Healthlink Online Message Specification

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1.1 Version History

Date	Version	Authors	Reason for change
17/12/2007	1.1	Gemma Garvan \Orla Doogue	This document was based on the HospInfoDoc for Healthlink Online Version 1 & 2. It contains all the additional information on the updates and enhancements of Healthlink Online Version 3
14/07/2008	1.2	Senthil Nathan	Update document with field lengths and additional optional fields.
01/08/2008	1.3	Gemma Garvan	PID.13 field was updated for phone no and email address. PID.15 added and Table 0396
20/08/2008	1.4	Senthil Nathan	Update document with field lengths and additional optional fields.
09/09/2008	1.5	Senthil Nathan	Added PV1.20 SEQ for Financial Class and added user-defined table 0064 for Financial Class Value.
11/09/2008	1.6	Senthil Nathan	Splited all HL7 tables to a separate document (HL7_tables.doc)
14/10/2008	1.7	Senthil Nathan	Updated document with Gastrointestinal Cancer Referral Message type, added OBX.4 for Observation Sub-Id, added PV1/PV1.3/PL.4/ HD.1; HD.2; HD.3 for assigned patient location, changed description for OBR.7 SEQ, Updated Laboratory Result Message with Microbiology result to be fixed width font and OBR.24 as a required field.
19/01/2009	1.8	Senthil Nathan	Added PID segment and removed PV1 segment for The Co-op Discharge Summary Message
27/01/2009	1.9	Senthil Nathan	Removed all the references to Healthlink Integration Pack
09/02/2009	2.0	Senthil Nathan	Updated MSH.7 with field TS.1
23/03/2009	2.1	Senthil Nathan	Added new Message type Inpatient Admission
10/05/2009	2.2	Gemma Garvan	Updated section on message encoding to be more specific on the conversion utility available for standard encoded messages.
29/07/2009	2.3	Senthil Nathan	Added RF1 Segment, Added PRD/PRD.2/XPN.6 field. Added PID.13/XTN.1/XTN.2/XTN.3, PRD.5/ XTN.2/XTN.3, OBR.17/XTN.2/XTN.3 and ORC/XTN.2/XTN.3 Added Cardiology Result Message, Updated the Gastrointestinal Cancer Referral Message, Added The Prostate Cancer Referral & Response Message, Added The Breast Clinic Referral & Response Message, Updated Co-op Discharge Summary Message, Added LOINC code List, Added HL7 tables, Added HLINK Local code list.
02/11/2009	2.5	Senthil Nathan	Added new LOINC and HLINK Local codes.
20/01/2010	2.6	Orla Doogue	Review changes, took DG1 segment out of coop out-of-hours message and referrals.
10/02/2010	2.7	Orla Doogue	Changed DG1.1 and DG1.6 optionality from RNC to RC. Added HLINK Local code for Previous Mammogram Date.
16/03/2010	2.8	SenthilNathan	Added Lung Cancer Referral & Response Message Type. Added Lung & Gastrointestinal Cancer Segment LOINC list.
03/06/2010	2.9	Orla Doogue	Added information for GP practice management systems to use fixed width font to display Healthlink results that use reporting/text results in section 3.4.4.

23/06/2010	2.10	Karen Wynne	Added codes for MRI & Chest Pain referrals
25/08/2010	2.11	Senthil Nathan	Changed Healthlink Local code text 'Symptoms Duration' to 'Symptom Duration' to match the description as in the Message construction guidelines document.
21/09/2010	2.12	Martin Krim	Updated section 3 The Healthlink Messages
12/10/2010	2.13	Senthil Nathan	Updated Section-3 'The Healthlnk Messages'. Updated OBX segment details for the 'The Laboratory Result Message'
13/10/2010	2.14	Gemma Garvan	Renamed document to remove reference to document being for Practice Management System vendors only
12/11/2010	2.15	Senthil Nathan	Removed 'New Message Types' section from Section-2. Updated Section 3.4.1 to support LOINC codes. Changed PID.13 field name to 'Patients Personal Contact details', and updated description to accept mobile number and email address. Updated PRD.5/XTN.1 field description to accept mobile number and email address. Added new Acknowledgement and Outpatient Clinic Letter message types. Updated Table 0361 with new values. Referral Changes: All the Referral messages are grouped together, and all the NCCP Referrals & Neurology Referral details are changed to new format with references to relevant implementation guidelines document(s).
17/01/2011	2.16	Orla Doogue Senthil Nathan	Added further information to the <copy to> OBR.28 field. Added extra values to table 0361. Changed optionality for OBR.22 field. Changed length of SCH.11/TQ.6. Updated values in table 0281. Added new LOINC and HLINK Local Codes.
06/05/2011	2.17	Karen Wynne	Added 'GE' to Sending/Receiving Application table 0361
22/06/2011	2.18	Orla Doogue	Added A&E Letter specification. Updated Message types outlining recommended/required fields for each segment used. Updated optionality for some fields where inconsistency existed with HL7 v2.4 spec.
24/07/2012	2.19	Orla Doogue	Changed length of MSH.10 field from 199 to 50.
29/11/2012	2.2	Orla Doogue	Brought lengths in line with HL7 2.4 library where sub-components extended the recommended lengths. This should not affect any current data being sent from hospitals. Added CSP ID to Table 0203 for Cervical Check patient id.
01/03/2013	2.3	Orla Doogue	Removed the DG1 segment for Lab Order Message. This is not used in any lab order implementation.
04/07/2013	2.31	Orla Doogue	Updated values in table 0361. Updated max length in fields OBR.2 and OBR.3 to 75, OBR.13 to 1,000 and PV1.3 to 250. Added an Appendix 5 for further explanation to this. Added D for Day Case Patient to Table 0004 - PV1.2, Patient Class
24/10/2013	2.32	Orla Doogue	Updated MSH.6 to reflect how to capture new national GP codes.

31/10/2013	2.33	Karen Wynne	Updated SCH/SCH.6/CE.2 Event Reason to remove reference to table 0276
29/11/2013	2.34	Orla Doogue	Added that OBR.15 is required for lab results.
08/01/2014	2.35	Karen Wynne	Update Admit Source table 0023 for PV1.14
03/02/2014	2.36	Orla Doogue	Remove reference to Gastrointestinal Cancer Referral Message, no longer in use as an electronic referral-was not a national referral.
03/02/2014	2.4	Orla Doogue	Update optionality in tables using mandatory/optional and conditional only. Added obr.16, xcn.2/3, removed obr.16, xcn.16. Added G/General Practitioner to table 0004 (PV1.2) Updated some recommended field info for message types. DG1 Segment removed from outpatient letter & Waiting List messages
26/08/2015	2.41	Gemma Garvan	Updated table 0203 to include references to IHI and HSPI
14/01/2016	2.42	Karen Wynne	Renamed A&E Letter (message type 19) to Emergency Department Letter

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2 Introduction

This document was based on the National Healthlink Project's original specification documents called HospInfoDoc. The document was redesigned with a new layout and includes details of the new features incorporated in the Version 3 of HealthlinkOnline application. Healthlink has attempted to build the new application with a backward compatible export feature for Practice Management System Integration. It does however have new fields, element and features available for updating the integration of existing and new message types. Throughout this document you will see reference to these new features but the following are the key areas of change from Version 2 of HealthlinkOnline to Version 3.

If you are new to interfacing with Healthlink Online this document should contain all the information you require.

New Features:

Copy To: Laboratory, Radiology and Co-op Messages may now contain data in the OBR.28 that indicates that the recipient was not the originating requestor of the test but has been specifically copied on the test result.

Repeatable Segments: Healthlink can now accept and export valid repeatable segments.

Escape Sequences: Healthlink can now accept and export valid XML escape sequences.

Web Services: Healthlink now have the ability to enable integration of messages to be initiated automatically from within the vendors systems using web service calls. Separate documentation is available from Healthlink for this feature.

2.1 Document Purpose

This document is intended to provide a definitive guide as to:

1. What message types are supported by HealthlinkOnline.
2. What message formats will be accepted
3. What data is required in each of the supported message types
4. What values are allowed in the fields that represent User Defined Tables

This document IS NOT an attempt to inform the reader about HL7. Please refer to the HL7 specification for further detail on the full HL7 specification.

2.2 Overview

Healthlink is a National Messaging System, allowing any Hospital, or secondary healthcare facility, to send messages to GP's via a central database managed by Healthlink. Healthlink provides a web interface for GP's to check messages that are addressed to them.

Healthlink Online exclusively supports HL7 Version 2.4

The Abstract Message Definitions for the HL7 Message Types that Healthlink uses are included in Appendix 1. Due to their complexity the schema's are not suitable for inclusion in this document. Schema's are available upon request from Healthlink. We recommend XML Spy Professional for viewing the schema's in a readable format.

2.3 Message Types

There are two distinct meanings for the term *message type* in this document. HL7 Defines a message type, such as ORU R01which is an *Unsolicited Transmission of Observation Message*. We will refer to such a message type as a HL7 Message Type.

Healthlink also defines its own message types. For example, the ORU R01 HL7 message type is used for two *Healthlink* message types: the Laboratory Result Message and the Radiology Result Message.

2.4 Message Encoding

In version 2.4 there are two options for message encoding: the standard encoding or XML encoding.

The National Healthlink Project conforms to the Irish National Messaging standards for message exchange between Primary and Secondary care providers (HeBE Messaging Standards). This standard is based on HL7 v2.4 in XML encoding. Healthlink can accept HL7 2.4 messages in standard encoding by running them through its conversion utility. This utility is only suitable for messages that confirm to this documents expected fields and segments per message type and will not strip out unexpected HL7 segments or fields.

The messages supplied must at least conform to the corresponding Abstract Message Structure definition for standard encoding, or the corresponding XML Schema for XML encoding. Healthlink recommend that vendors supply messages in XML encoding where possible.

3 The Healthlink Messages

Healthlink Message Type	HL7 Abstract Message Type	Healthlink Message Type ID
Laboratory Order	OML O21	1
Inpatient Admission	ADT A01	2
Outpatient Clinic Letter	REF I12	3
A&E Notification	ADT A01	4
Discharge Summary	REF I12	5
Death Notification	ADT A03	6
Radiology Result	ORU R01	7
OPD Appointment	SIU S12	8
Waiting List	SIU S12	9
Laboratory Result	ORU R01	10
Laboratory NACK	ORL O22	11
Discharge Notification	ADT A03	12
Acknowledgement	ACK	13
Neurology Referral	REF I12	14
Neurology Referral Response	RRI I12	15
Co-op Discharge	REF I12	16
Cardiology Result	ORU R01	17
Oesophageal & Gastric Cancer Referral	REF I12	18
Emergency Department Letter	REF I12	19
Prostate Cancer Referral	REF I12	20
Prostate Cancer Referral Response	RRI I12	21
Breast Cancer Referral	REF I12	22
Breast Cancer Referral Response	RRI I12	23
Lung Cancer Referral	REF I12	24
Lung Cancer Referral Response	RRI I12	25
Chest Pain Referral	REF I12	26
Chest Pain Referral Response	RRI I12	27
MRI Request	REF I12	28

MRI Request Response	RRI I12	29
General Referral	REF I12	30
General Referral Response	RRI I12	31

3.1 Notation

The following columns will appear in each table that describes each segment.

- SEQ: The sequence of the element in the segment
- ELEMENT | FIELD NAME: The name and fully qualified X-Path expression indicating the component/sub-component. The X-Path expression is taken from the root node in the XML Tree.
- OPT: Indicates whether a field is optional or required. The following values will be used:
  - O – Completely optional
  - RNC – Required, Not Critical
  - OR – Optional, but strongly recommended
  - RC – Required and Critical. If the data is missing or incorrect the message may not be delivered, or may have limited value
- LEN: The allowed number of characters that will be handled by the Healthlink Database. When an item is not stored in the Healthlink Database then this column will contain a dash (-). Any data in such a field must still conform to the lengths indicated by the HL7 specification.
- TBL#: This indicates the table number of the HL7, HL7 User Defined Table or Healthlink User Defined Table that the field uses. If this column is empty this field is not based on a table.
  When this column in filled with a numerical value, then the data provided for this element must conform to the Table Value and Description.
  For ID and IS Data Type fields only the Table Value need appear. For CE elements that are based on tables, then CE.1 carries the table value, CE.2 the table description. CE.3 will contain HL7#### where #### is the HL7 defined table number that is being used. See section 3.4.1 for more information
  Tables Listings are given in Appendix 2.
- DISP: This indicates whether the GP's see this data on the Web User interface when viewing messages. It is not an indication of what is viewable via a practice management system that allows integration of the message. This will vary with each implementation by the various vendors.
- DESCRIPTION: a basic description of the element, component or sub-component.
- OTHER INFO: Used to describe any other essential information.

3.2 Healthlink Validation Schema's

Schema's are available upon request from Healthlink. We recommend XML Spy Professional for viewing the schema's in a readable format.

3.3 How Healthlink Handles Exceptions

Messages may deviate somewhat from the specification laid out in this document, while still being fully compatible with the system.

3.3.1 Additional Elements & Fields

Healthlink Online Version 3 will allow hospitals to provide any valid HL7 v 2.4 messages. Healthlink recommend that for integration purposes that you should allow for any valid HL7 message to integrate into your system. If a message contains additional elements and fields that you do not require, they should not cause an integration error.

3.3.2 Additional Repeating Segments

In general the only repeating segments that are expected in Healthlink is the repeating OBR and OBX segments in the Laboratory Results message. Healthlink Online Version 3 will however allow for any valid repeating segments.

