outPatient to an inPatient
A07	ADT/ACK - Change an inPatient to an outPatient
A08	ADT/ACK - Update Patient information
A09	ADT/ACK - Patient departing - tracking
A10	ADT/ACK - Patient arriving - tracking
A11	ADT/ACK - Cancel admit/visit notification
A12	ADT/ACK - Cancel transfer
A13	ADT/ACK - Cancel discharge/end visit
A14	ADT/ACK - Pending admit
A15	ADT/ACK - Pending transfer
A16	ADT/ACK - Pending discharge
A17	ADT/ACK - Swap Patients
A18	ADT/ACK - Merge Patient information (for backward compatibility only)
A19	QRY/ADR - Patient query
A20	ADT/ACK - Bed status update
A21	ADT/ACK - Patient goes on a “leave of absence”
A22	ADT/ACK - Patient returns from a “leave of absence”
A23	ADT/ACK - Delete a Patient record
A24	ADT/ACK - Link Patient information
A25	ADT/ACK - Cancel pending discharge
A26	ADT/ACK - Cancel pending transfer
A27	ADT/ACK - Cancel pending admit
A28	ADT/ACK - Add person information
A29	ADT/ACK - Delete person information
A30	ADT/ACK - Merge person information (for backward compatibility only)
A31	ADT/ACK - Update person information
A32	ADT/ACK - Cancel Patient arriving - tracking
A33	ADT/ACK - Cancel Patient departing - tracking
A34	ADT/ACK - Merge Patient information - Patient-ID only (for backward compatibility only)
A35	ADT/ACK - Merge Patient information - account number only (for backward compatibility only)
A36	ADT/ACK - Merge Patient information - Patient-ID and account number (for backward compatibility only)
A37	ADT/ACK - Unlink Patient information
A38	ADT/ACK - Cancel pre-admit
A39	ADT/ACK - Merge person - Patient-ID (for backward compatibility only)
A40	ADT/ACK - Merge Patient - Patient identifier list

Value	Description
A41	ADT/ACK - Merge account - Patient account number
A42	ADT/ACK - Merge visit - visit number
A43	ADT/ACK - Move Patient information - Patient identifier list
A44	ADT/ACK - Move account information - Patient account number
A45	ADT/ACK - Move visit information - visit number
A46	ADT/ACK - Change Patient-ID (for backward compatibility only)
A47	ADT/ACK - Change Patient identifier list
A48	ADT/ACK - Change alternate Patient-ID (for backward compatibility only)
A49	ADT/ACK - Change Patient account number
A50	ADT/ACK - Change visit number
A51	ADT/ACK - Change alternate visit-ID
A52	ADT/ACK - Cancel leave of absence for a Patient
A53	ADT/ACK - Cancel Patient returns from a leave of absence
A54	ADT/ACK - Change attending doctor
A55	ADT/ACK - Cancel change attending doctor
A60	ADT/ACK - Update allergy information
A61	ADT/ACK - Change consulting doctor
A62	ADT/ACK - Cancel change consulting doctor
B01	PMU/ACK - Add personnel record
B02	PMU/ACK - Update personnel record
B03	PMU/ACK - Delete personnel record
B04	PMU/ACK - Active practicing person
B05	PMU/ACK - Deactivate practicing person
B06	PMU/ACK - Terminate practicing person
C01	CRM - Register a Patient on a clinical trial
C02	CRM - Cancel a Patient registration on clinical trial (for clerical mistakes only)
C03	CRM - Correct/update registration information
C04	CRM - Patient has gone off a clinical trial
C05	CRM - Patient enters phase of clinical trial
C06	CRM - Cancel Patient entering a phase (clerical mistake)
C07	CRM - Correct/update phase information
C08	CRM - Patient has gone off phase of clinical trial
C09	CSU - Automated time intervals for reporting, e.g. monthly
C10	CSU - Patient completes the clinical trial
C11	CSU - Patient completes a phase of the clinical trial
C12	CSU - Update/correction of Patient order/result information
I01	RQI/RPI - Request for insurance information
I02	RQI/RPL - Request/receipt of Patient selection display list

Value	Description
I03	RQI/RPR - Request/receipt of Patient selection list
I04	RQD/RPI - Request for Patient demographic data
I05	RQC/RCI - Request for Patient clinical information
I06	RQC/RCL - Request/receipt of clinical data listing
I07	PIN/ACK - Unsolicited insurance information
I08	RQA/RPA - Request for treatment authorization information
I09	RQA/RPA - Request for modification to an authorization
I10	RQA/RPA - Request for resubmission of an authorization
I11	RQA/RPA - Request for cancellation of an authorization
I12	REF/RRI - Patient referral
I13	REF/RRI - Modify Patient referral
I14	REF/RRI - Cancel Patient referral
I15	REF/RRI - Request Patient referral status
J01	QCN/ACK - Cancel query/acknowledge message
J02	QSX/ACK - Cancel subscription/acknowledge message
K11	RSP - Segment pattern response
K13	RTB - Tabular response
K15	RDY - Display response
K21	RSP - Get person demographics response
K22	RSP - Find candidates response
K23	RSP - Get corresponding identifiers response
K24	RSP - Allocate identifiers response
K25	RSP - Personnel information by segment response
M01	MFN/MFK - Master file not otherwise specified (for backward compatibility only)
M02	MFN/MFK - Master file - staff practitioner
M03	MFN/MFK - Master file - test/observation (for backward compatibility only)
M04	MFN/MFK - Master files charge description
M05	MFN/MFK - Patient location master file
M06	MFN/MFK - Clinical study with phases and schedules master file
M07	MFN/MFK - Clinical study without phases but with schedules master file
M08	MFN/MFK - Test/observation (numeric) master file
M09	MFN/MFK - Test/observation (categorical) master file
M10	MFN/MFK - Test /observation batteries master file
M11	MFN/MFK - Test/calculated observations master file
M12	MFN/MFK - Master file notification message
N01	NMQ/NMR - Application management query message
N02	NMD/ACK - Application management data message (unsolicited)
O01	ORM - Order message (also -RDE, -RDS, -RGV, -RAS)

Value	Description
O02	ORR - Order response (also -RRE, -RRD, -RRG, -RRA)
O03	OMD - Diet order
O04	ORD - Diet order acknowledgment
O05	OMS - Stock requisition order
O06	ORS - Stock requisition acknowledgment
O07	OMN - Non-stock requisition order
O08	ORN - Non-stock requisition acknowledgment
O09	OMP - Pharmacy/treatment order
O10	ORP - Pharmacy/treatment order acknowledgment
O11	RDE - Pharmacy/treatment encoded order
O12	RRE - Pharmacy/treatment encoded order acknowledgment
O13	RDS - Pharmacy/treatment dispense
O14	RRD - Pharmacy/treatment dispense acknowledgment
O15	RGV - Pharmacy/treatment give
O16	RRG - Pharmacy/treatment give acknowledgment
O17	RAS - Pharmacy/treatment administration
O18	RRA - Pharmacy/treatment administration acknowledgment
O19	OMG - General clinical order
O20	ORG/ORL - General clinical order response
O21	OML - Laboratory order
022	ORL - General laboratory order response message to any OML
P01	BAR/ACK - Add Patient accounts
P02	BAR/ACK - Purge Patient accounts
P03	DFT/ACK - Post detail financial transaction
P04	QRY/DSP - Generate bill and A/R statements
P05	BAR/ACK - Update account
P06	BAR/ACK - End account
P07	PEX - Unsolicited initial individual product experience report
P08	PEX - Unsolicited update individual product experience report
P09	SUR - Summary product experience report
P10	BAR/ACK - Transmit Ambulatory Payment Classification (APC)
PC1	PPR - PC/ problem add
PC2	PPR - PC/ problem update
PC3	PPR - PC/ problem delete
PC4	QRY - PC/ problem query
PC5	PRR - PC/ problem response
PC6	PGL - PC/ goal add
PC7	PGL - PC/ goal update
PC8	PGL - PC/ goal delete

