Health Information and Quality Authority

An tÚdarás Um Fhaisnéis agus Cáilíocht Sláinte

Newer version available

General Practice Messaging Standard Version 3.0

May 2014

Date	Version	Change
March 2010	1.0	First Version of Standard
November 2011	2.0	See Appendix 7 for change history
May 2014	3.0	See Appendix 7 for change history

About the Health Information and Quality Authority

The Health Information and Quality Authority (HIQA) is the independent Authority established to drive high quality and safe care for people using our health and social care services. HIQA's role is to promote sustainable improvements, safeguard people using health and social care services, support informed decisions on how services are delivered, and promote person-centred care for the benefit of the public.

The Authority's mandate to date extends across the quality and safety of the public, private (within its social care function) and voluntary sectors. Reporting to the Minister for Health and the Minister for Children and Youth Affairs, the Health Information and Quality Authority has statutory responsibility for:

- **Setting Standards for Health and Social Services** – Developing person-centred standards, based on evidence and best international practice, for those health and social care services in Ireland that by law are required to be regulated by the Authority.

- **Supporting Improvement –** Supporting health and social care services to implement standards by providing education in quality improvement tools and methodologies.

- **Social Services Inspectorate** – Registering and inspecting residential centres for dependent people and inspecting children detention schools, foster care services and child protection services.

- **Monitoring Healthcare Quality and Safety** – Monitoring the quality and safety of health and personal social care services and investigating as necessary serious concerns about the health and welfare of people who use these services.

- **Health Technology Assessment** – Ensuring the best outcome for people who use our health services and best use of resources by evaluating the clinical and cost effectiveness of drugs, equipment, diagnostic techniques and health promotion activities.

- **Health Information** – Advising on the efficient and secure collection and sharing of health information, evaluating information resources and publishing information about the delivery and performance of Ireland's health and social care services.

Overview of Health Information function

Healthcare is information-intensive, generating huge volumes of data every day. Health and social care workers spend a significant amount of their time handling information, collecting it, looking for it and storing it. It is therefore imperative that information is managed in the most effective way possible in order to ensure a high quality, safe service.

Safe, reliable healthcare depends on access to, and the use of, information that is accurate, valid, reliable, timely, relevant, legible and complete. For example, when giving a patient a drug, a nurse needs to be sure that they are administering the appropriate dose of the correct drug to the right patient and that the patient is not allergic to it. Similarly, lack of up-to-date information can lead to the unnecessary duplication of tests – if critical diagnostic results are missing or overlooked, tests have to be repeated unnecessarily and, at best, appropriate treatment is delayed or at worst not given.

In addition, health information has a key role to play in healthcare planning decisions – where to locate a new service, whether or not to introduce a new national screening programme and decisions on best value for money in health and social care provision.

Under section (8)(1)(k) of the Health Act 2007, the Health Information and Quality Authority (the Authority) has responsibility for setting standards for all aspects of health information and monitoring compliance with those standards. In addition, under section 8(1)(j), the Authority is charged with evaluating the quality of the information available on health and social care and making recommendations in relation to improving the quality and filling in gaps where information is needed but is not currently available.

Information and communications technology (ICT) has a critical role to play in ensuring that information to drive quality and safety in health and social care settings is available when and where it is required. For example, it can generate alerts in the event that a patient is prescribed medication to which they are allergic. Further to this, it can support a much faster, more reliable and safer referral system between the patient's general practitioner (GP) and hospitals. Although there are a number of examples of good practice, the current ICT infrastructure in Ireland's health and social care sector is highly fragmented with major gaps and silos of information which prevents the safe, effective, transfer of information. This results in service users being asked to provide the same information on multiple occasions.