3.4 General Guidelines

3.4.1 Hospitals Filling CE Data Type Components

Hospitals are given the following guidelines when filling the CE data types.

The CE Data Type has CE components labelled CE.1 through to CE.6 in the XML Encoding. With Healthlink, Hospitals should use the CE element for the following:

- holding data that is based on defined tables (see Appendix 2)
- holding data based on defined and recognised coding systems
- holding data that is not bound to any tables or coding systems, i.e. free text
- holding data that is based on local hospital tables or coding systems

When filling data that is based on defined tables from Appendix 2:
CE.1 must contain the reference to a *value* in the used table
CE.2 must contain meaningful descriptive text
CE.3 must contain a reference, for example:
HL7#### (# is a digit [0-9]) for HL7 Defined tables
L to indicate Local code
LN to indicate LOINC code

When filling data that is based on the local hospital tables or coding systems
CE.1 - Enter the code here
CE.2 - Must contain a meaningful description
CE.3 - Must contain the name of the coding system used in CE.1
Note: `CE.1 and CE.3 should uniquely identify value in CE.2`

3.4.2 Special Characters and Escape Sequences

Escape sequences are most used when messages are encoded in the standard way, although they are still required for certain situations in the XML encoding.

3.4.3 Special Characters

Healthlink will not accept deviations from the suggested special characters:

Delimiter	Suggested Value	Encoding Character Position	Usage
Segment Terminator	<cr> (hex 0D)	-	Terminates a segment record. This value cannot be changed by implementors.
Field Separator	|	-	Separates two adjacent data fields within a segment. It also separates the segment ID

			from the first data field in each segment.
Component Separator	^	1	Separates adjacent components of data fields where allowed.
Subcomponent Separator	&	4	Separates adjacent subcomponents of data fields where allowed. If there are no subcomponents, this character may be omitted.
Repetition Separator	~	2	Separates multiple occurrences of a field where allowed.
Escape Character	\	3	Escape character for use with any field represented by an ST, TX or FT data type, or for use with the data (fourth) component of the ED data type. If no escape characters are used in a message, this character may be omitted. However, it must be present if subcomponents are used in the message.

The above characters should be replaced by the following:
\E\ Escape character converted to escape character (e.g., '\')
\F\ Field separator converted to field separator character (e.g., '|')
\R\ Repetition separator converted to repetition separator character (e.g., '~')
\S\ Component separator converted to component separator character (e.g., '^')
\T\ Subcomponent separator converted to subcomponent separator character (e.g., '&')

3.4.4 Formatted Text

Healthlink Online Version 3 allows for the following valid HL7 v 2.4 formatting commands in XML encoding only.

	Meaning
Escape character to be used in v2 XML encoding	
<escape V=".br"/>	Begin new output line. Set the horizontal position to the current left margin and increment the vertical position by 1.
<escape V=".in*n*"/> where *n* = number	Indent <number> of spaces, where <number> is a positive integer. This command cannot appear after the first printable character of a line.

The following five characters should not be used in XML documents:
<, >, &, ', "
They should be replaced with:
< for <
> for >
& for &
' for '
" for "

NB: Please ensure that a FIXED WIDTH FONT is used for ORU messages that contain a text report in OBX.5. This is to ensure the correct alignment is displayed to the GP in the same way it is displayed in the lab systems.

Three optionalities are used, R – Required/O-Optional and C-Conditional. Conditional usually means it is required in certain message types and will be identified under that message type section. In some cases Conditional may mean add if available. This will be flagged with a C*.

3.5 Message Segments

3.5.1 The MSH segment (Message Header)

This segment provides the context for the entire message.

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
1	Field Separator MSH.1	R	1		N	This is expected to contain the standard field separator of |	
2	Encoding Characters MSH.2	R	4		N	This is expected to contain the standard encoding characters of ^~\&	
3	Sending Application MSH/MSH.3/HD.1	R	50	0363	N	This field will contain the identifier indicating the Healthlink Message Type. This field will also contain the generating systems name and the middleware name preceding the Healthlink message number in accordance with the HeBE standard review as follows; GeneratingSystem.Middleware.MessageNo e.g. Apex.Healthlink.10	Note: For Ihbound message types (Lab Orders and Referral) this will contain a value of "HealthlinkOnline" as these messages are generated on the Healthlink application.
3	Sending Application MSH/MSH.3/HD.2	R	50		N	Universal ID	RC only for inbound messages
3	Sending Application MSH/MSH.3/HD.3	R	50	0301	N	Universal ID Type	RC only for inbound messages
4	Sending Facility MSH/MSH.4/HD.1	R	50	0363	N	The name of the sender. For outbound messages this is the name of the sending hospital.	For Inbound messages (Lab Order and referral's) this will be HealthlinkOnline or the referring GP as this is where the message is being generated.
4	Sending Facility MSH/MSH.4/HD.2	R	50		Y*	The DOH Code as assigned by the Dept of Health. For Inbound messages (Lab Orders and Referrals) this is GP Code or Medical Council Number	
4	Sending Facility MSH/MSH.4/HD.3	R	50	0301	N	The string 'DOH' to indicate the coding system used to identify the sending facility.	
5	Receiving Application MSH/MSH.5/HD.1	O	50	0363	N	Namespace ID	
5	Receiving Application MSH/MSH.5/HD.2	O	50		N	Universal ID	
5	Receiving Application MSH/MSH.5/HD.3	O	50	0301	N	Universal ID Type	
6	Receiving Facility MSH/MSH.6/HD.1	R	50	0363	N	The name of the receiving facility. For outbound messages this is the GP's Name. For inbound messages the receiver is the hospital (dept or consultant) so the hospital name or receivers name is contained in this field.	The name in the format Surname, Firstname

6	Receiving Facility MSH/MSH.6/HD.2	R	50		N	The recipient GP's Medical Council Number is contained in this field. Note: For inbound message types (Lab Order, Neurology), this is the receiving hospital / dept or consultant code (Hospital code is taken from the DOH Code list)	NOTE: A hospital can now use the GP's medical council number concatenated with a . with the Healthlink Practice ID, which is now seen as a national id within messaging. To do this the value in MSH.6/HD.3 must be 'MCN.HLPracticeID'
6	Receiving Facility MSH/MSH.6/HD.3		50	0301	N	The coding system used in HD2	Should be L to represent Local coding or if using GP's Medical Council number and the Healthlink Practice ID, the value in MSH.6/HD.3 must be 'MCN.HLPracticeID' or this coding system will not work.
7	Date/Time of Message MSH/MSH.7/TS.1	R	26		Y	The time the message was generated by the source information system	
9	Message Type MSH/MSH.9/MSG.1	R	3	0076	N	The Message Type	Note: the HL7 Message Type is a combination of MSG.1 and MSG.2
9	Message Type MSH/MSH.9/MSG.2	R	3	0003	N	The Event Type	See above
10	Control ID MSH/MSH.10	R	50		N	The control ID off the sending application.	This should be a traceable reference back to the source information system that generated the message.
11	Processing ID MSH/MSH.11/PT.1	R	3		N	The Processing ID. This should be P for live messages.	Any messages sent with a processing ID other than P will not be visible by end users of Healthlink
12	Version ID MSH/MSH.12	R	20	0104	N	The version ID. This should be 2.4	

3.5.2 The RF1 Segment (Referral Information)

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
1	Referral Status/RF1/RF1.1/CE.1	O	50	0283	N	Referral Status ID	
1	Referral Status/RF1/RF1.1/CE.2	O	50	0283	N	Description of Referral Status	
1	Referral Status/RF1/RF1.1/CE.3	O	50	0396	N	Name of Coding System	Should be ' L' to represent Local coding
2	Referral Priority/RF1/RF1.2/CE.1	O	50	0280	N	Referral Priority ID	
2	Referral Priority/RF1/RF1.2/CE.2	O	50	0280	Y	Description of Referral Priority	
2	Referral Priority/RF1/RF1.2/CE.3	O	50	0396	N	Name of Coding System	Should be ' L' to represent Local coding
3	Referral Type/RF1/RF1.3/CE.1	O	50	0281	N	Referral Type ID	
3	Referral Type/RF1/RF1.3/CE.2	O	50	0281	N	Description of Referral Type	
3	Referral Type/ RF1/RF1.3/CE.3	O	50	0396	N	Name of Coding System	Should be ' L' to represent Local coding
6	Originating Referral Identifier/RF1/RF1.6/EI.1	R	30		N	Entity identifier	
7	Effective Date /RF1/RF1.7/TS.1	O	26		N	Time7 of an event	

3.5.3 The PID segment (Patient Identification)

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
3	Patient Identifier List PID/PID.3/CX.1	R	50		Y	The Patient ID (MRN) on the source hospital information system	
3	Patient Identifier List PID/PID.3/CX.4/HD.1	R	50		N	The name of the authority that assigned the MRN	
3	Patient Identifier List PID/PID.3/CX.4/HD.2	O	50		N	HIPE code of the assigning hospital	
3	Patient Identifier List PID/PID.3/CX.4/HD.3	O	50	0363	N	The string 'HIPE' to indicate the coding system used in HD.2	
3	Patient Identifier List PID/PID.3/CX.5	R	50	0203	N	The type of identifier used in CX.1, e.g. 'MRN'	The user defined table lists the various identifiers used.
5	Patient's Name PID/PID.5/XPN.1/FN.1	R	90		Y	The Patients Family Name	
5	Patient's Name PID/PID.5/XPN.2	R	50		Y	The Patient's First Name	
5	Patient's Name PID/PID.5/XPN.3	O	50		N	Middle names / and or initials	
5	Patient's Suffix PID/PID.5/XPN.4	O	10		N	Name Suffix	
5	Patient's Prefix PID/PID.5/XPN.5	O	10		N	Name Prefix	
5	Patient's Degree PID/PID.5/XPN.6	O	30	0360	N	Qualifications	
5	Patient's Name Type PID/PID.5/XPN.7	O	10	0200	*	Name type code	
7	Patient's DOB PID/PID.7/TS.1	R	26		Y	Patients Date of Birth in YYYMMDD format	
8	Patient's Administrative Sex PID/PID.8	R	1	0001	Y	Patient's Sex	
11	Patient's Address PID/PID.11/XAD.1/SAD.1	R	50		Y	Street Address	
11	Patient's Address PID/PID.11/XAD.2	C*	50		Y	Address Line 2	C* - Include if available
11	Patient's Address PID/PID.11/XAD.3	C*	50		Y	Address Line 3	
11	Patient's Address PID/PID.11/XAD.4	C*	50		Y	Address Line 4	
11	Patient's Address PID/PID.11/XAD.5	O	50		Y	Zip or Postal Code	
13	Patients Personal Contact details - PID/PID.13/XTN.1	O	50		Y	Phone number Home / Mobile number / Email address	
13	Patients Personal Contact details - PID/PID.13/XTN.2	O	3	0201	Y	Telecommunication use code	
13	Patients Personal Contact details - PID/PID.13/XTN.3	O	8	0202	Y	Telecommunication equipment Type (ID)	
13	Patients Personal Contact details - /PID.13/XTN.4	O	50		Y		
13	Patients Personal Contact details PID/PID.13/XTN.7	O	50		Y	Phone number	Used in Limerick, Nenagh and Ennis Radiology Msg type. Healthlink recommends users to use PID/PID.13/XTN.1 for phone number
15	Patients Primary Language PID.15/CE.1	O	20		N	Primary Language Code from ISO-639 table	Used in referral messages Note that all 3 subcomponents must be filled or empty for validation

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
15	Patients Primary Language PID.15/CE.2	O	50		Y	Description of coded language for display to the user	
15	Patients Primary Language PID.15/CE.3	O	20	0396	N	Name of coding system used. This should be ISO-639	ISO-639 Primary Language table attached below
29	Patient Death Date/Time PID/PID.29/TS.1	O	26		Y	The date and time of the patients death	
30	Patient Death Indicator PID/PID.30	C	1	0136	Y	A Yes | No indication as to whether the patient is deceased.	