Value	Description
PC9	QRY - PC/ goal query
PCA	PPV - PC/ goal response
PCB	PPP - PC/ pathway (problem-oriented) add
PCC	PPP - PC/ pathway (problem-oriented) update
PCD	PPP - PC/ pathway (problem-oriented) delete
PCE	QRY - PC/ pathway (problem-oriented) query
PCF	PTR - PC/ pathway (problem-oriented) query response
PCG	PPG - PC/ pathway (goal-oriented) add
PCH	PPG - PC/ pathway (goal-oriented) update
PCJ	PPG - PC/ pathway (goal-oriented) delete
PCK	QRY - PC/ pathway (goal-oriented) query
PCL	PPT - PC/ pathway (goal-oriented) query response
Q01	QRY/DSR - Query sent for immediate response
Q02	QRY/QCK - Query sent for deferred response
Q03	DSR/ACK - Deferred response to a query
Q04	EQQ - Embedded query language query
Q05	UDM/ACK - Unsolicited display update message
Q06	OSQ/OSR - Query for order status
Q07	VQQ - Virtual table query
Q08	SPQ - Stored procedure request
Q09	RQQ - event replay query
Q16	QSB - Create subscription
Q17	QVR - Query for previous events
Q21	QBP - Get person demographics
Q22	QBP - Find candidates
Q23	QBP - Get corresponding identifiers
Q24	QBP - Allocate identifiers
Q25	QBP - Personnel information by segment query
Q26	ROR - Pharmacy/treatment order response
Q27	RAR - Pharmacy/treatment administration information
Q28	RDR - Pharmacy/treatment dispense information
Q29	RER - Pharmacy/treatment encoded order information
Q30	RGR - Pharmacy/treatment dose information
QNC	Varies - Query cancellation
R01	ORU/ACK - Unsolicited transmission of an observation message
R02	QRY - Query for results of observation
R03	QRY/DSR - Display-oriented results, query/unsol. update (for backward compatibility only) (Replaced by Q05)
R04	ORF - Response to query; transmission of requested observation

Value	Description
ROR	ROR - Pharmacy prescription order query response
R07	EDR - Enhanced display response
R08	TBR - Tabular data response
R09	ERP - Event replay response
R21	OUL - Unsolicited laboratory observation
S01	SRM/SRR - Request new appointment booking
S02	SRM/SRR - Request appointment rescheduling
S03	SRM/SRR - Request appointment modification
S04	SRM/SRR - Request appointment cancellation
S05	SRM/SRR - Request appointment discontinuation
S06	SRM/SRR - Request appointment deletion
S07	SRM/SRR - Request addition of service/resource on appointment
S08	SRM/SRR - Request modification of service/resource on appointment
S09	SRM/SRR - Request cancellation of service/resource on appointment
S10	SRM/SRR - Request discontinuation of service/resource on appointment
S11	SRM/SRR - Request deletion of service/resource on appointment
S12	SIU/ACK - Notification of new appointment booking
S13	SIU/ACK - Notification of appointment rescheduling
S14	SIU/ACK - Notification of appointment modification
S15	SIU/ACK - Notification of appointment cancellation
S16	SIU/ACK - Notification of appointment discontinuation
S17	SIU/ACK - Notification of appointment deletion
S18	SIU/ACK - Notification of addition of service/resource on appointment
S19	SIU/ACK - Notification of modification of service/resource on appointment
S20	SIU/ACK - Notification of cancellation of service/resource on appointment
S21	SIU/ACK - Notification of discontinuation of service/resource on appointment
S22	SIU/ACK - Notification of deletion of service/resource on appointment
S23	SIU/ACK - Notification of blocked schedule time slot(s)
S24	SIU/ACK - Notification of opened (“unblocked”) schedule time slot(s)
S25	SQM/SQR - Schedule query message and response
S26	SIU/ACK - Notification that Patient did not show up for scheduled appointment
T01	MDM/ACK - Original document notification
T02	MDM/ACK - Original document notification and content
T03	MDM/ACK - Document status change notification
T04	MDM/ACK - Document status change notification and content
T05	MDM/ACK - Document addendum notification
T06	MDM/ACK - Document addendum notification and content
T07	MDM/ACK - Document edit notification

Value	Description
T08	MDM/ACK - Document edit notification and content
T09	MDM/ACK - Document replacement notification
T10	MDM/ACK - Document replacement notification and content
T11	MDM/ACK - Document cancel notification
T12	QRY/DOC - Document query
U01	ESU/ACK - Automated equipment status update
U02	ESR/ACK - Automated equipment status request
U03	SSU/ACK - Specimen status update
U04	SSR/ACK - specimen status request
U05	INU/ACK - Automated equipment inventory update
U06	INR/ACK - Automated equipment inventory request
U07	EAC/ACK - Automated equipment command
U08	EAR/ACK - Automated equipment response
U09	EAN/ACK - Automated equipment notification
U10	TCU/ACK - Automated equipment test code settings update
U11	TCR/ACK - Automated equipment test code settings request
U12	LSU/ACK - Automated equipment log/service update
U13	LSR/ACK - Automated equipment log/service request
V01	VXQ - Query for vaccination record
V02	VXX - Response to vaccination query returning multiple PID matches
V03	VXR - Vaccination record response
V04	VXU - Unsolicited vaccination record update
Varies	MFQ/MFR - Master files query (use event same as asking for, e.g. M05 - location)
W01	ORU - Waveform result, unsolicited transmission of requested information
W02	QRF - Waveform result, response to query

Table B 3: HL7 Table 0003 - Event Type

10006 HPI Code Set - Primary Language

Table B 4: 10006 HPI Code Set - Primary Language

Code	Description
AA	Afar
AB	Abkhazian
AE	Avestan
AF	Afrikaans
AK	Akan
AM	Amharic
AN	Aragonese

Code	Description
AR	Arabic
AS	Assamese
AV	Avaric
AY	Aymara
AZ	Azerbaijani
BA	Bashkir
BE	Belarusian
BG	Bulgarian
BH	Bihari
BI	Bislama
BM	Bambara
BN	Bengali
BO	Tibetan
BR	Breton
BS	Bosnian
CA	Catalan; Valencian
CE	Chechen
CH	Chamorro
CO	Corsican
CR	Cree
CS	Czech
CU	Church Slavic; Slavonic; Church Slavonic; Old Bulgarian; Old Church Slavonic
CV	Chuvash
CY	Welsh
DA	Danish
DE	German
DV	Divehi
DZ	Dzongkha
EE	Ewe
EL	Greek, Modern (1453 - present)
EN	English
EO	Esperanto
ES	Castilian; Spanish
ET	Estonian
EU	Basque
FA	Persian
FF	Fulah
FI	Finnish
FJ	Fijian

Code	Description
FO	Faroese
FR	French
FY	Frisian
GA	Irish
GD	Gaelic; Scottish Gaelic
GL	Gallegan
GN	Guarani
GU	Gujarati
GV	Manx
HA	Hausa
HE	Hebrew
HI	Hindi
HO	Hiri Motu
HR	Croatian
HT	Haitian; Haitian Creole
HU	Hungarian
HY	Armenian
HZ	Herero
IA	Interlingua (International Auxiliary Language Association)
ID	Indonesian
IE	Interlingue
IG	Igbo
II	Sichuan Yi
IK	Inupiaq
IO	Ido
IS	Icelandic
IT	Italian
IU	Inuktitut
JA	Japanese
JV	Javanese
KA	Georgian
KG	Kongo
KI	Gikuyu; Kikuyu
KJ	Kuanyama; Kwanyama
KK	Kazakh
KL	Greenlandic; Kalaallisut
KM	Khmer
KN	Kannada
KO	Korean

Code	Description
KR	Kanuri
KS	Kashmiri
KU	Kurdish
KV	Komi
KW	Cornish
KY	Kirghiz
LA	Latin
LB	Letzeburgesch; Luxembourgish
LG	Ganda
LI	Limburgan; Limburger; Limburgish
LN	Lingala
LO	Lao
LT	Lithuanian
LU	Luba-Katanga
LV	Latvian
MG	Malagasy
MH	Marshallese
MI	Mäori
MK	Macedonian
ML	Malayalam
MN	Mongolian
MO	Moldavian
MR	Marathi
MS	Malay
MT	Maltese
MY	Burmese
NA	Nauru
NB	Bokmål, Norwegian; Norwegian Bokmål
ND	Ndebele, North
NE	Nepali
NG	Ndonga
NL	Dutch; Flemish
NN	Norwegian Nynorsk; Nynorsk, Norwegian
NO	Norwegian
NR	Ndebele, South
NV	Navaho, Navajo
NY	Chewa; Chichewa; Nyanja
OC	Occitan (post 1500); Provençal
OJ	Ojibwa