Information can be lost, documentation is poor, and there is over-reliance on memory. Equally, those responsible for planning our services experience great difficulty in bringing together information in order to make informed decisions. Variability in practice leads to variability in outcomes and cost of care. Furthermore, we are all being encouraged to take more responsibility for our own health and wellbeing, yet it can be very difficult to find consistent, understandable and trustworthy information on which to base our decisions. As a result of these deficiencies, there is a clear and pressing need to develop a coherent and integrated approach to health information, based on standards and international best practice. A robust health information environment will allow all stakeholders – the general public, patients and service users, health professionals and policy makers – to make choices or decisions based on the best available information. This is a fundamental requirement for a high reliability healthcare system.

One of the areas currently being addressed through this work programme is the need to standardise the information shared between general practitioners and hospital consultant and administrative staff. This has been achieved through a General Practice Messaging Standard (GPMS). The Authority's GPMS is based on the international Health Level Seven (HL7) version 2.4 messaging standard. Version 1.0 of the GPMS was published in April 2010 and approved by the then Minister for Health and Children in May 2010. Version 2.0 of the GPMS was developed in 2011 to incorporate new requirements identified by stakeholders. Version 3.0 has been developed to include the messaging requirements for the electronic transfer of prescriptions between GP's and community pharmacy including the outpatient departments of hospitals.

Table of Contents

Document layout

To facilitate readers' review of this consultation document, this section describes the layout of the document and provides a brief description of each of the sections in the document.

Section 1 – Introduction

This section provides an introduction to the General Practice Messaging Standard (GPMS) and identifies the scope of the Standard and also what the Standard does not address.

Section 2 – Background

This section provides a brief introduction to the reason for developing the GPMS and the process that was undertaken to develop this Standard.

Section 3 – Message segments

This section describes each of the messaging segments used in the Standard. A segment is a logical grouping of data fields. Segments are the building-blocks for messages. They may occur only once in a message or they may be allowed to repeat. Each segment is given a name.

For example, the ADT message may contain the following segments: Message header (MSH), event type (EVN), patient ID (PID), and patient visit (PV1). Each segment is identified by a unique three-character code known as the segment ID.

For each segment, a segment attribute table is provided to detail the fields in the segment including (but not limited to) sequence, length, usage and reference table details are supplied. The description column allows for further description and implementation details to be supplied.

Section 4 – Message flows

Each individual message flow covered by the Standard is detailed in this section. A clinical-use case, an interaction model (including interaction diagram and interaction model) will be supplied. The abstract message definition and minimum segments will be detailed and, where an element of segment is specialised from the default segment specification, the detail will be documented.

Section 5 – Electronic prescribing in the community

This section documents scenarios, clinical examples, message flows and use cases relevant to electronic prescribing in the community

Section 6 – General implementation comments
This section provides additional information on XML, the CE data type and the PID.32 element.

Section 7 – Feedback
The Authority is fully committed to consulting on its work as widely as possible and invites comments and feedback on this document, using the form in Appendix 1.

Appendix 1 – Feedback form
A feedback form is available to support end-users in providing comments and feedback on this document.

Appendix 2 – Abstract message structures
This section lists the abstract message definitions used as the basis for work flows.

Appendix 3 - Reference tables
This section will detail the tables used in the Standard. For each table, the code to use and the code description will be supplied.

Appendix 4 – Healthlink to HL7 Mapping
This section provides a mapping from Healthlink to HL7 Abstract Message Types.

Appendix 5 – LOINC Codes
This section provides the LOINC codes for referral messaging in Ireland.

Appendix 6 – LOINC copyright notice and License
This section recreates the LOINC copyright notice and License as published on the LOINC website, www.loinc.org.

Appendix 7 – Version Control
This section lists the change history between the first and second version of the GPMS.

1 Introduction

The General Practice Messaging Standard (GPMS) is a messaging standard intended to standardise the electronic transmission of messages between general practices, and secondary care and out-of-hours care.

The GPMS focuses on the structure and content of electronic messages used to communicate between practice management systems of general practitioners and secondary care and out-of-hours care systems.

The Standard defines messages segments and message flows. It also defines both the dynamic aspects (systems participating in the interchange and triggers which precipitate the interchange) and the static aspects (message structure and content).