3.5.4 The EVN Segment (Event Type)

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
2	Recorded Date/Time EVN/EVN.2/TS.1	R	26		N	The date and time at which the event was recorded on the source information system	

3.5.5 The PV1 Segment (Patient visit)

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
2	Patient Class PV1/PV1.2	R	1	0004	Y	The class of the patient in terms of: Inpatient, Outpatient, Emergency, Unknown	
3	Assigned Patient Location PV1/PV1.3/PL.4/HD.1	O	80		Y	Patient Location facility description	Referral Source description
3	Assigned Patient Location PV1/PV1.3/PL.4/HD.2	O	20		N	Patient Location Source	Referral Source Code
3	Assigned Patient Location PV1/PV1.3/PL.4/HD.3	O	20		N	Coding System	
3	Assigned Patient Location PV1/PV1.3/PL.9/	O	80		Y	The location of the patient as plain text	
7	Attending Doctor ID PV1/PV1.7/XCN.1	O	20		N	The Identifier for the Hospital Doctor. Expect the MCN or HIPE Code here.	This data is not required, however, if the source system stores the MCN of the Doctors' then do provide this. The MCN is recommended by the HeBE standard however if the system does not capture it and captures the doctors HIPE code then this may be provided in this field.
7	Attending Doctor PV1/PV1.7/XCN.2/FN.1	O	50		Y	The Family Name of the Attending Doctor	
7	Attending Doctor PV1/PV1.7/XCN.3	O	50		Y	The First Name of the Attending Doctor	
7	Attending Doctor PV1/PV1.7/XCN.4	O	50		N	Middle Names and/or initials	
7	Attending Doctor Suffix PV1/PV1.7/XCN.5	O	10		N	The Name Suffix	
7	Attending Doctor Prefix PV1/PV1.7/XCN.6	O	10		N	The Name Prefix	

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
8	Referring Doctor ID PV1/PV1.8/XCN.1	O	20		Y	The Identifier for the Doctor. This is used in Lab Order Messages	
8	Referring Doctor PV1/PV1.8/XCN.2/FN.1	O	50		Y	The Family Name of the Ref Doctor. This is used in Lab Order Messages	
8	Referring Doctor PV1/PV1.8/XCN.3	O	50		Y	The First Name of the Ref Doctor. This is used in Lab Order Messages	
8	Referring Doctor PV1/PV1.8/XCN.4	O	50		Y	Middle Names and/or initials. This is used in Lab Order Messages	
8	Referring Doctor Suffix PV1/PV1.8/XCN.5	O	10		Y	The Name Suffix	Jnr
8	Referring Doctor Prefix PV1/PV1.8/XCN.6	O	10		Y	The Name Prefix	Dr
9	Consulting Doctor ID PV1/PV1.9/XCN.1	O	20		N	The Identifier for the Doctor. Expect the MCN or HIPE Code here.	This data is not required, however, if the source system stores the MCN of the Doctors' then do provide this. The MCN is recommended by the HeBE standard however if the system does not capture it and captures the doctors HIPE code then this may be provided in this field.
9	Consulting Doctor PV1/PV1.9/XCN.2/FN.1	O	50		Y	The Family Name of the Consulting Doctor	
9	Consulting Doctor PV1/PV1.9/XCN.3	O	50		Y	The First Name of the Consulting Doctor	
9	Consulting Doctor PV1/PV1.9/XCN.4	O	50		N	Middle Names and/or initials	
9	Consulting Doctor Suffix PV1/PV1.9/XCN.5	O	10		N	The Name Suffix	
9	Consulting Doctor Prefix PV1/PV1.9/XCN.6	O	10		N	The Name Prefix	
14	Admit Source PV1/PV1.14	O	6	0023	Y – mapped	The Admit Source of the patient, as per the user defined table.	
15	Ambulatory Status PV1/PV1.15	O	2	0009	Y	The Ambulatory Status of the patient, as per the table 0009.	
19	Visit Number PV1.19/CX.1	O	50		Y	The hospitals episode number.	
20	Financial Class PV1/PV1.20/FC.1	O	20	0064	Y	Financial Class Code of the patient, as per the user defined table.	
20	Financial Class PV1/PV1.20/FC.2	O	26		N	Effective Date	
36	Discharge Disposition REF_I12.PATIENT_VISIT/PV1/PV1.36	C	2	0112	Y – mapped	The Discharge Disposition of the patient, as per the user defined table.	HeBE have updated this table
37	Discharge to Location REF_I12.PATIENT_VISIT/PV1/PV1.37/DLD.1	O	25	0113	Y	The discharge, if to another HIPE coded facility/hospital should be indicated here	
44	Admit Date/Time REF_I12.PATIENT_VISIT/PV1.PV1.44	C	26		Y	The date/time the patient was admitted	
45	Discharge Date/Time REF_I12.PATIENT_VISIT/PV1.PV1.45	C	26		Y	The date/time that patient was discharged	
51	Visit Indicator REF_I12.PATIENT_VISIT/PV1.PV1.51	O	1	0326	N	The Visit Indicator as to the patient's billing status, i.e. Visit Level or Account Level	

3.5.6 The PV2 Segment (Patient visit – additional information)

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
2	Mode of Arrival Code PV2/PV2.38/CE.1	O	20		N	The code indicating how the patient arrived at A & E	
2	Mode of Arrival Code PV2/PV2.38/CE.2	O	50		Y	Accompanying Text for the code in CE.1	
2	Mode of Arrival Code PV2/PV2.38/CE.3	O	20	0396	N	The string 'HL70430' indicating the table used in CE.1	

3.5.7 The PRD Segment (Provider Data)

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
1	Provider Role REF_I12.PROVIDER_CONTACT/PRD/PRD.1/CE.1	R	20	0286	N	The Provider Role. Defines the relationship of the person being referred (i.e. the patient) to the person identified in this segment.	
1	Provider Role REF_I12.PROVIDER_CONTACT/PRD/PRD.1/CE.2	R	50		N	Description of the provider role in CE.1.	
1	Provider Role REF_I12.PROVIDER_CONTACT/PRD/PRD.1/CE.3	R	20		N	Coding system used in CE.1.	
2	Provider Name REF_I12.PROVIDER_CONTACT/PRD/PRD.2/XPN.1/FN.1	C	90		N	The Provider's Family Name	Displayed in Coop Message
2	Provider Name REF_I12.PROVIDER_CONTACT/PRD/PRD.2/XPN.2	C	50		N	The Provider's First Name	Displayed in Coop Message
2	Provider Name REF_I12.PROVIDER_CONTACT/PRD/PRD.2/XPN.3	O	50		N	Middle Names and/or initials	
2	Provider Name Suffix REF_I12.PROVIDER_CONTACT/PRD/PRD.2/XPN.4	O	10		N	The Name Suffix	
2	Provider Name Prefix REF_I12.PROVIDER_CONTACT/PRD/PRD.2/XPN.5	O	10		N	The Name Prefix	
2	Provider Name Degree REF_I12.PROVIDER_CONTACT/PRD/PRD.2/XPN.6	O	30	0360		Qualifications (Degree)	
3	Provider Address REF_I12.PROVIDER_CONTACT/PRD/PRD.3/XAD.1/SAD.1	O	100		Y	Street Address	
3	Provider Address REF_I12.PROVIDER_CONTACT/PRD/PRD.3/XAD.2	O	50		Y	Address Line 2	
3	Provider Address REF_I12.PROVIDER_CONTACT/PRD/PRD.3/XAD.3	O	50		Y	Address Line 3	
3	Provider Address REF_I12.PROVIDER_CONTACT/PRD/PRD.3/XAD.4	O	50		Y	Address Line 4	

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
4	Provider Location REF_I12.PROVIDER_CONTACT/PRD/PRD.4/PL.1	O	50		Y	Point of Care	
4	Provider Location REF_I12.PROVIDER_CONTACT/PRD/PRD.4/PL.6	O	50	0305	Y	Person location type	Displayed in Coop Message
4	Provider Location REF_I12.PROVIDER_CONTACT/PRD/PRD.4/PL.9	O	50		Y	Location description	
5	Provider Communication Information REF_I12.PROVIDER_CONTACT/PRD/PRD.5/XTN.1	O	50		Y	Phone Number / Mobile Number / Fax Number / Email Address	
5	Provider Communication Information REF_I12.PROVIDER_CONTACT/PRD/PRD.5/XTN.2	O	3	0201	Y	Telecommunication use code	
5	Provider Communication Information REF_I12.PROVIDER_CONTACT/PRD/PRD.5/XTN.3	O	8	0202	Y	Telecommunication equipment type (ID)	
7	Provider Identifiers REF_I12.PROVIDER_CONTACT/PRD/PRD.7/PI.1	O	20		N	Identifier of receiving facility – practice id or medical council no.	
7	Provider Identifiers REF_I12.PROVIDER_CONTACT/PRD/PRD.7/PI.2	O	20		N	Type of ID number (IS)	
7	Provider Identifiers REF_I12.PROVIDER_CONTACT/PRD/PRD.7/PI.3	O	20		N	Other qualifying info	

3.5.8 The DG1 Segment (~~Diagnosis~~) Used for backward compatibility ONLY

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
1	Set ID DG1/DG1.1	R	1		N	The set ID numbering the repeating DG1 segments.	
2	Diagnosis Coding Method DG1/DG1.2	O	2	0053	N		
3	Diagnosis Code DG1.3/CE.1	O	20			Local code for the diagnosis	
3	Diagnosis Code DG1.3/CE.2	O	199		Y	The diagnosis text associated with the code in CE.1	If no local codes are used please put the diagnosis description in DG1.4.
3	Diagnosis Code DG1.3/CE.3	O	20	0396		The coding system for used in CE.1. This should contain 'L' if used.	
4	Diagnosis Description DG1/DG1.4	O	40		Y	The free text description of the Diagnosis	
5	Diagnosis Date/Time DG1/DG1.5/TS.1	O	24		N	Diagnosis Date/Time	This field is not required by HL7 or by Healthlink but it is recommended for inclusion by HeBE

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
6	Diagnosis Type DG1/DG1.6	R	2	0052	N	The stage of Diagnosis in terms of Admitting, Working and Final. See table for codes	
16	Diagnosing Clinician ID DG1/DG1.16/XCN.1	O	20		N	The individual responsible for the diagnosis	This field is not required by HL7 or by Healthlink but it is recommended for inclusion by HeBE
16	Diagnosing Clinician DG1/DG1.16/XCN.2/FN.1	O	50		Y	The Family Name of the Diagnosing Clinician	
16	Diagnosing Clinician DG1/DG1.16/XCN.3	O	50		Y	The First Name of the Diagnosing Clinician	
16	Diagnosing Clinician DG1/DG1.16/XCN.4	O	50		N	Middle Names and/or initials	
16	Diagnosing Clinician Suffix DG1/DG1.16/XCN.5	O	10		N	The Name Suffix	
16	Diagnosing Clinician Prefix DG1/DG1.16/XCN.6	O	10		N	The Name Prefix	

3.5.9 NTE Segment (Notes and Comments)

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
1	Set ID NTE/NTE.1	O	4		N	The Set ID numbers repeating NTE segments	
2	Source of Comment NTE/NTE.2	O	1	0105	N	The source of the comment	
3	Comment NTE/NTE.3	O	65536		Y	General Notes	

3.5.10 The OBR Segment (Observation Request)

Note the X-Path expression in the ELEMENT | FIELD NAME column is abbreviated for clarity. The true X Path expression would be for instance:
ORU_R01.ORDER_OBSERVATION/OBR/OBR.1

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
1	Set ID /OBR/OBR.1	R	4		N	Numbers the OBR for each repeating segment.	
2	Placer Order Number OBR/OBR.2/EI.1	O	75		N	If the system that placed the order provided a reference to the filler, then it should be entered here.	For Healthlink Lab Orders this will contain the Unique Healthlink Order number.
3	Filler Order Number OBR/OBR.3/EI.1	R	20		N	The order number of the system that received the order.	This is the hospital systems / lab systems order control number or Call Number for Coop Message. PMS Vendor Note: This will not be available in the export of the lab order message from Healthlink as it is populated by the hospital after it receives the order. It will be available in the result message.
3	Filler Order Number OBR/OBR.3/EI.2	O	20	0363	N	The numeric identifier of the system that received the order.	

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
3	Filler Order Number OBR/OBR.3/EI.3	O	25		N	The name of the system that received the order.	
3	Filler Order Number OBR/OBR.3/EI.4	O	10	0301	N	The universal ID of the system that received the order.	
4	Universal Service Identifier OBR/OBR.4/CE.1	R	20		N	Code for observation / Test	Until the introduction of a National Laboratory Test coding scheme, this is the local code for the test in the receiving hospital system.
4	Universal Service Identifier OBR/OBR.4/CE.2	R	50		Y	Meaningful description of the Test being ordered or a meaningful Description of the overall set of OBX's included under each OBR,	For example: For Neurology Referral Messages: Presenting Complaints, Medical History. For Lab Results or orders this is the descriptive name of the laboratory test e.g Full Blood Count
4	Universal Service Identifier OBR/OBR.4/CE.3	R	20	0396	N	The coding system used in CE.1	
4	Universal Service Identifier OBR/OBR.4/CE.4	O	20		N	Code for the observation / Test	Reserved for possible adoption of national coding system
4	Universal Service Identifier OBR/OBR.4/CE.5	O	50		N	Meaningful description of the Lab / Radiology Test	Reserved for possible adoption of national coding system
4	Universal Service Identifier OBR/OBR.4/CE.6	O	20	0396	N	The coding system used in CE.4	Reserved for possible adoption of national coding system
7	Observation Date/Time OBR/OBR.7/TS.1	R	26		Y	The Date and time the specimen was collected or obtained	
12	Danger Code OBR/OBR.12/CE.1	O	20				
12	Danger Code OBR/OBR.12/CE.2	O	50			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.	Normally used in lab ordering message.
12	Danger Code OBR/OBR.12/CE.3	O	20				
12	Danger Code OBR/OBR.12/CE.4	O	20				
12	Danger Code OBR/OBR.12/CE.5	O	50				
12	Danger Code OBR/OBR.12/CE.6	O	20				
13	Relevant Clinical Information OBR/OBR.13	O	1000		Y	Any relevant clinical information	
14	Specimen Received Date/Time OBR/OBR.14/TS.1	O	26		Y	The time the specimen was received at dispatch	
15	Specimen Source Name OBR/OBR.15/SPS.1/CE.1	C	20	0070	N	The specimen source code	This table is HL7 defined This data is strictly taken from a HL7 table
15	Specimen Source Name OBR/OBR.15/SPS.1/CE.2	C	50	0070	Y	Meaningful specimen source description	This is the description part of the table for code in ce.1 This data is strictly taken from a HL7 table
15	Specimen Source Name OBR/OBR.15/SPS.1/CE.3	O	20		N	Coding System used in CE.1	
15	Specimen Source Name OBR/OBR.15/SPS.1/CE.4	O	20		N	Alternate specimen source code	