Code	Description
OM	Oromo
OR	Oriya
OS	Ossetian; Ossetic
PA	Panjabi; Punjabi
PI	Pali
PL	Polish
PS	Pushto
PT	Portuguese
QU	Quechua
RM	Raeto-Romance
RN	Rundi
RO	Romanian
RU	Russian
RW	Kinyarwanda
SA	Sanskrit
SC	Sardinian
SD	Sindhi
SE	Northern Sami
SG	Sango
SI	Sinhalese
SK	Slovak
SL	Slovenian
SM	Samoan
SN	Shona
SO	Somali
SQ	Albanian
SR	Serbian
SS	Swati
ST	Sotho, Southern
SU	Sundanese
SV	Swedish
SW	Swahili
TA	Tamil
TE	Telugu
TG	Tajik
TH	Thai
TI	Tigrinya
TK	Turkmen
TL	Tagalog

Code	Description
TN	Tswana
TO	Tonga (Tonga Islands)
TR	Turkish
TS	Tsonga
TT	Tatar
TW	Twi
TY	Tahitian
UG	Uighur
UK	Ukrainian
UR	Urdu
UZ	Uzbek
VE	Venda
VI	Vietnamese
VO	Volapük
WA	Walloon
WO	Wolof
XH	Xhosa
YI	Yiddish
YO	Yoruba
ZA	Chuang; Zhuang
ZH	Chinese
ZU	Zulu

Table B 4: 10006 HPI Code Set - Primary Language

HL7 Table 0292 – Vaccines Administered

Table B 5: HL7 Table 0292 - Vaccines Administered

Code	Description	Full Vaccine Name
54	adenovirus, type 4	adenovirus vaccine, type 4, live, oral
55	adenovirus, type 7	adenovirus vaccine, type 7, live, oral
82	adenovirus, NOS[1]	adenovirus vaccine, NOS[1]
24	anthrax	anthrax vaccine
19	BCG	Bacillus Calmette-Guerin vaccine
27	botulinum antitoxin	botulinum antitoxin
26	cholera	cholera vaccine
29	CMVIG	cytomegalovirus immune globulin, intravenous
56	dengue fever	dengue fever vaccine
12	diphtheria antitoxin	diphtheria antitoxin
28	DT (pediatric)	diphtheria and tetanus toxoids, adsorbed for pediatric

Code	Description	Full Vaccine Name
		use
20	DTaP	diphtheria, tetanus toxoids and acellular pertussis vaccine
50	DTaP-Hib	DTaP-*Haemophilus influenzae* type b conjugate vaccine
01	DTP	diphtheria, tetanus toxoids and pertussis vaccine
22	DTP-Hib	DTP-*Haemophilus influenzae* type b conjugate vaccine
57	hantavirus	hantavirus vaccine
52	Hep A, adult	hepatitis A vaccine, adult dosage
83	Hep A, ped/adol, 2 dose	hepatitis A vaccine, pediatric/adolescent dosage, 2 dose schedule
84	Hep A, ped/adol, 3 dose	hepatitis A vaccine, pediatric/adolescent dosage, 3 dose schedule
31	Hep A, pediatric, NOS[1]	hepatitis A vaccine, pediatric dosage, NOS[1]
85	Hep A, NOS[1]	hepatitis A vaccine, NOS[1]
30	HBIG	hepatitis B immune globulin
08	Hep B, adolescent or pediatric	hepatitis B vaccine, pediatric or pediatric/adolescent dosage
42	Hep B, adolescent/high risk infant	hepatitis B vaccine, adolescent/high risk infant dosage
43	Hep B, adult	hepatitis B vaccine, adult dosage
44	Hep B, dialysis	hepatitis B vaccine, dialysis Patient dosage
45	Hep B, NOS[1]	hepatitis B vaccine, NOS[1]
58	Hep C	hepatitis C vaccine
59	Hep E	hepatitis E vaccine
60	herpes simplex 2	herpes simplex virus, type 2 vaccine
46	Hib (PRP-D)	*Haemophilus influenzae* type b vaccine, PRP-D conjugate
47	Hib (HbOC)	*Haemophilus influenzae* type b vaccine, HbOC conjugate
48	Hib (PRP-T)	*Haemophilus influenzae* type b vaccine, PRP-T conjugate
49	Hib (PRP-OMP)	*Haemophilus influenzae* type b vaccine, PRP-OMP conjugate
17	Hib, NOS[1]	*Haemophilus influenzae* type b vaccine, conjugate NOS[1]
51	Hib-Hep B	*Haemophilus influenzae* type b conjugate and Hepatitis B vaccine
61	HIV	human immunodeficiency virus vaccine
62	HPV	human papilloma virus vaccine
86	IG	immune globulin, intramuscular
87	IGIV	immune globulin, intravenous
14	IG, NOS[1]	immune globulin, NOS[1]

Code	Description	Full Vaccine Name
15	influenza, split (incl. purified surface antigen)	influenza virus vaccine, split virus (incl. purified surface antigen)
16	influenza, whole	influenza virus vaccine, whole virus
88	influenza, NOS[1]	influenza virus vaccine, NOS[1]
10	IPV	poliovirus vaccine, inactivated
02	OPV	poliovirus vaccine, live, oral
89	polio, NOS[1]	poliovirus vaccine, NOS[1]
39	Japanese encephalitis	Japanese encephalitis vaccine
63	Junin virus	Junin virus vaccine
64	leishmaniasis	leishmaniasis vaccine
65	leprosy	leprosy vaccine
66	Lyme disease	Lyme disease vaccine
03	MMR	measles, mumps and rubella virus vaccine
04	M/R	measles and rubella virus vaccine
94	MMRV	measles, mumps, rubella, and varicella virus vaccine
67	malaria	malaria vaccine
05	measles	measles virus vaccine
68	melanoma	melanoma vaccine
32	meningococcal	meningococcal polysaccharide vaccine
07	mumps	mumps virus vaccine
69	parainfluenza-3	parainfluenza-3 virus vaccine
11	pertussis	pertussis vaccine
23	plague	plague vaccine
33	pneumococcal	pneumococcal polysaccharide vaccine
100	pneumococcal conjugate	pneumococcal conjugate vaccine, polyvalent
70	Q fever	Q fever vaccine
18	rabies, intramuscular injection	rabies vaccine, for intramuscular injection
40	rabies, intradermal injection	rabies vaccine, for intradermal injection
90	rabies, NOS[1]	rabies vaccine, NOS[1]
72	rheumatic fever	rheumatic fever vaccine
73	Rift Valley fever	Rift Valley fever vaccine
34	RIG	rabies immune globulin
74	rotavirus	rotavirus vaccine, tetravalent, live, oral
71	RSV-IGIV	respiratory syncytial virus immune globulin, intravenous
93	RSV-Mab	respiratory syncytial virus monoclonal antibody (palivizumab), intramuscular
06	rubella	rubella virus vaccine
38	rubella/mumps	rubella and mumps virus vaccine
75	smallpox	smallpox vaccine

Code	Description	Full Vaccine Name
76	*Staphylococcus* bacterio lysate	*Staphylococcus* bacteriophage lysate
09	Td (adult)	tetanus and diphtheria toxoids, adsorbed for adult use
35	tetanus toxoid	tetanus toxoid
77	tick-borne encephalitis	tick-borne encephalitis vaccine
13	TIG	tetanus immune globulin
95	TST-OT tine test	tuberculin skin test; old tuberculin, multipuncture device
96	TST-PPD	intradermal tuberculin skin test; purified protein derivative solution, intradermal
97	TST-PPD tine test	tuberculin skin test; purified protein derivative, multipuncture device
98	TST, NOS[1]	tuberculin skin test; NOS[1]
78	tularemia vaccine	tularemia vaccine
25	typhoid, oral	typhoid vaccine, live, oral
41	typhoid, parenteral	typhoid vaccine, parenteral, other than acetone-killed, dried
53	typhoid, parenteral, AKD (U.S. military)	typhoid vaccine, parenteral, acetone-killed, dried (U.S. military)
101	typhoid, ViCPs	Typhoid Vi capsular polysaccharide vaccine
91	typhoid, NOS[1]	typhoid vaccine, NOS[1]
79	vaccinia immune globulin	vaccinia immune globulin
21	varicella	varicella virus vaccine
81	VEE, inactivated	Venezuelan equine encephalitis, inactivated
80	VEE, live	Venezuelan equine encephalitis, live, attenuated
92	VEE, NOS[1]	Venezuelan equine encephalitis vaccine, NOS[1]
36	VZIG	varicella zoster immune globulin
37	yellow fever	yellow fever vaccine
999	unknown	unknown vaccine or immune globulin
99	RESERVED – do not use	RESERVED – do not use