This Standard is an application-level specification and does not address lower level details. Specifically it does not address:

- choice of transport technologies
- encryption and authentication mechanisms
- infrastructure for addressing and routing of messages.

2 Background

In 2009, the Health Information and Quality Authority (the Authority) commenced work on the development of the GPMS standard for general practice messaging. To lead and oversee the process and advise the Authority, a multidisciplinary working group was convened including experts from practice management systems vendors, acute care information systems and messaging experts. The inaugural meeting of this group was held on 11 June 2009. The terms of reference for the working group were to:

- agree to adopt, adapt or develop a general practice messaging standard
- make recommendations on a mechanism for testing conformance to the standard
- make recommendations on a mechanism for amendments, version control, and timescale when the standard should be formally reviewed.

The Authority, through its Health Information function, retains overall responsibility for the project and its management.

The Authority would like to thank the members of the working group for their input, and would like to thank Dr Brian O'Mahony (GPIT) and Orla Doogue (Healthlink) in particular for the significant time and expertise they provided in developing the messaging standard.

The membership of the working group included representation from the following organisations:

- Dr Brian O'Mahony, General Practice Information Technology Group
- Malachy Stringer, Health Service Executive
- Julie Bellew, Health Service Executive
- Orla Doogue, National Healthlink Project
- Eleanor Crowley, National Cancer Registry Ireland
- Dr Kevin O Carroll, Health Information and Quality Authority
- Louise Mc Quaid, Health Information and Quality Authority
- Dr Donal Buckley, Irish College of General Practitioners
- Dr Ann Lynott, Irish College of General Practitioners
- Carl Beame, Complete GP Ltd
- Declan Rossiter, Health Ireland Partners Ltd
- Vincent Jordan, Health Service Executive
- Patrick O Neill, Freagra
- Gerard Hurl, Health Service Executive
- Michael Nerney, Health Service Executive
- Stephen Mulvany, Health Service Executive.

Version 1.0 of the GPMS was published in April 2010 and approved by the then Minister for Health and Children in May 2010. Version 2.0 of the GPMS was developed to incorporate new requirements identified by stakeholders. Version 3.0 includes an update related to electronic transfer of prescriptions.

3 Message segments

The GPMS standard specifies the structure and content of electronic messages transmitted to and from GP practices. To achieve this, the GPMS initially defines a set of building blocks for messages, known as message segments, which may be reused when constructing messages. A total of 25 message segments are detailed and are listed below.

- The MSH segment (message header)
- The PID segment (patient identification)
- The EVN segment (event)
- The PV1 segment (event type/ patient visit)
- The PV2 segment (event type additional information)
- The PRD segment (provider data)
- The DG1 segment (diagnosis)
- The NTE segment (notes and comments)
- The OBR segment (observation request)
- The OBX segment (observation result)
- The PDA segment (patient death and autopsy)
- The RGS segment (resource group)
- The AIP segment (appointment information – personnel resources)
- The SCH segment (scheduling activity information)
- The AIL segment (appointment information – location resource)
- The ORC segment (common order segment)
- The RF1 segment (referral information)
- The SAC segment (specimen container detail)
- The MSA segment (message acknowledgement)
- The ERR segment (message error)
- The QRD segment (query definition)
- The QRF segment (query filter)
- The QAK segment (query response)
- The TXA segment (transcription document header)
- The DSC segment (continuation pointer)

This section details each of the messages segments that may used in a message flow and the associated fields and rules. The message segment attribute table will be used to detail each of the segments.

Table 1 - Message segment attribute table

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description

Below follows a description of each of the columns in the message segment attribute table.

HL7 Seq

This refers to the ordinal position of the field in the segment. In the segment attribute tables, this information is provided in the column labelled "HL7 Seq".

HL7 Element Name

This refers to the name of the field as specified in the HL7 version 2.4 standard. The name is for reference purposes only and does not appear on the message data. In the segment attribute tables this information is provided in the column labelled "HL7 Element name".