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
15	Specimen Source Name OBR/OBR.15/SPS.1/CE.5	O	50		N	Alternate specimen source description	
15	Specimen Source Name OBR/OBR.15/SPS.1/CE.6	O	20		N	Alternate Coding System used in CE.1	
15	Additives OBR/OBR.15/SPS.2	O	50		N	Text describing additives	
15	Free Text OBR/OBR.15/SPS.3	O	50		N	Simply Free Text	
15	Body Site OBR/OBR.15/SPS.4/CE.2	O	50	0163	Y	Text description of the body site	This table is HL7 defined This data is strictly taken from a HL7 table
15	Site Modifier OBR/OBR.15/SPS.5/CE.2	O	50		Y	Text Description of the site modifier	
15	Collection Method OBR/OBR.15/SPS.6/CE.2	O	50		N	Text Description of the collection method	
16	Ordering Provider OBR/OBR.16/XCN.1	C	20		N	ID of the person ordering (i.e. usually GP Code that appears in the MSH segment)	This identifies the GP who ordered the test.
16	Ordering Provider OBR/OBR.16/XCN.2	C	50		N	Family name of the person ordering (i.e.. usually GP Code that appears in the MSH segment)	
16	Ordering Provider OBR/OBR.16/XCN.3	C	50		N	First name of the person ordering the test	
16	Ordering Provider OBR/OBR.16/XCN.6	O	10		N	Name Prefix	
17	Order Callback Phone Number OBR/OBR.17/XTN.1	O	50		Y	Telephone Number	
17	Order Callback Phone Number OBR/OBR.17/XTN.2	O	3	0201	Y	Telecommunication use code (ID)	
17	Order Callback Phone Number OBR/OBR.17/XTN.3	O	8	0202	Y	Telecommunication equipment type (ID)	
22	Results Rpt / Status Chng - Date/Time + OBR/OBR.22/TS.1	O	24		N	Time of an Event	
24	Diagnostic Service Section Identifier OBR/OBR.24	C	10	0074	N	Identifies the diagnostic service that provided / ran the test.	
25	Result Status OBR/OBR.25	R	1	0123	N	This field is the status of results for this order.	Usually F to say that result is final
27	Quantity/Timing OBR/OBR.27/TQ.1	O	194		Y	Quantity	
27	Quantity/Timing OBR/OBR.27/TQ.6	O	6		Y	Priority	Displayed in Coop Message
28	Ordering Provider ID OBR/OBR.28/XCN.1	O	20		N	ID of the person being copied (e.g. GP's GP Code)	Please see the HSE Messaging Board Addneda 1.1 document for full explanation of this feature.
28	Ordering Provider OBR/OBR.28/XCN.2/FN.1	O	50		N	Family Name	
28	Ordering Provider OBR/OBR.28/XCN.3	O	50		N	First Name	
28	Ordering Provider OBR/OBR.28/XCN.4	O	30		N	Middle / Other Names	
28	Ordering Provider Suffix OBR/OBR.28/XCN.5	O	10		N	Name Suffix	
28	Ordering Provider Prefix OBR/OBR.28/XCN.6	O	10		N	Name Prefix	
28	Ordering Provider OBR/OBR.28/XCN.16/CE.1	O	20		N	A code relating to the description in CE.2	

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
28	Ordering Provider OBR/OBR.28/XCN.16/CE.2	O	50	0448	N	<Copy To> A description of the context of the name in XCN.2/3, eg. Copy To One	
28	Ordering Provider OBR/OBR.28/XCN.16/CE.3	O	10		N	The coding system used in CE.1	

3.5.11 The OBX Segment (Observation/Result)

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
1	Set ID OBX/OBX.1	R	4		N	Numbers the OBX for each repeating segment.	
2	Value Type OBX/OBX.2	C*	2	0125	N	The HL7 Data Type of the Observation Value*	This should be FT to allow for formatted text or NM if numeric.
3	Observation Identifier OBX/OBX.3/CE.1	R	20		N	The code for the OBX.3/CE.2 description	
3	Observation Identifier OBX/OBX.3/CE.2	R	50		Y	A description of the test or observation	E.g For neurology referral this would be complaint/test/symptom For Lab messages this would be the Name of the Lab Test e.g Sodium
3	Observation Identifier OBX/OBX.3/CE.3	R	20	0396	N	The coding system used in CE.1	This information is important for the importing systems as the name of coding system will identify the observation in OBX.3/CE.2, example Ref_AssociatedSymptoms will mean value in OBX.3/CE.2 is an associated symptom. For Labs/ Rad messages this will be set to L to mean local coding system used
3	Observation Identifier OBX/OBX.3/CE.4	O	20		N	Alternate code for the test or observation	Reserved for possible adoption of a national coding system
3	Observation Identifier OBX/OBX.3/CE.5	O	50		N	Alternate description of the radiology test	
3	Observation Identifier OBX/OBX.3/CE.6	O	20	0396	N	The alternate coding system used in CE.4	
4	Observation Sub-Id OBX/OBX.4/ST	O	20		N	This field is used to distinguish between multiple OBX segments with the same observation	
5	Observation Value* OBX/OBX.5	C	65536		Y	The report/result text	This will be a result if the value in OBX.3/CE.2 requires it. For Numeric Lab Results this is the result value. For Neurology Referral Messages this could be Eg. OBX.3/CE.2 = number of alcohol units. OBX.5 = 5. OBX.6/CE.1 and OBX.6/CE.2 = weekly
6	Units OBX/OBX.6/CE.1	C	20		N	The code for the units used	This should always be filled. If no coded value available then enter description (same as OBX.6/CE.2)
6	Units OBX/OBX.6/CE.2	C	50		Y	The actual units used as text (not a code)	This is used for displaying the units to the user on the Healthlink web application

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
6	Units OBX/OBX.6/CE.3	C	20	0396	N	The coding system used for the units	
6	Units OBX/OBX.6/CE.4	O	20		N	Alternative coding system	
6	Units OBX/OBX.6/CE.5	O	50		N	Description to alternative coding system	
6	Units OBX/OBX.6/CE.6	O	20	0396	N	The coding system used for the units in ce.4	
7	Reference Range OBX/OBX.7	C	60		Y	Shows the reference range for this particular test.	Should be used with value NM in OBX.2
8	Abnormal Flags OBX/OBX.8	C	5	0078	N	Flags indicating abnormalities	
11	Observation Result Status OBX/OBX.11	R	1	0085	Y	Indicates the status of result	Usually uses value F to signify result is final.
14	Date/time of observation OBX.14/TS.1	O	24		Y	Date/time of observation	

*** If result is available.**

3.5.12 The PDA Segment (Patient death and autopsy)

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
1	Death Cause Code PDA/PDA.1/CE.1	O	20		N	The code indicating the cause of death	
1	Death Cause Code PDA/PDA.1/CE.2	O	50		Y	The text for the cause of death	
1	Death Cause Code PDA/PDA.1/CE.3	O	20	0396	N	The coding system used in CE.1. Expect 'L' if used.	
2	Death Location PDA/PDA.2/PL.9	O	50		Y	The free text location of patient's death	
4	Death Cert Signed Date Time PDA/PDA.4/TS.1	C	26		Y	The date/time the death certificate was signed	
5	Death Certified By PDA/PDA.5/XCN.1	O	20		Y	ID of person who certified death cert	
5	Death Certified By PDA/PDA.5/XCN.2	O	50		Y	Name of person who certified death cert	
5	Death Certified By PDA/PDA.5/XCN.3	O	50		Y	Name of person who certified death cert	
5	Death Certified By PDA/PDA.5/XCN.6	O	10		Y		

3.5.13 The RGS Segment (Resource Group)

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
1	Set ID - RGS	R	4				
2	Segment Action Code	O	3	0206		Action Code/Unique Identifier	
3	Resource Group ID	O	250			The Waiting list Clinic Name	

3.5.14 The AIP Segment (Appointment Information – Personnel Resource)

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
1	Set ID	R	4		N	ID for the AIP segment	Required field for message validation

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
2	Segment Action Code	O	3	0206		Action Code/Unique Identifier	
3	Personnel Resource ID	O	250		Y	The Consultants Name	
4	Resource Role	R	250			Identifies role of personnel	Required field for message validation

3.5.15 SCH Segment (Scheduling Activity Information)

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
2	Filler Appointment ID SCH/SCH.2/EI.1	O	199		N	Entity Identifier	Recommended by HeBE
2	Filler Appointment ID SCH/SCH.2/EI.2	O	20		N	Namespace ID	
2	Filler Appointment ID SCH/SCH.2/EI.3	O	199		N	Universal ID	
2	Filler Appointment ID SCH/SCH.2/EI.4	O	6		N	Universal ID Type	
3	Occurrence Number SCH/SCH.3	O	5		N		
6	Event Reason SCH/SCH.6/CE.1	R	20		N	The code (local code) for the event reason.	
6	Event Reason SCH/SCH.6/CE.2	R	50		Y	The reason for this message event	Recommended by HeBE
6	Event Reason SCH/SCH.6/CE.3	R	20	0396	N	The coding system used in CE.1. This should be 'L' to indicate that CE.1 contains a local code.	
11	Appointment Timing Quantity SCH/SCH.11/TQ.4/TS.1	R	26		Y	The start time of the appointment	
11	Appointment Timing Quantity SCH/SCH.11/TQ.6	O	3		Y	The priority of the appointment	
16	Filler Contact Person SCH/SCH.16/XCN.1	R	15		N	The identifier of the filler contact person	
16	Filler Contact Person SCH/SCH.16/XCN.2/FN.1	R	194		N	The Family Name of the filler contact person	
16	Filler Contact Person SCH/SCH.16/XCN.3	R	30		N	The First Name of the filler contact person	
16	Filler Contact Person SCH/SCH.16/XCN.4	O	30		N	The Middle Name of the filler contact person	
16	Filler Contact Person SCH/SCH.16/XCN.5	O	20		N	The Name Suffix of the filler contact person	
16	Filler Contact Person SCH/SCH.16/XCN.6	O	20		N	The Name Prefix of the filler contact person	
20	Entered by Person SCH/SCH.20/XCN.1	R	15		N	The identifier of the entered by contact person	
20	Entered by Person SCH/SCH.20/XCN.2/FN.1	R	194		N	The Family Name of the entered by person	
20	Entered by Person SCH/SCH.20/XCN.3	R	30		N	The First Name of the entered by person	
20	Entered by Person SCH/SCH.20/XCN.4	O	30		N	The Middle Name of the entered by person	
20	Entered by Person SCH/SCH.20/XCN.5	O	20		N	The Name Suffix of the entered by person	
20	Entered by Person SCH/SCH.20/XCN.6	O	20		N	The Name Prefix of the entered by person	
25	Filler Status Code SCH/SCH.25/CE.1	O	20	0278	N	The status code of the appointment as seen by the filler (the hospital)	
25	Filler Status Code SCH/SCH.25/CE.2	O	199		Y	The status text	
25	Filler Status Code SCH/SCH.25/CE.3	O	20	0396	N	The coding system used in CE.1 Expect 'HL70278'	

3.5.16 The AIL Segment (Appointment Information – Location Resource)

SEQ	ELEMENT | FIELD NAME	OPT	LEN	TBL#	DISP	DESCRIPTION	OTHER INFO
1	Set ID	R	4		N	ID for the segment	Required field for message validation
2	Segment Action Code	O	3	0206		Action Code/Unique Identifier	
3	Location Resource ID	O	80			The name of the Ward	
4	Location type - AIL	R	250			Identifies role of location requested	

3.5.17 ORC - common order segment

The Common Order segment (ORC) is used to transmit fields that are common to all orders (all types of services that are requested). The ORC segment is required in the Order (ORM) message

HL7 Attribute Table – ORC – Common Order

SEQ	ELEMENT NAME	OPT	LEN	DT	TBL#	Display	OTHER INFO
1	Order Control	R	2	ID	0119	Y	
14	CallBackPhoneNumber ORC/ORC.14/XTN.1	R	50	XTN		Y	Displayed as emergency phone number
14	CallBackPhoneNumber ORC/ORC.14/XTN.2	O	3	XTN	0201	Y	Telecommunication use code
14	CallBackPhoneNumber ORC/ORC.14/XTN.3	O	8	XTN	0202	Y	Telecommunication equipment type (ID)

3.5.18 The SAC Segment (Specimen Container detail)

The SAC segments included in the message allow the transfer of, e.g.: a laboratory order with multiple containers and multiple test orders related to each container, or laboratory orders with test order requiring multiple containers.

SEQ	ELEMENT NAME	OPT	LEN	DT	TBL#	Display	OTHER INFO
1	External Accession Identifier	O	80	EI			

3.5.18.1 Message Acknowledgement (MSA) Segment

The MSA Segment identifies the message being acknowledged and whether the message was successfully received.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME	IMPLEMENTATION NOTES
1	2	ID	R		0008	00018	Acknowledgment Code	There are three values possible: AA Application Acknowledgement, AE Application Error or AR Application Reject
2	20	ST	R			00010	Message Control ID	This field contains the message control ID of the message sent by the sending system. It allows the sending system to associate this response with the message for which it is intended.
3	80	ST	O			00020	Text Message	Use the ERR Segment rather than MSA.3 or MSA.6 for descriptions of error conditions.
4	15	NM	O			00021	Expected Sequence Number	
5	1	ID	O		0102	00022	Delayed Acknowledgment Type	
6	250	CE	O		0357	00023	Error Condition	

Table 3 Message Acknowledgement (MSA) Segment

3.5.19 Message Error (ERR) Segment

The ERR Segment is used to add comments to acknowledgement messages.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME	IMPLEMENTATION NOTES
1	80	R		Y		00024 Error	Code and Location	Please see notes below.