Table B 5: HL7 Table 0292 - Vaccines Administered

NOTE: *[1] Not Otherwise Specified. NOS should only be used to record historical records that lack the indicated specificity.*

HL7 Figure 7-9 - Common ISO derived units and ISO+ extensions

Table B 6: HL7 Figure 7-9 - Common ISO derived units and ISO+ extensions

Code/Abbreviation	Name
/(arb_u)	*1 / arbitrary unit
/iu	*1 / international unit
/kg	*1 / kilogram

Code/Abbreviation	Name
/L	1 / litre
1/mL	*1 / millilitre
10.L/min	*10 x litre / minute
10.L /(min.m2)	*10 x (litre / minute) / metre^2 = litre / (minute □□metre^2)
10*3/mm3	*10^3 / cubic millimetre (e.g., white blood cell count)
10*3/L	*10^3 / Litre
10*3/mL	*10^3 / millilitre
10*6/mm3	*10^6 / millimetre^3
10*6/L	*10^6 / Litre
10*6/mL	*10^6 / millilitre
10*9/mm3	*10^9 / millimetre^3
10*9/L	*10^9 / Litre
10*9/mL	*10^9 / millilitre
10*12/L	*10^{12} / Litre
10*3(rbc)	*1000 red blood cells†
a/m	Ampere per metre
(arb_u)	*Arbitrary unit
bar	Bar (pressure; 1 bar = 100 kilopascals)
/min	Beats or Other Events Per Minute
bq	Becquerel
(bdsk_u)	*Bodansky Units
(bsa)	*Body surface area
(cal)	*Calorie
1	*Catalytic Fraction
/L	Cells / Litre
cm	Centimetre
cm_h20	*Centimetres of water =H_20 (pressure)
cm_h20.s/L	Centimetres H_20 / (litre / second) = (centimetres H_20 □□second) / litre (e.g., mean pulmonary resistance)
cm_h20/(s.m)	(Centimetres H_20 / second) / metre = centimetres H_20 / (second □□metre) (e.g., pulmonary pressure time product)
(cfu)	*Colony Forming Units
m3/s	Cubic metre per second
d	Day
db	Decibels
dba	*Decibels a Scale
cel	Degrees Celsius
deg	Degrees of Angle
(drop)	Drop
10.un.s/cm5	Dyne □□Second / centimetre$_5$ (1 dyne = 10 micronewton = 10 un)

Code/Abbreviation	Name
	(e.g., systemic vascular resistance)
10.un.s/(cm5.m2)	((Dyne □□second) / centimetre$_5$) / metre$_2$ = (Dyne □□second) / (centimetre$_5$ □□metre$_2$) (1 dyne = 10 micronewton = 10 un) (e.g., systemic vascular resistance/body surface area)
ev	Electron volts (1 electron volt = 160.217 zeptojoules)
eq	Equivalent
f	Farad (capacitance)
fg	Femtogram
fL	Femtoliter
fmol	Femtomole
/mL	*Fibers / millilitre
g	Gram
g/d	*Gram / Day
g/dL	Gram / Decilitre
g/hr	Gram / Hour
g/(8.hr)	*Gram / 8 Hour Shift
g/kg	Gram / Kilogram (e.g., mass dose of medication per body weight)
g/(kg.d)	(Gram / Kilogram) / Day = gram / (kilogram □□day) (e.g., mass dose of medication per body weight per day)
g/(kg.hr)	(Gram / Kilogram) / Hour = gram / (kilogram □□hour) (e.g., mass dose of medication per body weight per hour)
g/(8.kg.hr)	(Gram / Kilogram) /8 Hour Shift = gram / (kilogram □□8 hour shift) (e.g., mass dose of medication per body weight per 8 hour shift)
g/(kg.min)	(Gram / Kilogram) / Minute = gram / (kilogram □□minute) (e.g., mass dose of medication per body weight per minute)
g/L	Gram / Litre
g/m2	Gram / Metre^2 (e.g., mass does of medication per body surface area)
g/min	Gram / Minute
g.m/(hb)	Gram □□metre / heart beat (e.g., ventricular stroke work)
g.m/((hb).m2)	(Gram □□metre/ heartbeat) / metre^2 = (gram □□metre) / (heartbeat □□metre^2) (e.g., ventricular stroke work/body surface area, ventricular stroke work index)
g(creat)	*Gram creatinine
g(hgb)	*Gram hemoglobin
g.m	Gram metre
g(tot_nit)	*Gram total nitrogen
g(tot_prot)	*Gram total protein
g(wet_tis)	*Gram wet weight tissue
gy	Grey (absorbed radiation dose)
hL	Hectalitre = 10^2 litre
h	Henry

Code/Abbreviation	Name
in	Inches
in_hg	Inches of Mercury (=Hg)
iu	*International Unit
iu/d	*International Unit / Day
iu/hr	*International Unit / Hour
iu/kg	International Unit / Kilogram
iu/L	*International Unit / Litre
iu/mL	*International Unit / Millilitre
iu/min	*International Unit / Minute
j/L	Joule/litre (e.g., work of breathing)
kat	*Katal
kat/kg	*Katal / Kilogram
kat/L	*Katal / Litre
k/watt	Kelvin per watt
(kcal)	Kilocalorie (1 kcal = 6.693 kilojoule)
(kcal)/d	*Kilocalorie / Day
(kcal)/hr	*Kilocalorie / Hour
(kcal)/(8.hr)	*Kilocalorie / 8 Hours Shift
kg	Kilogram
kg(body_wt)	*Kilogram body weight
kg/m3	Kilogram per cubic metre
kh/h	Kilogram per hour
kg/L	Kilogram / litre
kg/min	Kilogram per minute
kg/mol	Kilogram / mole
kg/s	Kilogram / second
kg/(s.m2)	(Kilogram / second)/ metre^2 = kilogram / (second □□metre^2)
kg/ms	Kilogram per square metre
kg.m/s	Kilogram metre per second
kpa	Kilopascal (1 mmHg = 0.1333 kilopascals)
ks	Kilosecond
(ka_u)	King-Armstrong Unit
(knk_u)	*Kunkel Units
L	Litre
L/d	*Litre / Day
L/hr	Litre / hour
L/(8.hr)	*Litre / 8 hour shift
L/kg	Litre / kilogram
L/min	Litre / minute

Code/Abbreviation	Name
L/(min.m2)	(Litre / minute) / metre^2 = litre / (minute □□metre^2) (e.g., cardiac output/body surface area = cardiac index)
L/s	Litre / second (e.g., peak expiratory flow)
L.s	Litre / second / second^2 = litre □□second
lm	Lumen
lm/m2	Lumen / Metre^2
(mclg_u)	*MacLagan Units
mas	Megasecond
m	Metre
m2	Metre^2 (e.g., body surface area)
m/s	Metre / Second
m/s2	Metre / Second^2
ueq	*Microequivalents
ug	Microgram
ug/d	Microgram / Day
ug/dL	Microgram / Decilitre
ug/g	Microgram / Gram
ug/hr	*Microgram / Hour
ug(8hr)	Microgram / 8 Hour Shift
ug/kg	Microgram / Kilogram
ug/(kg.d)	(Microgram / Kilogram) /Day = microgram / (kilogram □□day) (e.g., mass dose of medication per Patient body weight per day)
ug/(kg.hr)	(Microgram / Kilogram) / Hour = microgram / (kilogram □□hours) (e.g., mass dose of medication per Patient body weight per hour)
ug/(8.hr.kg)	(Microgram / Kilogram) / 8 hour shift = microgram / (kilogram □□8 hour shift) (e.g., mass dose of medication per Patient body weight per 8 hour shift)
ug/(kg.min)	(Microgram / Kilogram) / Minute = microgram / (kilogram □□minute) (e.g., mass dose of medication per Patient body weight per minute)
ug/L	Microgram / Litre
ug/m2	Microgram / Metre$_2$ (e.g., mass dose of medication per Patient body surface area)
ug/min	Microgram / Minute
uiu	*Micro international unit
ukat	*Microkatel
um	Micrometre (Micron)
umol	Micromole
umol/d	Micromole / Day
umol/L	Micromole / Litre
umol/min	Micromole / Minute
us	Microsecond
uv	Microvolt