Max Len

This column details the maximum field length. For repeating fields it specifies the maximum length of each value, so a field with multiple repeating values may exceed the specified length.

HL7 Data Type

This column indicates the HL7 data type that must be used for the field. Information about HL7 data types may be found in Chapter 2 of the HL7 standard specification available at www.hl7.org. In the segment attribute tables this information is provided in the column labelled "HL7 Data Type".

Opt

This column defines whether the field is required, optional, or conditional in a segment. In the segment attribute tables this information is provided in the column labelled "Opt".

A local implementation guide or local standard may make an optional field in HL7 a required field locally. A local implementation guide may not make a required

field in HL7 optional. If a HL7 field is required, not all of the field components need to be populated.

The values listed in the table below are appropriate for the general practice messaging standard. A mapping to the Healthlink Online Messaging Specification (HOMS) is also provided.

Table 2 - Mapping to HOMS

Value		Description	HOMS mapping
R	Required	If data is missing or incorrect, the message may not be delivered or may have limited value.	RC
O	Optional	Population of the field is optional.	RNC, O, OR
C	Conditional	The optionality of the field is conditional on the trigger event or on some other field(s) within the message.	C, RNC
B	Backward	This element is retained for backward compatibility.	B
X	Not Used	The element is in the base HL7 standard but is not used in the GP Messaging Standard.	

Repeating field

This column defines whether the field may repeat or not, or the number of repetitions supported. In the segment attribute tables this information is provided in the column labelled "Repeat". The designations for repetition are detailed in table 3 below.

Table 3 - Repeating field values

Value	Description
N or blank	no repetition allowed
Y	the field may repeat an indefinite or site-determined number of times
(integer)	the field may repeat up to the number of times specified by the integer

Table

The table column of a segment attribute table specifies the HL7 identifier for a set of coded values.

In the segment attribute tables, the table identifier is provided in the column labelled "Table". An entry in the table number column means that the table name and the element name are equivalent. If this attribute is not valued or blank, there is not a table of values defined for the field.

HL7 defines table values in 3 ways: HL7 defined, user-defined and externally defined as follows:

- User-defined Tables: A user-defined table is a set of values that are locally or site defined
- HL7 Tables: A HL7 table is a set of values defined and published by HL7. They are a part of the HL7 Standard because they affect the interpretation of the messages that contain them. These values may not be redefined locally; however, the table itself may be extended to accommodate locally defined values
- External Tables: An external table is a set of coded values defined and published by another standards organisation.

Item Number

The item number is a small integer that uniquely identifies the data item throughout the Standard. In the segment definition this information is provided in the column labelled "Item #".

Description

The description field adds additional information to the usage of the element. This information will be contained in the "Description" column.

Not all fields in the HL7 segments are detailed in this standard. These fields are identified in the segment attribute tables with a description "Not currently used" and are also identifiable by a lighter font.

3.1 The MSH segment (message header)

The MSH segment defines the intent, source, destination, and some specifics of the syntax of a message.

Table 4 - MSH Segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	MSH.1 - Field Separator	1	ST	R			00001	This field contains the separator between the segment ID and the first real field, MSH-2-encoding characters. As such it serves as the separator and defines the character to be used as a separator for the rest of the message. Recommended value is |, (ASCII 124).
2	MSH.2 - Encoding Characters	4	ST	R			00002	This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. Recommended values are ^~\& (ASCII 94, 126, 92, and 38, respectively).