Table 4 Message Error (ERR) Segment

Notes:

- The ERR segment is optional in an ACK message, but where it does appear the ERR.1 field is required.
- ERR.1, Error Code and Location, allows information on one or more errors to be described precisely, down to the subcomponent level.
- The ERR.1 field is repeatable, allowing for information on multiple errors to be displayed.
- The components of the ERR.1 field are:
    - segment ID, the three letter identifier of the segment in which the error occurred;
    - sequence, the Set ID of the segment if there is more than one segment with the same segment ID in the message;
    - field position, the field number within the segment where the error occurred;

Code identifying error, taken from HL7 table 0357 Message Error Condition Codes and shown in Section 11 of this document.

Notes on fields to be included:

Highly Recommended, if available on sending system, include in hl7 message.

3.6 Inpatient Admission

Healthlink Message Type: 2

Please see the Abstract Message Definition for the ADT A01 message that this Healthlink Inpatient Admission message uses.

3.6.1 The EVN Segment

This segment is required to appear once.

EVN.2 (Required)

3.6.2 The PID Segment

This segment is required to appear once. To be filled as usual.

3.6.3 The PV1 Segment

This segment is required to appear once.

PV1.2 (Required)
PV1.3 (Highly Recommended) – should be included if available
PV1.44 (Required)

3.6.4 The PV2 Segment

This segment may appear once.

PV2.3 (Recommended)

3.6.5 General Remarks

The Inpatient Admission Message that we expect should have each of the above segments appearing as per the abstract message definition in Appendix 1.

3.7 Accident & Emergency Notification Message

Healthlink Message Type: 4

Please see the Abstract Message Definition for the ADT A01 message that this Healthlink A & E Notification message uses.

3.7.1 The EVN Segment

This segment is required to appear once.

EVN.2 (Required)

3.7.2 The PID Segment

This segment is required to appear once. To be filled as usual.

3.7.3 The PV1 Segment

This segment is required to appear once.

PV1.2 (Required)
PV1.3 (Highly Recommended) – should be included if available
PV1.7 (Recommended)
PV1.14 (Recommended)
PV1.44 (Required)

3.7.4 The PV2 Segment

This segment may appear once.

PV2.3 (Recommended)
PV2.38 (Recommended)

3.7.5 General Remarks

The A & E Notification Message that we expect should have each of the above segments appearing as per the abstract message definition in Appendix 1.

3.8 Outpatient Clinic Letter

Healthlink Message Type: 3

Please see the Abstract Message Definition for the REF I12 message, which this Healthlink Outpatient Clinic Letter message uses. The REF I12 is a Referral Message and it allows for the inclusion of the relevant information a GP may need to know about the diagnosis details, consulting doctor, and possibly the next follow-up appointment details.

3.8.1 The PRD Segment

This segment is required to appear at least once.

The single PRD Segment is only expected to contain data that identifies the GP that the patient is being released back into the care of. This is already identified in short by the GP Code contained in the message header.

PRD.1 (Required)

3.8.2 The PV1 Segment

This segment is required to appear once.

PV1.2 (Required)
PV1.3 (Highly Recommended) – should be included if available
PV1.7 (Highly Recommended) – should be included if available
PV1.44 (Required)

3.8.3 The NTE Segment

This segment is required to appear at least once.

The content and details of the patient's visit should be stored in this segment.

NTE.1 (Required if value in NTE.3)
NTE.3 (Required)

3.9 Emergency Department Letter

Healthlink Message Type: 19

Please see the Abstract Message Definition for the REF I12 message, which this Healthlink Emergency Department Letter message uses. The REF I12 message allows for the inclusion of the relevant information a GP may need, including the diagnosis details, consulting doctor, attendance details and further clinical information that was recorded during the A&E attendance.

3.9.1 The PRD Segment

This segment is required to appear at least once.

The single PRD Segment is only expected to contain data that identifies the GP that the patient is being released back into the care of.

PRD.1 (Required)

3.9.2 The PV1 Segment

This segment is required to appear once.

PV1.2 (Required)
PV1.3 (Highly Recommended) – should be included if available
PV1.7 (Highly Recommended) – should be included if available
PV1.14 (Highly Recommended) – should be included if available
PV1.15 (Recommended)
PV1.44 (Required)

3.9.3 The NTE Segment

This segment is required to appear at least once.

The content and diagnosis of the clinical visit should be stored in this segment.

NTE.1 (Required if value in NTE.3)
NTE.3 (Optional)

3.10 The Discharge Summary Message

Healthlink Message Type: 5

Please see the Abstract Message Definition for the REF I12 message which this Healthlink Discharge Summary message uses. The REF I12 is a Referral Message and it allows the inclusion of the relevant information a GP may need to know when a patient is discharged (or in other words: referred) back to the care of a primary healthcare practitioner, i.e. the GP.

Although in a pure sense the patient may not be referred to the GP by the hospital, this is the approach used in the implementation of this message. The GP is not under the impression that this is an actual referral when they receive the message.

3.10.1 The PRD Segment

This segment is required to appear at least once.

The single PRD Segment is only expected to contain data that identifies the GP that the patient is being released back into the care of.

PRD.1 (Required)

3.10.2 The PID Segment

This segment is required to appear once. To be filled as usual.

3.10.3 The DG1 Segment

~~In the REF message this segment may appear 0 to a multiple number of times. Within the Healthlink implementation of this HL7 Message Type, it is only expected to appear once however the integration should allow for more then one occurrences of this segment.~~

This segment should **NOT** be used for new implementations of this message type, this segment can be difficult to fill from the clinical source, this information should be placed in the letter part of this message under NTE.3.

(DG1.1 (Required))
(DG1.6 (Required))

3.10.4 The PV1 Segment

This segment is required to appear once.

PV1.2 (Required)
PV1.3 (Highly Recommended) – should be included if available
PV1.7 (Highly Recommended) – should be included if available
PV1.36 (Required)
PV1.37 (Recommended)
PV1.45 (Required)

3.10.5 The NTE Segment

This segment is required to appear at least once.

The content and diagnosis of the clinical visit should be stored in this segment.

NTE.1 (Required if value in NTE.3)
NTE.3 (Required)

3.10.6 General Remarks

This message may contain the detail of the patient's diagnosis and condition at the time of discharge. This detail is not included in the simple Discharge Notification Message described in section 3.10 of this document.

3.11 The Discharge Notification Message

Healthlink Message Type: 12

Please see the Abstract Message Definition for the ADT A03 message that this Healthlink Discharge Notification message uses.

3.11.1 The EVN Segment

This segment is required to appear once.

EVN.2 (Required)

3.11.2 The PID Segment

This segment is required to appear once. To be filled as usual.

3.11.3 The PV1 Segment

This segment is required to appear once.

PV1.2 (Required)
PV1.3 (Highly Recommended) – should be included if available
PV1.7 (Highly Recommended) – should be included if available
PV1.36 (Required)
PV1.37 (Recommended)
PV1.45 (Required)

3.11.4 General Remarks

This message is simply a notification with no detail about the details of the patient's condition or diagnosis at the time of discharge. If this detail is available please issue a Discharge Summary Message rather than a Notification message.

3.12 Death Notification

Healthlink Message Type: 6

Please see the Abstract Message Definition for the ADT A03 message which this Healthlink Death Notification message uses. Effectively this message is a Discharge Notification, that has resulted due to a patient's death and hence they share the same HL7 message type

3.12.1 The EVN Segment

This segment is required to appear once.

EVN.2 (Required)

3.12.2 The PID Segment

This segment is required to appear once.

PID.29 (Highly Recommended) – should be included if available
PID.30 (Required)

3.12.3 The PV1 Segment

This segment is required to appear once.

PV1.2 (Required)

3.12.4 The PDA Segment

This segment should appear once.

PDA.1 (Highly Recommended) – should be included if available
PDA.2 (Recommended)
PDA.3 (Recommended)
PDA.4 (Required) – if available
PDA.5 (Recommended)

3.13 Out Patient Department Appointment Message

Note: The new message types listed below will not be released in this phase. However there are some changes required in the tables outlined below in the SCH segments.

Healthlink Message Type: 8

Please see the Abstract Message Definition for the SIU messages below, which this Healthlink Outpatient Appointment message uses.

Healthlink uses the following trigger events for Scheduled messages

SIU^S12 schedule
SIU^S13 reschedule
SIU^S14 modify

SIU^S15 cancelled
SIU^S26 DNA

These message types should be entered into MSH.9 field.

3.13.1 The SCH Segment

This segment is required to appear once.

SCH.2 (Recommended)
SCH.6 (Required)
SCH.11 (Required)
SCH.16 (Required)
SCH.20 (Required)
SCH.25 (Highly Recommended) – should be included if available

3.13.2 The NTE Segment

This segment may appear 0 to a multiple number of times.

3.13.3 The PID Segment

This segment is required to appear once. To be filled as usual.

3.13.4 The PV1 Segment

This segment should appear once.

PV1.2 (Required)
PV1.3 (Highly Recommended) – should be included if available
PV1.7 (Highly Recommended) – should be included if available
PV1.44 (Recommended)

3.13.5 The RGS Segment

This segment is required to appear once in the Healthlink implementation.

RGS.1 (Required)

3.13.6 The AIL Segment

This segment may appear **0** to a multiple number of times.

AIL.1 (Required)
AIL.4 (Required)

3.13.7 The AIP Segment

This segment may appear **0** to a multiple number of times.

AIP.1 (Required)
AIP.4 (Required)

3.14 The Waiting List Message

Healthlink Message Type: 9

Please see the Abstract Message Definition for the following SIU messages which this Healthlink Waiting List message uses.

Healthlink uses the following trigger events for Scheduled messages;

SIU^S12	schedule
SIU^S13	reschedule
SIU^S14	modify
SIU^S15	cancelled
SIU^S26	DNA

These message types should be entered into MSH.9

3.14.1 The SCH Segment

This segment is required to appear once.

SCH.2 (Recommended)
SCH.6 (Required)
SCH.7 (Recommended)
SCH.11 (Required)
SCH.16 (Required)
SCH.20 (Required)
SCH.25 (Highly Recommended) – should be included if available

3.14.2 The NTE Segment

This segment may appear 0 to a multiple number of times.

3.14.3 The PID Segment

This segment is required to appear once. To be filled as usual.

3.14.4 The PV1 Segment

This segment should appear once.

PV1.2 (Required)
PV1.3 (Highly Recommended) – should be included if available
PV1.9 (Highly Recommended) – should be included if available

3.14.5 The RGS Segment

This segment is required to appear once in the Healthlink implementation.

RGS.1 (Required)

3.14.6 The AIL Segment

This segment may appear **0** to a multiple number of times.

AIL.1 (Required)
AIL.4 (Required)

3.14.7 The AIP Segment

This segment may appear **0** to a multiple number of times.

AIP.1 (Required)
AIP.4 (Required)

3.15 The Co-op Out of Hours Message

Healthlink Message Type: 16

Please see the Abstract Message Definition for the REF I12 message, which this Healthlink message uses. The REF I12 is a Referral Message and it allows the inclusion of the relevant information a GP may need to know when a patient utilises an out of hour's service.

Although the patient may not be referred to the GP by the out of hour's facility, this is the approach used in the implementation of this message. The GP is not under the impression that this is an actual referral when they receive the message.

3.15.1 The PRD Segment

While filling PRD/PRD.4/PL.6 (Person Location Type), please choose values from user-defined table 0305 (e.g., Home Visit, Treatment Centre). Within the Healthlink implementation of this Message type integration should allow for more than one occurrence of this segment. The PRD Segments must be implemented as per the order below. There are usually three occurrences of this segment:

- The Treating clinician details using value RP as provider role
- Own doctor information using value PP as provider role
- Triaging Clinician details using value CP as provider role

Please refer to user-defined table 0286 while filling PRD.1 (Provider Role) field.

This segment is required to appear once.

PRD.1 (Required)
PRD.2 (Required)
PRD.3 (Highly Recommended) – should be included if available
PRD.4 (Recommended)
PRD.5 (Recommended)
PRD.7 (Recommended)

3.15.2 The PID Segment

This segment is required to appear once. To be filled as usual.

3.15.3 OBR Segment

Please pay particular attention to OBR.3/EI.1 field, where call number (Order number) should be entered and in OBR.27/TQ.6 priority must be entered as per the user-defined table 99003.

This segment should appear at least once.

OBR.1 (Required)
OBR.3 (Required)
OBR.4 (Required)
OBR.7 (Required)

OBR.24 (Highly Recommended) – should be included if available
OBR.25 (Required)
OBR.27 (Required)

3.15.4 OBX Segment

This segment will be attached to a leading OBR segment. It can appear from 0 to multiple number of times.

OBX.1 (Required)
OBX.2 (Required if OBX.5 is filled)
OBX.3 (Required)
OBX.5 (Required once a result is available)
OBX.11 (Required)
OBX.14 (Highly Recommended) – should be included if available

3.15.5 The NTE Segment

This segment can appear 0 to multiple number of times.

3.15.6 General Remarks

This message may contain the detail of the patient's presenting complaint, diagnosis and condition at the time of discharge from the out of hour's co-op service.