Code/Abbreviation	Name
mbar	Millibar (1 millibar = 100 pascals)
mbar.s/L	Millibar / (litre / second) =(millibar □□second) / litre (e.g., expiratory resistance)
meq	*Milliequivalent
meq/d	*Milliequivalent / Day
meq/hr	*Milliequivalent / Hour
meq/(8.hr)	Milliequivalent / 8 Hour Shift
meq/kg	Milliequivalent / Kilogram (e.g., dose of medication in milliequivalents per Patient body weight)
meq/(kg.d)	(Milliequivalents / Kilogram) / Day = milliequivalents / (kilogram □□day) (e.g., dose of medication in milliequivalents per Patient body weight per day)
meq/(kg.hr)	(Milliequivalents / Kilogram) / Hour = milliequivalents / (kilogram □□hour) (e.g., dose of medication in milliequivalents per Patient body weight per hour)
meq/(8.hr.kg)	(Milliequivalents / Kilogram) / 8 Hour Shift = milliequivalents / (kilogram □□8 hour shift) (e.g., dose of medication in milliequivalents per Patient body weight per 8 hour shift)
meq/(kg.min)	(Milliequivalents / Kilogram) / Minute = milliequivalents / (kilogram □□minute) (e.g., dose of medication in milliequivalents per Patient body weight per minute)
meq/L	Milliequivalent / Litre
meq/m2	Milliequivalent / Metre^2 (e.g., dose of medication in milliequivalents per Patient body surface area)
meq/min	Milliequivalent / Minute
mg	Milligram
mg/m3	Milligram / Metre^3
mg/d	Milligram / Day
mg/dL	Milligram / Decilitre
mg/hr	Milligram / Hour
mg/(8.hr)	Milligram / 8 Hour shift
mg/kg	Milligram / Kilogram
mg/(kg.d)	(Milligram / Kilogram) / Day = milligram / (kilogram □□day) (e.g., mass dose of medication per Patient body weight per day)
mg/(kg.hr)	(Milligram / Kilogram) / Hour = milligram/ (kilogram □□hour) (e.g., mass dose of medication per Patient body weight per hour)
mg/(8.hr.kg)	(Milligram / Kilogram) /8 Hour Shift = milligram / (kilogram □□8 hour shift) (e.g., mass dose of medication per Patient body weight per 8 hour shift)
mg/(kg.min)	(Milligram / Kilogram) / Minute = milligram / (kilogram □□minute) (e.g., mass dose of medication per Patient body weight per hour)
mg/L	Milligram / Litre
mg/m2	Milligram / Metre^2 (e.g., mass dose of medication per Patient body surface area)
mg/min	Milligram / Minute

Code/Abbreviation	Name
mL	Millilitre
mL/cm_h20	Millilitre / Centimetres of Water (H_20) (e.g., dynamic lung compliance)
mL/d	*Millilitre / Day
mL/(hb)	Millilitre / Heart Beat (e.g., stroke volume)
mL/((hb).m2)	(Millilitre / Heart Beat) / $Metre_2$ = Millilitre / (Heart Beat □□$Metre_2$) (e.g., ventricular stroke volume index)
mL/hr	*Millilitre / Hour
mL/(8.hr)	*Millilitre / 8 Hour Shift
mL/kg	Millilitre / Kilogram (e.g., volume dose of medication or treatment per Patient body weight)
mL/(kg.d)	(Millilitre / Kilogram) / Day = millilitre / (kilogram □□day) (e.g., volume dose of medication or treatment per Patient body weight per day)
mL/(kg.hr)	(Millilitre / Kilogram) / Hour = millilitre / (kilogram □□hour) (e.g., volume dose of medication or treatment per Patient body weight per hour)
mL/(8.hr.kg)	(Millilitre / Kilogram) / 8 Hour Shift = millilitre / (kilogram □□8 hour shift) (e.g., volume dose of medication or treatment per body weight per 8 hour shift)
mL/(kg.min)	(Millilitre / Kilogram) / Minute = millilitre / (kilogram □□minute) (e.g., volume dose of medication or treatment per Patient body weight per minute)
mL/m2	Millilitre / $Metre^2$ (e.g., volume of medication or other treatment per Patient body surface area)
mL/mbar	Millilitre / Millibar (e.g., dynamic lung compliance)
mL/min	Millilitre / Minute
mL/(min.m2)	(Millilitre / Minute) / $Metre_2$ = millilitre / (minute □□$metre_2$) (e.g., millilitres of prescribed infusion per body surface area; oxygen consumption index)
mL/s	Millilitre / Second
mm	Millimetre
mm(hg)	*Millimetre (HG) (1 mm Hg = 133.322 kilopascals)
mm/hr	Millimetre/ Hour
mmol/kg	Millimole / Kilogram (e.g., molar dose of medication per Patient body weight)
mmol/(kg.d)	(Millimole / Kilogram) / Day = millimole / (kilogram □□day) (e.g., molar dose of medication per Patient body weight per day)
mmol/(kg.hr)	(Millimole / Kilogram) / Hour = millimole / (kilogram □□hour) (e.g., molar dose of medication per Patient body weight per hour)
mmol/(8.hr.kg)	(Millimole / Kilogram) / 8 Hour Shift = millimole / (kilogram □□8 hour shift) (e.g., molar dose of medication per Patient body weight per 8 hour shift)
mmol/(kg.min)	(Millimole / Kilogram) / Minute = millimole / (kilogram □□minute) (e.g., molar dose of medication per Patient body weight per minute)
mmol/L	Millimole / Litre

Code/Abbreviation	Name
mmol/hr	Millimole / Hour
mmol/(8hr)	Millimole / 8 Hour Shift
mmol/min	Millimole / Minute
mmol/m2	Millimole / Metre^2 (e.g., molar dose of medication per Patient body surface area)
mosm/L	*Milliosmole / Litre
ms	Milliseconds
mv	Millivolts
miu/mL	*Milliunit / Millilitre
mol/m3	Mole per cubic metre
mol/kg	Mole / Kilogram
mol/(kg.s)	(Mole / Kilogram) / Second = mole / (kilogram □□second)
mol/L	Mole / Litre
mol/s	Mole / Second
ng	Nanogram
ng/d	Nanogram / Day
ng/hr	*Nanogram / Hour
ng/(8.hr)	Nanogram / 8 Hour shift
ng/L	Nanogram / Litre
ng/kg	Nanogram / Kilogram (e.g., mass dose of medication per Patient body weight)
ng/(kg.d)	(Nanogram / Kilogram) / Day = nanogram / (kilogram □□day) (e.g., mass dose of medication per Patient body weight per day)
ng/(kg.hr)	(Nanogram / Kilogram) / Hour = nanogram / (kilogram □□hour) (e.g., mass dose of medication per Patient body weight per hour)
ng/(8.hr.kg)	(Nanogram / Kilogram) / 8 Hour Shift = nanogram / (kilogram □□8 hour shift) (e.g., mass dose of medication per Patient body weight per 8 hour shift)
ng/(kg.min)	(Nanogram / Kilogram) / Minute = nanogram / (kilogram □□minute) (e.g., mass dose of medication per Patient body weight per minute)
ng/m2	Nanogram / Metre^2 (e.g., mass dose of medication per Patient body surface area)
ng/mL	Nanogram / Millilitre
ng/min	*Nanogram / Minute
ng/s	*Nanogram / Second
nkat	*Nanokatel
nm	Nanometre
nmol/s	Nanomole / Second
ns	Nanosecond
n	Newton (force)
n.s	Newton second
(od)	*O.D. (optical density)

Code/Abbreviation	Name
ohm	Ohm (electrical resistance)
ohm.m	Ohm metre
osmol	Osmole
osmol/kg	Osmole per kilogram
osmol/L	Osmole per litre
/m3	*Particles / Metre$_3$
/L	*Particles / Litre
/(tot)	*Particles / Total Count
(ppb)	*Parts Per Billion
(ppm)	*Parts Per Million
(ppth)	Parts per thousand
(ppt)	Parts per trillion (10^12)
pal	Pascal (pressure)
/(hpf)	*Per High Power Field
(ph)	*pH
pa	Picoampere
pg	Picogram
pg/L	Picogram / Litre
pg/mL	Picogram / Millilitre
pkat	*Picokatel
pm	Picometre
pmol	*Picomole
ps	Picosecond
pt	Picotesla
(pu)	*P.U.
%	Percent
dm2/s2	Rem (roentgen equivalent man) = 10^{-2} metre$_2$ / second$_2$ = decimetre$_2$ / second$_2$ Dose of ionizing radiation equivalent to 1 rad of x-ray or gamma ray) [From Dorland's Medical Dictionary]
sec	Seconds of arc
sie	Siemens (electrical conductance)
sv	Sievert
m2/s	Square metre / second
cm2/s	Square centimetre / second
t	Tesla (magnetic flux density)
(td_u)	Todd Unit
v	Volt (electric potential difference)
1	Volume Fraction
wb	Weber (magnetic flux)

Table B 6: HL7 Figure 7-9 - Common ISO derived units and ISO+ extensions

NOTES:

** Starred items are not genuine ISO, but do not conflict.*

† This approach to units is discouraged by IUPAC. Retained only for backward compatibility.

HL7 Table 0070 – Specimen Source Code

Table B 7: HL7 Table 0070 - Specimen Source Code

Value	Description	Value	Description
ABS	Abscess	MBLD	Menstrual blood
AMN	Amniotic fluid	MLK	Milk
ASP	Aspirate	MILK	Breast milk
BPH	Basophils	NAIL	Nail
BIFL	Bile fluid	NOS	Nose (nasal passage)
BLDA	Blood arterial	ORH	Other
BBL	Blood bag	PAFL	Pancreatic fluid
BLDC	Blood capillary	PAT	Patient
BPU	Blood product unit	PRT	Peritoneal fluid / ascites
BLDV	Blood venous	PLC	Placenta
BON	Bone	PLAS	Plasma
BRTH	Breath(use EXHLD)	PLB	Plasma bag
BRO	Bronchial	PLR	Pleural fluid (thoracentesis fld)
BRN	Burn	PMN	Polymorphonuclear neutrophils
CALC	Calculus (= Stone)	PPP	Platelet poor plasma
CDM	Cardiac muscle	PRP	Platelet rich plasma
CNL	Cannula	PUS	Pus
CTP	Catheter tip	RT	Route of medicine
CSF	Cerebral spinal fluid	SAL	Saliva
CVM	Cervical mucus	SEM	Seminal fluid
CVX	Cervix	SER	Serum
COL	Colostrum	SKN	Skin
CBLD	Cord blood	SKM	Skeletal muscle
CNJT	Conjunctiva	SPRM	Spermatozoa
CUR	Curettage	SPT	Sputum
CYST	Cyst	SPTC	Sputum / coughed
DIAF	Dialysis fluid	SPTT	Sputum/ tracheal aspirate
DOSE	Dose med or substance	STON	Stone (use CALC)
DRN	Drain	STL	Stool = Fecal
DUFL	Duodenal fluid	SWT	Sweat

Value	Description	Value	Description
EAR	Ear	SNV	Synovial fluid (Joint fluid)
EARW	Ear wax (cerumen)	TEAR	Tears
ELT	Electrode	THRT	Throat
ENDC	Endocardium	THRB	Thrombocyte (platelet)
ENDM	Endometrium	TISS	Tissue
EOS	Eosinophils	TISG	Tissue gall bladder
RBC	Erythrocytes	TLGI	Tissue large intestine
EYE	Eye	TLNG	Tissue lung
EXHLD	Exhaled gas (=breath)	TISPL	Tissue placenta
FIB	Fibroblasts	TSMI	Tissue small intestine
FLT	Filter	TISU	Tissue ulcer
FIST	Fistula	TUB	Tube NOS
FLU	Body fluid, unsp	ULC	Ulcer
GAS	Gas	UMB	Umbilical blood
GAST	Gastric fluid/contents	UMED	Unknown medicine
GEN	Genital	URTH	Urethra
GENC	Genital cervix	UR	Urine
GENL	Genital lochia	URC	Urine clean catch
GENV	Genital vaginal	URT	Urine catheter
HAR	Hair	URNS	Urine sediment
IHG	Inhaled Gas	USUB	Unknown substance
IT	Intubation tube	VLT	Vault
ISLT	Isolate	VOM	Vomitus
LAM	Lamella	BLD	Whole blood
WBC	Leukocytes	BDY	Whole body
LN	Line	WAT	Water
LNA	Line arterial	WICK	Wick
LNV	Line venous	WND	Wound
LIQ	Liquid NOS	WNDA	Wound abscess
LYM	Lymphocytes	WNDE	Wound exudate
MAC	Macrophages	WNDD	Wound drainage
MAR	Marrow	XXX	To be specified in another part of the message
MEC	Meconium		

Table B 7: HL7 Table 0070 - Specimen Source Code

***Variance to HL7**: VLT Vault is not used in HL7.*

HPI 10006 2.1.1 Identifier Type

Table B 8: HPI 10006 2.1.1 Identifier Type

Code	Description
CH	Chiropractor Board Register Number
OH	Dental Council of New Zealand Register Number
DI	Dietetic Board Register Number
LT	Medical Laboratory Science Register Number
MC	Medical Council of New Zealand Register Number
MW	Midwifery Council Register Number
NC	Nursing Council Register Number
OS	Osteopath Board Register Number
OT	Occupational Therapy Board Register Number
PC	Register of Psychologists Number
PM	Pharmacy Council Register Number
PO	Podiatry Board Register Number
PT	Physiotherapy Board Register Number
RT	Medical Radiation Technology Board Register Number
OD	Optometry Board Optical Dispensing Register Number
OP	Optometry Board Register Number
OR	Optometry Board Optometry Prescriber Register Number
CS	Cervical Screening Identifier Number
HP	HealthPAC Number
AC	ACC Provider Number
ST	Staff List or Employee Number
HI	Health Practitioner Index CPN
HO	Health Practitioner Index - Organisation Identifier
HF	Health Practitioner Index - Facility Identifier

Table B 8: HPI 10006 2.1.1 Identifier Type

HL7 Table 0354 - Message Structure

Table B 9: HL7 Table 0354 - Message Structure

Value	Events
ACK	Varies
ADR_A19	A19
ADT_A01	A01, A04, A08, A13
ADT_A02	A02
ADT_A03	A03

Value	Events
ADT_A05	A05, A14, A28, A31
ADT_A06	A06, A07
ADT_A09	A09, A10, A11, A12
ADT_A15	A15
ADT_A16	A16
ADT_A17	A17
ADT_A18	A18
ADT_A20	A20
ADT_A21	A21, A22, A23, A25, A26, A27, A29, A32, A33
ADT_A24	A24
ADT_A30	A30, A34, A35, A36, A46, A47, A48, A49
ADT_A37	A37
ADT_A38	A38
ADT_A39	A39, A40, A41, A42
ADT_A43	A43, A44
ADT_A45	A45
ADT_A50	A50, A51
ADT_A52	A52, A53, A55
ADT_A54	A54
ADT_A60	A60
ADT_A61	A61, A62
BAR_P01	P01
BAR_P02	P02
BAR_P05	P05
BAR_P06	P06
BAR_P10	P10
CRM_C01	C01, C02, C03, C04, C05, C06, C07, C08
CSU_C09	C09, C10, C11, C12
DFT_P03	P03
DOC_T12	T12
DSR_P04	P04
DSR_Q01	Q01
DSR_Q03	Q03
EAC_U07	U07
EAN_U09	U09
EAR_U08	U08
EDR_R07	R07
EQQ_Q04	Q04
ERP_R09	R09

Value	Events
ESR_U02	U02
ESR_U02	U02
ESU_U01	U01
INR_U06	U06
INU_U05	U05
LSU_U12	U12, U13
MDM_T01	T01, T03, T05, T07, T09, T11
MDM_T02	T02, T04, T06, T08, T10
MFD_MFA	MFA
MFK_M01	M01, M02, M03, M04, M05, M06, M07, M08, M09, M10, M11
MFN_M01	M01
MFN_M02	M02
MFN_M03	M03
MFN_M04	M04
MFN_M05	M05
MFN_M06	M06
MFN_M07	M07
MFN_M08	M08
MFN_M09	M09
MFN_M10	M10
MFN_M11	M11
MFN_M12	M12
MFQ_M01	M01, M02, M03, M04, M05, M06
MFR_M01	M01, M02, M03, M04, M05, M06
NMD_N02	N02
NMQ_N01	N01
NMR_N01	N01
OMD_O03	O03
OMG_O19	O19
OML_O21	O21
OMN_O07	007
OMP_O09	O09
OMS_O05	O05
ORD_O04	O04
ORF_R04	R04
ORG_O20	O20
ORL_O22	022
ORM_O01	O01