3.16 The Radiology Result Message

Healthlink Message Type: 7

Please see the Abstract Message Definition for the ORU R01 message which this Healthlink Radiology Result message uses.

3.16.1 Radiology Result Reporting

The Radiology Message can have more than one OBR, which represents the Observation Request, with related OBX's, representing the result of each OBR. An NTE segment is now also required for Radiology reports with more than one OBR segment, but with only one report. In this case the OBX.5 is left blank and the report is contained in NTE.3. There will be one NTE with a Radiology message with more than one OBR. If a separate report is contained in each OBX, which will be stored in OBX.5, then the NTE field if present will only contain a comment relating to the message.

3.16.2 The PID Segment

This segment is required to appear once. To be filled as usual.

3.16.3 The PV1 Segment

This segment should appear once.

PV1.2 (Required)

3.16.4 The OBR Segment

This segment is required to appear at least once.

OBR.1 (Required)
OBR.3 (Required)
OBR.4 (Required)
OBR.7 (Required)
OBR.13 (Optional)
OBR.16 (Required)
OBR.24 (Required)
OBR.25 (Required)
OBR.28 (Required if message is a copy to message)

Please note that the OBR.28 may be used in this message type to identify that the message was copied to the recipient and they were not the person who ordered it. In the majority of cases however the recipient is expected to be the person who ordered or referred the patient for the exam. (MSH.6 and OBR.16 will contain the same GP recipient details and OBR.28 will be blank). However it could be a case where the MSH.6 and OBR.28 are the same and the OBR.16 is different. Please refer the HSE Messaging Boards Addendum documentation for full details on copy to reports.

3.16.5 The OBX Segment

This segment will be attached to a leading OBR segment. It can appear from 0 to multiple number of times.

OBX.1 (Required)
OBX.2 (Required if OBX.5 is filled)
OBX.3 (Required)
OBX.5 (Required if result available)
OBX.11 (Required)
OBX.14 (Optional)

3.16.6 NTE Segments

The NTE Segment in a Radiology Result message can appear 0 or 1 times in the following context:

- Related to an OBR
  This means that the comment pertains to the OBR or to the group of OBX's that belong to this OBR. Within the MWHB region, this NTE will contain the Radiology report.

The position of the NTE segment determines its context. A NTE following an OBR pertains to that OBR. In the XML encoding the context is more explicitly represented by use of the elements <OBR_R01.ORDER_OBSERVATION>.

NTE.1 (Required if NTE.3 is filled)
NTE.3 (Optional)

3.17 The Laboratory Result Message

Healthlink Message Type: 10

Please see the Abstract Message Definition for the ORU R01 message which this Healthlink Laboratory Result message uses.

Laboratory Result Reporting:
The laboratory result can consist of multiple observation requests (OBR segments). Like the radiology result, each OBR, which represents the Observation Request, may have a single related OBX, representing the result. It is also possible for each OBR to have multiple related OBX segments.

Note: All Microbiology results should use fixed width font for the display.

3.17.1 The PID Segment

This segment is required to appear once. To be filled as usual.

3.17.2 The PV1 Segment

This segment should appear once.

PV1.2 (Required)

3.17.3 The OBR Segment

This segment is required to appear at least once.

OBR.1 (Required)
OBR.2 (Optional)
OBR.3 (Required)
OBR.4 (Required)
OBR.7 (Required)
OBR.13 (Optional)
OBR.14 (Required)
OBR.15 (Required) – should be included if available
OBR.16 (Required)
OBR.24 (Required)
OBR.25 (Required)
OBR.28 (Required if message is a copy to message)

Please note that the OBR.28 may be used in this message type to identify that the message was copied to the recipient and they were not the person who ordered it. In the majority of cases however the recipient is expected to be the person who ordered or referred the patient for the exam. (MSH.6 and OBR.16 will contain the same GP recipient details and OBR.28 will be blank). However it could be a case where the MSH.6 and OBR.28 are the same and the OBR.16 is different. Please refer the HSE Messaging Boards Addendum documentation for full details on copy to reports. Also note that the OBR.24 is a required field for Laboratory Result message as it outlines the lab discipline.

3.17.4 The OBX Segment

This segment will be attached to a leading OBR segment. It can appear from 0 to multiple number of times.

OBX.1 (Required)
OBX.2 (Required if OBX.5 is filled)
OBX.3 (Required)
OBX.5 (Required if result available)
OBX.6 (Required if units are associated with result, value in OBX.2 will usually be NM for this)
OBX.7 (Required if a reference range is included with the result)
OBX.8 (Required if an abnormal flag should be reported)
OBX.11 (Required)
OBX.14 (Optional)

Please note that the OBX.4 may be used in the Histopathology results.

3.17.5 NTE Segments

The NTE Segment in a Laboratory Result message can appear 0 or 1 times in the following contexts:

- Related to an OBR - This means that the comment pertains to the OBR or to the group of OBX's that belong to this OBR
- Related to an OBX - This means the comment pertains to the OBX alone.

The position of the NTE segment determines its context. A NTE following an OBR pertains to that OBR, where an NTE immediately following an OBX pertains to that OBX. NTE segment with a lab can also be linked to an overall message.
In the XML encoding the context is more explicitly represented by use of the elements <OBR_R01.ORDER_OBSERVATION> and <OBR_R01.OBSERVATION>.

NTE.1 (Required if NTE.3 is filled)
NTE.3 (Optional)

3.17.6 Result Status and Observation Result Status and Corrections

An order is identified by the Filler Order Number in OBR.3/EI.1. If an order spawns multiple results messages these messages can be logically linked by this Filler Order Number. For this reason number the Filler Order Number must be globally unique within the context of a hospital, or lab service provider.

Instructions to Hospitals for filling OBR.25
The following sections 3.16.5.1 and 3.16.5.2 outline the instructions for the hospitals in filling the OBR.25 and OBX.11 fields to highlight the status of a message.

OBR.25 can indicate whether the observations (resulting from that OBR) are complete reported or only partially report in the related set of OBX's. An OBR should indicate a Final when all the required observations are reported in the related set of OBX's, otherwise it should indicate a partial result.
If the source information system (HIS) is able to discern whether an OBR's related OBX's are transmitting a partial result then the relevant Result Status code indicating a partial result should be entered.

If a message needs to be corrected, the OBR.25 status will be 'C' for Correction. This should overwrite the previous result that is being corrected within the vendor systems.[1]

3.17.6.1 Instructions to Hospitals for filling OBX.11

OBX.11 can indicate the status of an individual observation as Final, a partial or as a correction. Final results can be corrected by corrections and these are indicated using the relevant Result Status code.
If the HIS is able to discern that an individual OBX is transmitting a corrected result (of a previously transmitted final result) the fill OBX.11 will contain the Result Status code for a correction.
If the HIS is not able to discern corrections to the level of individual OBX's within a message then the Result Status code for a final result will be contained in the OBX.11.

3.18 Laboratory Ordering Message

Healthlink Message Type: 1

[1] HeBE is currently reviewing the status result actions for OBR.25 and OBX.11 segments.

Please see the Abstract Message Definition for the OML_ O21 message that this Laboratory Ordering message uses for further breakdown of what fields should be used.

3.18.1 Laboratory Order Message Composition

The laboratory order can consist of multiple observation requests (OBR segments). Like the laboratory result, each OBR, which represents the Observation Request, may have a single related OBX, representing the result. It is also possible for each OBR to have multiple related OBX segments.

3.18.2 The PV1 Segment

3.18.3 The OBR Segment

3.18.4 The OBX Segment

3.18.5 ORC - common order segment

The Common Order segment (ORC) is used to transmit fields that are common to all orders (all types of services that are requested). The ORC segment is required in the Order (ORM) message

3.18.6 The SAC Segment

The SAC segments included in the message allow the transfer of, e.g.: a laboratory order with multiple containers and multiple test orders related to each container, or laboratory orders with test order requiring multiple containers.

3.19 Lab Order Acknowledgement Requirements

3.19.1 Acknowledgement (ACK) Messages

Healthlink Message Type: 11

3.19.2 General Guidelines

Healthlink is configured for negative acknowledgement messages only. Healthlink processes 2 types of NACK messages. The first is a system NACK where there was a problem with the structure or content of the message received by the hospital. This message is sent to the Healthlink administration system only and not to the GP. The other type of NACK processed is generated by the HIS functionality when the order is removed from the worklist by Lab or Specimen Reception staff. The reason for removal is contained in this message and this is sent back to the GP for their information.

The following segments are contained in the NACK message

3.19.3 MSH Segment

A fuller discussion of the MSH segment can be found in the HeBE document HL7(Health Level Seven) Message Standards for Laboratory Results and Radiology Reports in Ireland, version 1.5 and in Chapter 2 of the HL7 version 2.4 Standard.

3.19.4 MSA Segment

The MSA.2 field contains the message control ID (MSH.10) of the original message. This allows the original message and its acknowledgement to be linked.

Here is an example of an MSA Segment where a message was successful:

```
<MSA>
    <MSA.1> AA </MSA.1>
    <MSA.2> 12 </MSA.2>
</MSA>
```

Here is an example of an MSA Segment where a message was rejected:

```
<MSA>
    <MSA.1>AR</MSA.1>
    <MSA.2> 12 </MSA.2>
</MSA>
```

3.19.5 ERR Segment

The Message Type MSH.9.1 of the acknowledgement message is always ACK, but the trigger event is that of the message being acknowledged. For example, in the case of an acknowledgement of a laboratory order (OML_O21) the MSH.9 of the ACK message will appear as follows:

```
<MSH.9>
        <MSG.1>ACK</MSG.1>
        <MSG.2>O21</MSG.2>
</MSH.9>
```

Please note that Healthlink only currently send NACK messages from the Hospital System to the GP account for Lab Order Messages.

3.20 The Cardiology Result Message

Healthlink Message Type ID: 17

HL7 Message type: ORU R01

3.20.1 Cardiology Result Reporting

The cardiology result can consist of multiple observation requests (OBR segments). Like the radiology result, each OBR, which represents the Observation Request, may have a single related OBX, representing the result. It is also possible for each OBR to have multiple related OBX segments.

3.20.2 The PID Segment

This segment is required to appear once. To be filled as usual.

3.20.3 The PV1 Segment

This segment should appear once.

PV1.2 (Required)

3.20.4 The OBR Segment

This segment is required to appear at least once.

OBR.1 (Required)
OBR.2 (Optional)
OBR.3 (Required)
OBR.4 (Required)
OBR.7 (Required)
OBR.13 (Optional)
OBR.16 (Required)
OBR.24 (Required)
OBR.25 (Required)
OBR.28 (Required if message is a copy to message)

Please note that the OBR.28 may be used in this message type to identify that the message was copied to the recipient and they were not the person who ordered it. In the majority of cases however the recipient is expected to be the person who ordered or referred the patient for the exam. (MSH.6 and OBR.16 will contain the same GP recipient details and OBR.28 will be blank). However it could be a case where the MSH.6 and OBR.28 are the same and the OBR.16 is different. Please refer the HSE Messaging Boards Addendum documentation for full details on copy to reports.

3.20.5 The OBX Segment

This segment will be attached to a leading OBR segment. It can appear from 0 to multiple number of times.

OBX.1 (Required)
OBX.2 (Required if OBX.5 is filled)
OBX.3 (Required)
OBX.5 (Required if result available)
OBX.11 (Required)
OBX.14 (Optional)

3.20.6 NTE Segments

The NTE Segment in a Cardiology Result message can appear 0 or 1 times in the following context:

- Related to an OBR
  This means that the comment pertains to the OBR or to the OBX or group of OBX's that belong to this OBR.
- Related to an OBX
  This means that the comment pertains only to the OBX it is linked to.
- Related to overall message
  This means that the comment pertains to the entire result.

The position of the NTE segment determines its context, for example, an NTE following an OBR pertains to that OBR.

NTE.1 (Required if value in NTE.3)
NTE.3 (Optional)

3.21 Acknowledgement Message

Healthlink Online Version 3 allows associated IT systems, such as hospital systems and GP vendor systems, to send and receive Acknowledgement messages. Healthlink recommends using the Acknowledgement Message to complete the full audit process.

Healthlink Message Type ID: 13

Note: Please refer to the following document:

- Generic_Ref_Message_Construction_Ack Version 1_4 or higher

3.22 The Neurology Referral & Response Message

Healthlink Online Version 3 allows users to place Referral messages either through Healthlink or PMS Vendor Systems. The referral and response message(s) can be exported from Healthlink to store the information with the patient's file in the GP Practice Management System.

Healthlink Message Type: Neurology Referral (14)
Neurology Referral Response (15)

Note: Please refer to the following documents:

- Generic_Ref_Message_Construction_Guide Version 1_9 or higher
- Message_ Construction_Neurology Version 0.1 or higher
- Response_Message_Neurology Version 0.1 or higher

3.23 The Prostate Cancer Referral & Response Message

Healthlink Online Version 3 allows users to place Referral messages either through Healthlink or the accredited GP Vendor Systems. The referral and response message(s) can be exported from Healthlink to store the information with the patient's file in the GP Practice Management System.

Healthlink Message Type: Prostate Cancer Referral (20)
Prostate Cancer Referral Response (21)

Note: Please refer to the following documents:

- Generic_Ref_Message_Construction_Guide Version 1_9 or higher
- Message_ Construction_ Prostate Version 1.7 or higher
- Response Message document version 0.6 or higher

3.24 The Breast Clinic Referral & Response Message

Healthlink Online Version 3 allows users to place Referral messages either through Healthlink or the accredited GP Vendor Systems. The referral and response message(s) can be exported from Healthlink to store the information with the patient's file in the GP Practice Management System.

Healthlink Message Type: Breast Clinic Referral (22)
Breast Clinic Referral Response (23)

Note: Please refer to the following documents:

- Generic_Ref_Message_Construction_Guide Version 1_9 or higher
- Message_ Construction_ Breast Version 0.7 or higher
- Response Message document version 0.6 or higher

3.25 The Lung Cancer Referral & Response Message

Healthlink Online Version 3 allows users to place Referral messages either through Healthlink or the accredited GP Vendor Systems. The referral and response message(s) can be exported from Healthlink to store the information with the patient's file in the GP Practice Management System.

Healthlink Message Type: Lung Cancer Referral (24)
Lung Cancer Referral Response (25)

Note: Please refer to the following documents:

- Generic_Ref_Message_Construction_Guide Version 1_9 or higher
- Message_ Construction_ Lung Version 0.6 or higher
- Response Message document version 0.6 or higher

4 Appendix 1 – Abstract Message Definitions

The chapter numbers refer to the official HL7 Specification Version 2.4

The ADT A01 Abstract Message Definition
This HL7 Message Type is used by the Healthlink Message Type A & E Notification Message and Inpatient Admission

ADT^A01^ADT_A01	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
[{ NK1 }]	Next of Kin / Associated Parties	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ AL1 }]	Allergy Information	3
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6
[{		
PR1	Procedures	6
[{ ROL }]	Role	12
}]		
[{ GT1 }]	Guarantor	6
[{		

ADT^A01^ADT_A01	ADT Message	Chapter
IN1	Insurance	6
[IN2]	Insurance Additional Info.	6
[{ IN3 }]	Insurance Additional Info - Cert.	6
[{ ROL }]	Role	12
}]		
[ACC]	Accident Information	6
[UB1]	Universal Bill Information	6
[UB2]	Universal Bill 92 Information	6
[PDA]	Patient Death and Autopsy	3

The ADT A03 Abstract Message Definition

This HL7 Message Type is used by both the Death Notification and the Discharge Notification Healthlink Message Types

ADT^A03^ADT_A03	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6
[{		
PR1	Procedures	6
[{ ROL }]	Role	12
}]		
[{ OBX }]	Observation/Result	7
[PDA]	Patient Death and Autopsy	3

The ORU R01 Abstract Message Definition
This HL7 Message Type is used by the Laboratory Results, Radiology and Cardiology Results Healthlink Message Types

ORU^R01	Unsolicited Observation Message	Chapter
MSH	Message Header	2
{		
[		
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{NK1}]	Next of Kin/Associated Parties	3
[{NTE}]	Notes and Comments	2
[		
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info	3
]		
]		
{		
[ORC]	Order common	4
OBR	Observations Report ID	7
{[NTE]}	Notes and comments	2
[CTD]	Contact Data	11
{		
[OBX]	Observation/Result	7
{[NTE]}	Notes and comments	2
}		
[{FT1}]	Financial Transaction	6
{[CTI]}	Clinical Trial Identification	7
}		
}		
[DSC]	Continuation Pointer	2

The SIU S12 Abstract Message Definition
This HL7 Message Type is used by both the Waiting List and the Outpatient Appointment Healthlink Message Types

SIU^S12-S24, S26^SIU_S12	Schedule Information Unsolicited	Chapter
MSH	Message Header	2
SCH	Schedule Activity Information	10
[{ NTE }]	Notes and Comments	2
[{ PID	Patient Identification	3
[PD1]	Additional Demographics	3
[PV1]	Patient Visit	3
[PV2]	Patient Visit - Additional Info	3
[{ OBX }]	Observation/Result	4
[{ DG1 }]	Diagnosis	6
}		
]		
{ RGS	Resource Group Segment	10
[{ AIS	Appointment Information - Service	10
[{ NTE }	Notes and Comments	2
]		
}		
]		
[{ AIG	Appointment Information - General Resource	10
[{ NTE }	Notes and Comments	2
]		
}		
]		
[{ AIL	Appointment Information - Location Resource	10
[{ NTE }	Notes and Comments	2
]		
}		
]		
[{ AIP	Appointment Information - Personnel Resource	10
[{ NTE }	Notes and Comments	2
]		
}		
]		
}		

The REF I12 Abstract Message Definition
This HL7 Message Type is used by the Discharge Summary Healthlink Message Type

REF^I12-I15^REF_I12	Patient Referral	Chapter
MSH	Message Header	2
[RF1]	Referral Information	11
[		
AUT	Authorization Information	11
[CTD]	Contact Data	11
]		
{		
PRD	Provider Data	11
[{CTD}]	Contact Data	11
}		
PID	Patient Identification	3
[{NK1}]	Next of Kin/Associated Parties	6
[{GT1}]	Guarantor	6
[		
{		
IN1	Insurance	6
[IN2]	Insurance Additional Info	6
[IN3]	Insurance Add'l Info -Cert	6
}		
]		
[ACC]	Accident Information	6
[{DG1}]	Diagnosis	6
[{DRG}]	Diagnosis Related Group	6
[{AL1}]	Allergy Information	3
[		
{		
PR1	Procedure	6
[		
AUT	Authorization Information	11
[CTD]	Contact Data	11
	]	
}		
]		
[		

REF^I12-I15^REF_I12	Patient Referral	Chapter
{		
OBR	Observation Request	4
[{NTE}]	Notes and Comments	2
[		
{		
OBX	Observation/Result	7
[{NTE}]	Notes and Comments	2
}		
]		
}		
]		
[		
PV1	Patient Visit	3
[PV2]	Patient Visit Additional Info	3
]		
[		
PV1	Patient Visit	3
[PV2]	Patient Visit Additional Info	3
]		
[{NTE}]	Notes and Comments	2

The OML_O21 Abstract Message Definition
This HL7 Message Type is used by the Laboratory Ordering Healthlink Message Type

OML^O21^OML_O21	Laboratory Order Message	Chapter
MSH	Message Header	2
[{NTE}]	Notes and Comments (for Header)	2
[		
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{NTE}]	Notes and Comments (for Patient ID)	2
[PV1	Patient Visit	3
[PV2]]	Patient Visit- Additional Info	3
[{IN1	Insurance	6
[IN2]	Insurance Additional Info	6
[IN3]	Insurance Add'l Info - Cert.	6
}]		
[GT1]	Guarantor	6
[{AL1}]	Allergy Information	3
]		
{		
[		
SAC	Specimen Container Details	13
[{OBX}]	Additional Specimen Characteristics	7
]		
{		
ORC	Common Order	4
[		
OBR	Observation Request	4
[{		
SAC	Specimen Container Details	13
[{OBX}]	Additional Specimen Characteristics	7
}]		
[TCD]	Test Code Details	13
[{NTE}]	Notes and Comments (for Detail)	2
[{DG1}]	Diagnosis	6
[{		
OBX	Observation/Result	7
[TCD]	Test Code Detail	13
[{NTE}]	Notes and Comments (for Results)	2
}]		
[{		
[PID	Patient Identification – previous result	3
[PD1]]	Additional Demographics – previous result	3
[PV1	Patient Visit – previous result	3
[PV2]]	Patient Visit Add. Info – previous result	3
[{AL1}]	Allergy Information - previous result	3
{		
[ORC]	Common Order - previous	4

```
OML^O21^OML_O21          Laboratory Order Message                          Chapter
                         result
           OBR           Order Detail              - previous              4
                         result
                         Notes and Comments        - previous              2
{[NTE]}                  result
           {
             OBX         Observation/Result        - previous              7
                         result
                         Notes and Comments        - previous              2
[{NTE}]                  result
           }
         }
      }]
   ]
   [{FT1}]               Financial Transaction                             6
   [{CTI}]               Clinical Trial Identification                     7
   [BLG]                 Billing Segment                                   4
  }
]
```

Appendix 2 – HL7 and User Defined Tables

The tables used in the Healthlink Messages fall into three categories.

Firstly there are tables that are not user definable, i.e. they are strictly defined by at HL7 level and cannot be redefined. These are used by Fields that are of the ID HL7 data type. These tables are referenced by HL7#### where #### is a four digit numerical code that is allocated by HL7.

Secondly there are tables that are user definable, however, they have been defined by HL7 and allocated a four digit numeric code. These tables are referenced by HL7#### where #### is the digit numerical code. These tables are used by fields of the IS HL7 data type.

Thirdly there are tables that User Defined Tables that have been defined by organisations outside HL7. An existing HL7 user defined table may have redefined, or a completely new table can be devised, however, if an implementation (such as Healthlink) chooses to do so a new table number must be allocated to the table. The new table code must follow the format 99nnn where n is an alphanumeric character.

4.1.1 HL7 Tables

Please refer to Healthlink HL7_Tables.doc / Healthlink HL7_Tables.pdf for more details.

4.1.2 User Defined Tables

Table 0361 – Sending/Receiving application (MSH.3/MSH.5)

Value	Description
TOREX.HEALTHLINK.12	Torex, Healthlink Bridge Middleware, Discharge Notification Message
PAS.HEALTHLINK.12	Torex, Healthlink Bridge Middleware, Discharge Notification Message
IPMISOFT.HEALTHLINK.12	iPMiSoft, Healthlink Bridge Middleware, Discharge Notification Message
TOREX.HEALTHLINK.10	Torex, Healthlink Bridge Middleware, Message ID Lab Result
WOODARD.HEALTHLINK.10	Woodard, Healthlink Bridge Middleware, Message ID Lab Result
APEX.HEALTHLINK.10	Apex, Healthlink Bridge Middleware, Message ID Lab Result
MCKESSAN.HEALTHLINK.10	McKessan, Healthlink Bridge Middleware, Message ID Lab Result
TELEPATH.HEALTHLINK.10	Telepath, Healthlink Bridge Middleware, Message ID Lab Result Message
TOREX.HEALTHLINK.9	Torex, Healthlink Bridge, Healthlink Bridge Middleware, Waiting List Message
PAS.HEALTHLINK.9	Patient Administration System, Healthlink Bridge, Healthlink Bridge Middleware, Waiting List Message
TOREX.HEALTHLINK.8	Torex, Healthlink Bridge, Healthlink Bridge Middleware, OPD Appointment Message
PAS.HEALTHLINK.8	Patient Administration System, Healthlink Bridge Middleware, OPD Appointment Message
IPMISOFT.HEALTHLINK.8	iPMiSoft, Healthlink Bridge Middleware, OPD Appointment Message
IMS.HEALTHLINK.7	IMS, Healthlink Bridge Middleware, Radiology Message
KEOGHRIS.HEALTHLINK.7	Keogh Radiology System, Healthlink Bridge Middleware, Radiology Message
MCKESSAN.HEALTHLINK.7	KcKessan Radiology System, Healthlink Bridge Middleware, Radiology Message
PAS.HEALTHLINK.7	Patient Administration System, Healthlink Bridge Middleware, Radiology Message
IPMISOFT.HEALTHLINK.7	iPMiSoft, Healthlink Bridge Middleware, Radiology Message
TOREX.HEALTHLINK.6	Torex, Healthlink Bridge Middleware, Death Notification Message
PAS.HEALTHLINK.6	Patient Administration System, Healthlink Bridge Middleware, Death Notification Message
IPMISOFT.HEALTHLINK.6	iPMiSoft, Healthlink Bridge Middleware, Death Notification Message
TOREX.HEALTHLINK.5	Torex, Healthlink Bridge Middleware, Discharge Summary Message

PAS.HEALTHLINK.5	Torex, Healthlink Bridge Middleware, Discharge Summary Message
AE.HEALTHLINK.4	A&E Information System, Healthlink Bridge Middleware, A&E Notification Message
TOREX.HEALTHLINK.4	Torex, Healthlink Bridge Middleware, A&E Notification Message
IMS.HEALTHLINK.4	IMS A&E System, Healthlink Bridge Middleware, A&E Notification Message
HLONLINE.HEALTHLINK.1	Healthlink Online, Healthlink Bridge Middleware, Lab Order Message
HLONLINE.HEALTHLINK.14	Healthlink Online, Healthlink Bridge Middleware, Neurology Referral Message
HLONLINE.HEALTHLINK.15	Healthlink Online, Healthlink Bridge Middleware, Neurology Response Message
TOREX.HEALTHLINK.11	Torex, Healthlink Bridge, Healthlink Bridge Middleware, Laboratory Order NACK
IPMISOFT.HEALTHLINK.17	iPMiSoft, Healthlink Bridge Middleware, Cardiology Message
SUNQUEST	HSE NW Laboratory Information System
WINPATH HL7	HSE NE Laboratory Information System
KEOGHRIS	HSE NE Radiology Information System
ADASTRA	HSE NE Out of Hours Co-operative
iLAB.ICE	HSE SE Laboratory Information System with Anglia ICE Middleware
APEX.ICE	HSE S Laboratory Information System with Anglia ICE Middleware
TOREXRIS	St James's Hospital Radiology Information System
ADASTRA2 COMPLETEGP	HSE SE Out of Hours Co-operative, CareDoc Message Generated by CompleteGP Practice Management System
HEALTHONE	Message Generated by HealthOne Practice Management System
HELIXPM	Message Generated by Helix Practice Manager Practice Management System
SOCRATES	Message Generated by Socrates Practice Manager Practice Management System
HEALTHLINKONLINE	Message Generated by Healthlink Online Application
GE	Euromedic Radiology system
AGFA	
BEAUMONT	
DMF_OPENLIS	
DWISI	
HIPEHOS	
ILAB	
IPM	
IWM	
MAXIMS-RIS	
MILLENIUM	
MONAGHANHOSP	
NETACQUIRE	
TEAMS	

TOREXPAS	
DMF_EDS	
GE	Messages generated by Euromedics radiology
MLP-APOLLO	NCSS – Med Lab

Table 0362 (extract from DOH&C/HIPE list) - MSH.4, HD.2, Sending/Receiving Facility

Value	Description
3	ShannonDoc
101	St. Colmcille's Hospital
102	Naas General Hospital
108	Connolly Hospital
123	Connolly Hospital Test
201	Portloaise General Hospital
202	Mullingar General Hospital
203	Tullamore General Hospital
300	Limerick Hospital
305	Ennis General Hospital
800	University College Hospital Galway
801	Merlin Park, General Hosp
802	Mayo General Hospital
803	Roscommon County Hospital
904	St. James's Hospital
904.001	St.James's Hospital – Prostate Clinic
908	Mater Hospital
910	St. Vincent's University Hosp
912	St Michaels
919	Portiuncla
923	Beaumont Hospital
923.002	Beaumont Hospital – Breast Clinic
940	Temple St.
1049	AMNCH

This indicates the hospital or health area sending or receiving messages. This table is only a subset from the HIPE code list; the full list will need to be reviewed as hospitals are added to the electronic messaging environment.