Value	Events
ORN_008	O08
ORP_O10	O10
ORR_O02	O02
ORR_O02	O02
ORS_O06	O06
ORU_R01	R01
OSQ_Q06	Q06
OSR_Q06	Q06
OUL_R21	R21
PEX_P07	P07, P08
PGL_PC6	PC6, PC7, PC8
PMU_B01	B01, B02
PMU_B03	B03
PMU_B04	B04, B05
PPG_PCG	PCC, PCG, PCH, PCJ
PPP_PCB	PCB, PCD
PPR_PC1	PC1, PC2, PC3
PPT_PCL	PCL
PPV_PCA	PCA
PRR_PC5	PC5
PTR_PCF	PCF
QBP_Q11	Q11
QBP_Q13	Q13
QBP_Q15	Q15
QBP_Q21	Q21, Q22, Q23, Q24, Q25
QCK_Q02	Q02
QCN_J01	J01, J02
QRY_A19	A19
QRY_P04	P04
QRY_PC4	PC4, PC9, PCE, PCK
QRY_Q01	Q01
QRY_Q02	Q02
QRY_Q26	Q26
QRY_Q27	Q27
QRY_Q28	Q28
QRY_Q29	Q29
QRY_Q30	Q30
QRY_R02	R02
QRY_T12	T12

Value	Events
QSB_Q16	Q16
QVR_Q17	Q17
RAS_O17	O17
RCI_I05	I05
RCL_I06	I06
RDE_O01	O01
RDR_RDR	RDR
RDS_O13	O13
RDY_K15	K15
REF_I12	I12, I13, I14, I15
RER_RER	RER
RGR_RGR	RGR
RGV_O15	O15
ROR_ROR	ROR
RPA_I08	I08, I09, I10, 1II
RPI_I0I	I01, I04
RPL_I02	I02
RPR_I03	I03
RQA_I08	I08, I09, I10, I11
RQC_I05	I05, I06
RQI_I0I	I01, I02, I03, I07
RQP_I04	I04
RQQ_Q09	Q09
RRA_O02	O02
RRA_O18	O18
RRD_O14	O14
RRE_O12	O12
RRG_O16	O16
RRI_I12	I12, I13, I14, I15
RSP_K11	K11
RSP_K21	K21
RSP_K22	K22
RSP_K23	K23, K24
RTB_K13	K13
SPQ_Q08	Q08
SQM_S25	S25
SQR_S25	S25
SRM_S01	S01, S02, S03, S04, S05, S06, S07, S08, S09, S10, S11

Value	Events
SRR_S01	S01, S02, S03, S04, S05, S06, S07, S08, S09, S10, S11
SSR_U04	U04
SSU_U03	U03
SUR_P09	P09
SUR_P09	P09
TBR_R08	R08
TBR_R09	R09
TCU_U10	U10, U11
UDM_Q05	Q05
VQQ_Q07	Q07
VXQ_V01	V01
VXR_V03	V03
VXU_V04	V04
VXX_V02	V02
ORU_W01	W01
QRF_W02	W02

Table B 9: HL7 Table 0354 - Message Structure

HL7 User Defined Table 0006 – Religion

Table B 10: HL7 User Defined Table 0006 - Religion

Value	Description
AGN	Agnostic
ATH	Atheist
BAH	Baha'i
BUD	Buddhist
BMA	Buddhist: Mahayana
BTH	Buddhist: Theravada
BTA	Buddhist: Tantrayana
BOT	Buddhist: Other
CFR	Chinese Folk Religionist
CHR	Christian
ABC	Christian: American Baptist Church
AMT	Christian: African Methodist Episcopal
AME	Christian: African Methodist Episcopal Zion
ANG	Christian: Anglican
AOG	Christian: Assembly of God
BAP	Christian: Baptist

Value	Description
CAT	Christian: Roman Catholic
CRR	Christian: Christian Reformed
CHS	Christian: Christian Science
CMA	Christian: Christian Missionary Alliance
COC	Christian: Church of Christ
COG	Christian: Church of God
COI	Christian: Church of God in Christ
COM	Christian: Community
COL	Christian: Congregational
EOT	Christian: Eastern Orthodox
EVC	Christian: Evangelical Church
EPI	Christian: Episcopalian
FWB	Christian: Free Will Baptist
FRQ	Christian: Friends
GRE	Christian: Greek Orthodox
JWN	Christian: Jehovah's Witness
LUT	Christian: Lutheran
LMS	Christian: Lutheran Missouri Synod
MEN	Christian: Mennonite
MET	Christian: Methodist
MOM	Christian: Latter-day Saints
NAZ	Christian: Church of the Nazarene
ORT	Christian: Orthodox
COT	Christian: Other
PRC	Christian: Other Protestant
PEN	Christian: Pentecostal
COP	Christian: Other Pentecostal
PRE	Christian: Presbyterian
PRO	Christian: Protestant
QUA	Christian: Friends
REC	Christian: Reformed Church
REO	Christian: Reorganized Church of Jesus Christ-LDS
SAA	Christian: Salvation Army
SEV	Christian: Seventh Day Adventist
SOU	Christian: Southern Baptist
UCC	Christian: United Church of Christ
UMD	Christian: United Methodist
UNI	Christian: Unitarian

Value	Description
UNU	Christian: Unitarian Universalist
WES	Christian: Wesleyan
WMC	Christian: Wesleyan Methodist
CNF	Confucian
ERL	Ethnic Religionist
HIN	Hindu
HVA	Hindu: Vaishnavites
HSH	Hindu: Shaivites
HOT	Hindu: Other
JAI	Jain
JEW	Jewish
JCO	Jewish: Conservative
JOR	Jewish: Orthodox
JOT	Jewish: Other
JRC	Jewish: Reconstructionist
JRF	Jewish: Reform
JRN	Jewish: Renewal
MOS	Muslim
MSU	Muslim: Sunni
MSH	Muslim: Shiite
MOT	Muslim: Other
NAM	Native American
NRL	New Religionist
NOE	Nonreligious
OTH	Other
SHN	Shintoist
SIK	Sikh
SPI	Spiritist
VAR	Unknown

Table B 10: HL7 User Defined Table 0006 - Religion

User Defined Table 99NZHSC - Health Specialty

Table B 11:User Defined Table 99NZHSC - Health Specialty

Value	Description
D00	Age-related disability geriatric A, T & R sub-series
D01	Geriatric A, T & R (active rehabilitation)
D02	Geriatric A, T & R (continuing care)

Value	Description
D03	Geriatric A, T & R (intermittent planned programme)
D04	Geriatric A, T & R (respite / unplanned)
D10	Age-related disability geriatric residential care sub-series
D11	Geriatric residential care (hospital - long term)
D12	Geriatric residential care (hospital - short term / respite)
D13	Geriatric residential care (rest home - long term)
D14	Geriatric residential care (rest home - short term / respite)
D20	Age-related disability psychogeriatric A, T & R sub-series
D21	Psychogeriatric A, T & R (active rehabilitation)
D22	Psychogeriatric A, T & R (continuing care)
D23	Psychogeriatric A, T & R (intermittent planned programme)
D24	Psychogeriatric A, T & R (respite / unplanned)
D30	Age-related disability psychogeriatric residential care sub-series
D31	Psychogeriatric residential care (hospital - long term)
D32	Psychogeriatric residential care (hospital / respite)
D33	Psychogeriatric residential care (rest home - long term)
D34	Psychogeriatric residential care (rest home / respite)
D40	Physical disability a,t & r sub-series
D41	Physical disability A, T & R (active rehabilitation)
D42	Physical disability A, T & R (continuing care)
D43	Physical disability A, T & R (intermittent programme)
D44	Physical disability A, T & R (respite)
D50	Physical disability residential care sub-series
D51	Physical disability residential care (hospital - long term)
D52	Physical disability residential care (hospital / respite)
D53	Physical disability residential care (non-hospital - long term)
D54	Physical disability residential care (non-hospital - short term / respite)
D60	Intellectual disability A, T & R sub-series
D61	Intellectual disability A, T & R (active rehabilitation)
D62	Intellectual disability A, T & R (continuing care)
D63	Intellectual disability A, T & R (intermittent programme)
D64	Intellectual disability A, T & R (respite)
D70	Intellectual disability residential care sub-series
D71	Intellectual disability residential care (hospital - long term)
D72	Intellectual disability residential care (hospital - short term / respite)
D73	Intellectual disability residential care (non-hospital - long term)
D74	Intellectual disability residential care (non-hospital - short term / respite)
D80	Sensory disability A, T & R sub-series
D81	Sensory disability A, T & R (active rehabilitation)