Table 0363 (extract from DOH&C/HIPE list) – Assigning Authorithy

Value	Description
L	Local
LN	LOINC
PCRS	Primary Care Re-imbursement Service

Table 0004 - PV1.2, Patient Class

Value	Description
E	Emergency

I	Inpatient
O	Outpatient
D	Day Case Patient
G	General Practitioner
U	Unknown

Table 0302 - PV1.3, PL.1, Point of Care

Value	Description
MED	Medical
SUR	Surgical
PSY	Psychiatric
MAT	Maternity
PAE	Paediatric
EME	Emergency
OTH	Other

Table 0305 - PV1.3, PL.6, Person Location Type

Value	Description
C	Clinic
D	Department
N	Nursing Unit
O	Provider's Office
H	Home Visit
T	Treatment Centre
P	Doctor Triage (phone)

Table 0023 - PV1.14, Admit Source

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 0064 - PV1.20, Financial Class

Value	Description
01	Medical Card
02	Public Patient
03	Semi Private Patient

04	Private Patient

Table 0112 - PV1.36, Discharge Disposition

Value	Description
01	Discharged to home or self care (routine discharge)
02	Discharged/transferred to another short term general hospital for inpatient care
03	Discharged/transferred to skilled nursing facility (SNF)
04	Discharged/transferred to an intermediate care facility (ICF)
05	Discharged/transferred to another type of institution for inpatient care or referred for outpatient services to another institution
06	Discharged/transferred to home under care of organized home health service organization
07	Left against medical advice or discontinued care
08	Discharged/transferred to home under care of Home IV provider
09	Admitted as an inpatient to this hospital
10 …19	Discharge to be defined at state level, if necessary
20	Expired (i.e. dead)
21 ... 29	Expired to be defined at state level, if necessary
30	Still patient or expected to return for outpatient services (i.e. still a patient)
31 … 39	Still patient to be defined at state level, if necessary (i.e. still a patient)
40	Expired (i.e. died) at home
41	Expired (i.e. died) in a medical facility; e.g., hospital, SNF, ICF, or free standing hospice
42	Expired (i.e. died) - place unknown

Table 0326 – PV1.51, Visit Indicator

Value	Description
A	Account level (default)
V	Visit level

Table 0430 - PV2.38, Mode of Arrival Code

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

Table 0203 - PID.3, CX.5, Identifier Type Code

Value	Description
GMS	General Medical Services Number
GPN	GP Electronic Patient Record Number
MRN	Medical Record Number
PPSN	Personal Social Services Number
CCEI	Central Client Eligibility Index
VHI	Voluntary Health Insurance Number
BUPA	BUPA Number
RAD	Radiology Chart Number
LAB	Laboratory Number
OTH	Other
UNK	Unknown
COOP	Out of Hours Number
RIS	Radiology Information System
CN	Chart Number
PASPID	Patient Admin System Patient ID No
HLID	Healthlink ID
NCIN	National Client Index Number
CSP ID	Cervical Check ID
IHI	Individual Health Identifier for Ireland
HSPI	Health Service Professional Identifier for Ireland

Table 0001 - PID.8, Administrative Sex

Value	Description
M	Male
F	Female
U	Unknown
S	Unspecified

Table 0286 - PRD.1, Provider Role

Value	Description
RP	Referring Provider
PP	Primary Care Provider
RT	Referred To Provider
CP	Consulting Provider

Table 0052 - DG1.6, Diagnosis Type

Value	Description
A	Admitting
W	Working
F	Final

Table 0078 - OBX.8, Abnormal Flags

Value	Description
L	Below low normal
LL	Below lower panic limits
H	Above high normal
HH	Above upper panic limits
<	Below absolute low-off instrument scale
>	Above absolute high-off instrument scale
N	Normal (applies to non-numeric results)
A	Abnormal (applies to non-numeric results)
S	Susceptible. Indicates for microbiology susceptibilities only.
R	Resistant. Indicates for microbiology susceptibilities only.
I	Intermediate. Indicates for microbiology susceptibilities only.

Table 0278 – SHC.25, Filler Status Code

Value	Description
Pending	Appointment has not yet been confirmed
Waitlist	Appointment has been placed on a waiting list for a particular slot, or set of slots
Booked	The indicated appointment is booked
Started	The indicated appointment has begun and is currently in progress
Complete	The indicated appointment has completed normally (was not discontinued, canceled, or deleted)
Cancelled	The indicated appointment was stopped from occurring (canceled prior to starting)
Dc	The indicated appointment was discontinued (DC'ed while in progress, discontinued parent appointment, or discontinued child appointment)
Deleted	The indicated appointment was deleted from the filler application
Blocked	The indicated time slot(s) is(are) blocked
Overbook	The appointment has been confirmed; however it is confirmed in an overbooked state

Table: 0103 - MSH.11, Processing ID

Value	Description
D	Debugging
P	Production
T	Training

Table: 0283 - RF1.1, Referral Status

Value	Description
A	Accepted
P	Pending
R	Rejected
E	Expired

Table: 0281 - RF1.3, Referral Type

Value	Description
Prostate	Prostate
Breast	Breast
Lung	Lung
MRI	MRI
Chest	Chest
Neurology	Neurology
General	General

Table: 0009 - PV1.15, Ambulatory Status

Value	Description
B6	Pregnant
B7	Not Pregnant
B8	Pregnancy Unknown

Table 0280 - RF1.2, Referral Priority

Value	Description
U	Urgent
E	Early
R	Routine

Table 99003 - Priority Codes

Value	Description
S	With Highest Priority
A	As soon as possible (after S)
R	Routine

Healthlink Local Diagnosis code look-up table

Local Code Range	Description
0001 - 999	Disease
1000 – 1999	Symptoms
2000 – 2999	Body Site
3000 – 4999	Procedures
5000 – 6999	Medication
7000 – 8999	Unassigned
9000 – 9999	General

Note: All of the user-defined tables are subject to expand and change.

Appendix 3 - Healthlink Local Codes for Data Items for which a LOINC Code is not available

Text	Local code
Previous Attendance at Specialist Clinic	X0001-0
Previous Attendance Detail	X0002-0
Previous attendance consultant detail	X0002-1
Previous attendance location detail	X0002-2
Symptoms	X0003-0
Symptom Duration	X0004-0
Prostate Biopsy	X0005-0
Interpreter Required	X0006-0
Years Smoking	X0007-0
Comments Reason for Referral	X0008-0
Prostate biopsy result and date	X0009-0
Prostate Biopsy Result	X0009-1
Prostate Biopsy location detail	X0009-2
Prostate Biopsy date	X0009-3
Anticoagulant Use	X0010-0
Units of Alcohol per week	X0011-0
Previous Breast Disease	X0012-0
Previous Breast Disease Detail	X0013-0
Previous Mammogram Detail	X0014-0
Previous Mammogram Date	X0014-1
Previous Mammogram Result	X0015-0
Breast Cancer Segment	X0016-0
Referral Overview	X0017-0
Referral Received	X0018-0
OPD Arranged	X0019-0
Other Comments	X0020-0
OPD Details	X0021-0
OPD Clinic	X0021-1
Appointment Date	X0022-0
Appointment Interval	X0023-0

Reminder Comment	X0024-0
No OPD	X0025-0
Discussed with GP	X0026-0
Date Agreed with GP	X0027-0
Allocation of Responsibilities	X0028-0
Arranged and Followed up by GP	X0029-0
GP Laboratory Tests	X0030-0
GP Radiology	X0031-0
Suggested Therapy by GP	X0032-0
Arranged and Followed up by Consultant	X0033-0
Consultant Laboratory Tests	X0034-0
Consultant Radiology	X0035-0
Suggested Therapy by Consultant	X0036-0
Number of Children's / Children	X0037-0
Neurology Study	X0038-0
Neurologists View	X0039-0
Advice Only	X0040-0
Advice & Investigations	X0041-0
ECG	X0042-0
Neurophysiology	X0043-0
Gastrointestinal Cancer Segment	X0044-0
Haemoptysis	X0045-0
Persistent Unexplained Symptoms	X0046-0
History of Allergy to Contrast Dye	X0047-0
History of Renal Insufficiency	X0048-0
Patient Advised of Possible Diagnosis	X0049-0
Clubbing	X0050-0
Lymphadenopathy	X0051-0
Hepatomegaly	X0052-0
Chest X-Ray Result	X0053-1
Chest X-Ray Location Detail	X0053-2
Chest X-Ray Date	X0053-3
Chest X-Ray Comment	X0053-4
CT Scan Result	X0054-1
CT Scan Location Detail	X0054-2
CT Scan Date	X0054-3
CT Scan Comment	X0054-4
MRI Request	X0055-0
Safety Checklist	X0056-0
Body Part to Scan	X0057-0
Clinical Indication	X0058-0
Chest Pain Segment	X0059-0

Appendix 4 - Logical Observation Identifiers Names and Codes (LOINC®)

LOINC Codes for Observation Request Segments (OBR)

Text	LOINC code
Social history	29762-2
History general	11329-0
Laboratory studies	26436-6
Current medication	19009-0
Radiology study reports	18726-0
Physical exam.total (Other Examination)	22029-3

LOINC Codes for Observation Result Segments (OBX)

Text	LOINC code
History of present illness (Other Symptoms) / Presenting Complaint	10164-2
History of family member diseases	10157-6
History of alcohol use	11330-8
History of allergies	10155-0
History of tobacco use	11366-2
History of surgical procedures	10167-5
History of past illness	11348-0
Physical mobility impairment	28189-9
Cigarettes Smoked per day	8663-7

LOINC Codes for Clinical Examination Segment

Text	LOINC code
Blood Pressure (BP systolic/Diastolic)	18684-1
Pulse / Heart Beat	8893-0

LOINC Codes for Prostate Cancer Type Referral Segment

Text	LOINC code	Comment
Urology study	28620-3	OBR code
Physical findings	10205-3	Rectal examination
Diagnosis (Suspected Diagnosis)	29548-5	Suspected diagnosis
Urinalysis studies	18729-4	OBR code
PSA Test	2857-1	OBX code
Urinalysis	24357-6	

LOINC codes for Breast Cancer Specific Segment

Text	LOINC code	Comment
Breast Examination	32422-8	Physical findings: breast
Previous Mammogram	24605-8	Diagnostic Mammogram

LOINC codes for Neurology Specific Segment

Text	LOINC code	Comment
Diagnosis	29548-5	OBX code
Abnormal Gait	32433-5	Physical Findings: Gait
Fundi	32468-1	Physical Findings: Retina
Sensory	10211-1	Physical Findings: Sense of Touch
Visual Acuity	32488-9	Physical Findings: Vision
Facial Weakness	32432-7	Physical Findings: Face
Bulbar Weakness	32426-9	Physical Findings: Cranial Nerves
Motor Reflexes	10194-9	Physical Findings: Tendon Reflexes
Motor Plantars	11397-7	Physical Findings: Foot
Other Findings	10202-0	Physical Findings: Neurological System

LOINC codes for Lung Cancer Specific Segment

Text	LOINC code
Respiratory Symptoms and Diseases	10177-4
History of Asthma	45669-9
Chest Signs	11422-3
Details of Chest Signs	11391-0
Chest X-Ray	24642-1
CT Scan	24627-2

Appendix 5 – HL7 V2.4 standard field length increase

Fields that have length extended from the HL7 2.4 library.

OBR.2
OBR.3
PV1.3
OBR.13

Healthlink have extended the length of these fields for the Healthlink Message Specification. As National Messaging Broker, HL7 v2.4 library states that this is acceptable if it is required to suit localised (national in this case) use. HIQA have been informed of these changes.
The main drive for these changes are as a result of multiple legacy and new source systems sending clinical HL7 messages via the Healthlink Broker.

Below is an extract from HL7 v2.4 library Chapter 2, stating that length can be changed on a site specific basis.

> "2.7.2 Maximum length
> …
>
> The maximum length is not of conceptual importance in the abstract message or the HL7 coding rules. The length of a field is normative, but can be changed on a site specific basis. "