Value	Description
D82	Sensory disability A, T & R (continuing care)
D83	Sensory disability A, T & R (intermittent programme)
D84	Sensory disability A, T & R (respite)
M00	General medicine
M05	Emergency medicine
M08	Specialist intensive care
M10	Cardiology
M14	Specialist paediatric cardiology
M15	Dermatology
M20	Endocrinology and diabetology
M24	Specialist paediatric endocrinology and diabetology
M25	Gastroenterology
M29	Specialist paediatric gastroenterology
M30	Haematology
M34	Specialist paediatric haematology
M35	Immunology
M40	Infectious diseases
M44	Specialist paediatric infectious diseases
M45	Neurology
M49	Specialist paediatric neurology
M50	Oncology
M54	Specialist paediatric oncology
M55	Paediatric medicine
M59	Specialist paediatric intensive care
M60	Renal medicine
M64	pecialist paediatric renal medicine
M65	Respiratory medicine
M69	Specialist paediatric respiratory medicine
M70	Rheumatology
M74	Specialist paediatric rheumatology
M75	Venereology
M79	Specialist paediatric venereology
M80	Palliative and terminal care medical services
M84	Specialist paediatric palliative care
M85	Other medical services
M86	Specialist nuclear medicine
M89	Specialist interventionist radiology
M90	Radiotherapy
M94	Specialist paediatric radiotherapy

Value	Description
P00	Antenatal services
P10	Delivery services [mother]
P11	Primary delivery services [midwife]
P20	Postnatal services [mother]
P30	Postnatal services [well newborn]
P35	Primary postnatal services [specialist]
P41	Paediatric neonatal special care [level I]
P42	Paediatric neonatal special / intensive care [level II]
P43	Paediatric neonatal special / intensive care [level III]
P50	Postnatal early intervention
S00	General surgery
S05	Anaesthesiology
S10	Gastroenterological surgery
S15	Cardiothoracic surgery
S19	Thoracic surgery
S20	Dental surgery
S24	Maxillo-facial surgery
S25	Otorhinolaryngology (ent)
S30	Gynaecology
S35	Neurosurgery
S40	Ophthalmology
S45	Orthopaedic surgery
S50	Spinal surgery
S58	Specialist paediatric surgery [neonates]
S59	Specialist paediatric surgery [others]
S60	Plastic surgery [excluding burns]
S65	Burns surgery
S70	Urology
S75	Vascular surgery
Y01	Adult mental health individual treatment services
Y02	Adult mental health group programmes
Y03	Adult acute/crisis mental health services
Y04	Intensive care mental health services
Y05	Adult mental health care co-ordination
Y06	Adult mental health early psychosis intervention
Y07	Adult mental health consultation/liaison
Y08	Adult mental health intensive care services
Y09	Adult acute / crisis health services
Y11	Psychiatric disability rehabilitation (inPatient - long term)

Value	Description
Y12	Psychiatric disability rehabilitation (inPatient - short term/respite)
Y15	Clozapine treatment
Y16	Risperidone treatment
Y18	Adult mental health acute inPatient services
Y22	Forensic mental health medium secure
Y23	Forensic mental health maximum secure
Y24	Forensic court liaison
Y25	Forensic prison liaison
Y29	Forensic consultation/liaison
Y33	Maori mental health acute/crisis services
Y38	Maori mental health acute inPatient services
Y41	Substance abuse individual treatment services
Y42	Substance abuse group programmes
Y43	Substance abuse detoxification services (medical)
Y44	Methadone treatment
Y45	Substance abuse detoxification services (social)
Y46	Substance abuse care co-ordination
Y47	Substance abuse consultation / liaison
Y53	Child and adolescent acute/crisis services
Y58	Child and adolescent mental health acute inPatient services
Y60	Mental health skills enhancement
Y61	Social and recreational
Y62	Activity and skill development
Y63	Work opportunities
Y71	Community mental realth residential level 1
Z99	Migrated data only (NZHIS use only)

Table B 11: User Defined Table 99NZHSC - Health Specialty

HL7 Table 0074 - Diagnostic Service Section ID

Table B 12: HL7 Table 0074 - Diagnostic Service Section ID

Value	Description
AU	Audiology
BG	Blood gases
BLB	Blood bank
CUS	Cardiac Ultrasound
CTH	Cardiac catheterisation
CAT	CT scan
CH	Chemistry

Value	Description
CP	Cytopathology
EC	Electrocardiac (e.g., EKG, EEC, Holter)
EN	Electroneuro (EEG, EMG, EP, PSG)
HM	Hematology
ICU	Bedside ICU Monitoring
IMG	Diagnostic Imaging
IMM	Immunology
LAB	Laboratory
MB	Microbiology
MCB	Mycobacteriology
MYC	Mycology
NMS	Nuclear medicine scan
NMR	Magnetic resonance
NRS	Nursing service measures
OUS	Obstetrical ultrasound
OT	Occupational Therapy
OTH	Other
OSL	Outside Lab
PAR	Parasitology
PAT	Pathology (gross & histopath, not surgical)
PHR	Pharmacy
PT	Physical Therapy
PHY	Physician (Hx. Dx, admission note, etc.)
PF	Pulmonary function
RAD	Radiology
RX	Radiographic image(s)
RUS	Radiological ultrasound
RC	Respiratory Care (therapy)
RT	Radiation therapy
SR	Serology
SP	Surgical Pathology
TX	Toxicology
URN	Urinalysis
VUS	Vascular Ultrasound
VR	Virology
XRC	Cineradiograph

Table B 12: HL7 Table 0074 - Diagnostic Service Section ID

Appendix C: Variances to HL7 Standard version 2.4

(Informative)

Variances to HL7 Standard Version 2.4 - An Application Protocol for Electronic Data Exchange in Healthcare Environments are listed below. The chapter and table numbers and segments refer to the Messaging Standard.

Chapter # containing Variance	Table # containing Variance	Variance (Segment) Details	Difference
5.1.6.26	Table 48	XAD	The extended Street Address type in the first component is not used in New Zealand
5.1.6.29	Table 54	XPN	This definition uses an ST type for Family Name.
5.2.2		DG1-3	This field is required in this implementation
5.6.4		MSH-4	HL7 does not require this field
5.6.6		MSH-6	HL7 does not require this field
5.6.7		MSH-7	HL7 does not require this field
5.6.9		MSH-9	According to HL7 v2.4 this field should be length 13. This has been confirmed as an error and has been corrected to 15 in HL7 v2.5.
5.7.2		NK1-2	HL7 does not require this field
5.7.3	Table 81	NK1-3	This is optional in HL7
5.8.1		NTE-1	This implementation requires the use of Set IDs for NTE segments
5.9.2		OBR-2	The length of this field has been extended to 50
5.9.3		OBR-3	The length of this field has been extended to 50
5.9.14		OBR-16	This field is required in this implementation
5.9.26	Table 95	OBR-30	The value “CART” is described as a cart or gurney in HL7
5.10.5		OBX-5	The size of this field has been increased to 5MB
5.10.11	Table 109	OBX-11	The usage of a value of ‘O’ to send a prototype of an OBX segment is not allowed in this implementation
5.11.1	Table 111	ORC-1	This field is extended to ORC-1 is extended to include the code ‘IN’ for specific information requirements for Medications, Alerts, Family History and Accident details.
5.11.2		ORC-2	The length of this field has been extended to 50

5.11.3		ORC-3	The length of this field has been extended to 50
5.13.7	Table 123	PID-10	New Zealand usage allows only 3 repeats of this field. This field is called “Race” in HL7 v2.4.
5.15.1	Table 133	PRD-1	HL7 uses values from HL7 User Defined Table 0286 in this field
5.16.15	Table 139	PV1-15	HL7 uses the term ‘transient handicapped condition’
5.18.7	Table 161	RF1-10	This field may repeat as many times as necessary to communicate all referred reasons. The values “T”, “E” and “F” have been added to the standard HL7 table for local usage
5.20.5		RXA-5	For this implementation this field is optional
5.20.6		RXA-6	For this implementation this field is optional
5.23.1	Table 174	RXR-1	Code “U” has been added to the table to indicate unknown route
Appendix B	Table B 7	HL7 Table 0070 - Specimen Source Code	VLT Vault is not used in HL7