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
3	MSH.3 - Sending Application	180	HD	R			00003	This field uniquely identifies the sending application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise. This field further describes the sending application, MSH-3-sending application. The field structure is System or System.Middleware or System.Middleware.Message Number. The optionality of this field is further constrained than the HL7 standard optionality of (O). The HD datatype is used in fields that in earlier versions of HL7 used the IS data type. Thus, a single component HD (only the first component valued) will look like a simple IS data type for older systems expecting a single component in the place of the HD data type. If the first component for the HD data type is present, the second and third components are optional. If the third component is present, then the second must also be present (although in this case the first is optional). The second and third components must either both be valued (both non-null), or both be not valued (both null).This means that if all three components of the HD are valued, the entity identified by the first component is the same as the entity identified by components two and three taken together. However, implementers may choose, by site agreement, to specify that if all three components of the HD are valued, the first component defines a member in the set defined by the second and third components.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
3	MSH.3/HD.1		IS	C		0361		The name of the sending application. This field further describes the sending application, MSH-3-sending application. The field structure is System or System.Middleware or System.Middleware.Message Number.
3	MSH.3/HD.2		ST	C				The code associated with the sending application.
3	MSH.3/HD.3		ID	C				The coding system used to identify the sending application.
4	MSH.4 - Sending Facility	180	HD	R			00004	The field is used to define the health agency where the message originated. In the acute setting this may be the department or clinic, in the general practice setting this will be the general practice. This field further describes the sending application, MSH-3-sending application. The optionality of this field is further constrained than the HL7 standard optionality of (O).
4	MSH.4/HD.1		IS	C		0362		The name of the sending facility.
4	MSH.4/HD.2		ST	C				The code associated with the sending facility.
4	MSH.4/HD.3		ID	C				The coding system used to identify the sending facility.
5	MSH.5 -Receiving Application	180	HD	O			00005	This field uniquely identifies the receiving application among all other applications within the network enterprise.
5	MSH.5/HD.1		IS	C		0361		The name of the receiving application.
5	MSH.5/HD.2		ST	C				The code associated with the receiving application.
5	MSH.5/HD.3		ID	C				The coding system used to identify the receiving application.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
6	MSH.6 - Receiving Facility	180	HD	R			00006	The field is used to define the health agency where the message is destined. In the acute setting this may be the department or clinic, in the general practice setting this will be the general practice. The optionality of this field is further constrained than the HL7 standard optionality of (O).
6	MSH.6/HD.1		IS	C		0362		The name of the receiving facility.
6	MSH.6/HD.2		ST	C				The code associated with the receiving facility.
6	MSH.6/HD.3		ID	C				The coding system used to identify the receiving facility.
7	MSH.7 – Date / Time Of Message	26	TS	R			00007	This field contains the date/time that the sending system created the message.
8	MSH.8 - Security	40	ST	X			00008	Not Currently Used.
9	MSH.9 - Message Type	13	CM	R			00009	The first component is the message type code defined by HL7 Table 0076 - Message type. This table contains values such as ACK, ADT, ORM, ORU etc.. The second component is the trigger event code defined by HL7 Table 0003 - Event type. This table contains values like A01, O01, R01 etc..
9	MSH.9/MSG.1		ID	R		0076		This field is the message type code defined by HL7 Table 0076 - Message type. This table contains values such as ACK, ADT, ORM, ORU etc..
	MSH.9/MSG.2		ID	R		0003		This field is the trigger event code defined by HL7 Table 0003 - Event type. This table contains values like A01, O01, R01 etc..

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
10	MSH.10 - Message Control ID	20	ST	R			00010	This field contains a number or other identifier that uniquely identifies the message. The receiving system echoes this ID back to the sending system in the Message acknowledgment segment (MSA) where applicable.
11	MSH.11- Processing ID	3	PT	R		0103/0207	00011	This field is used to decide whether to process the message as defined in HL7 Application (level 7) Processing rules.
11	MSH.11/PT.1		ID	R				This should be set to P for live messages, T for training messages and D for debugging messages.
12	MSH.12 - Version ID	60	VID	R		0104	00012	The version id. This should be 2.4.
13	MSH.13- Sequence Number	15	NM	X			00013	Not Currently Used.
14	MSH.14-Continuation Pointer	180	ST	X			00014	Not Currently Used.
15	MSH.15 - Accept Acknowledgment Type	2	ID	O		0155	00015	This field identifies the conditions under which accept acknowledgments are required to be returned in response to this message. Required for enhanced acknowledgment mode.
16	MSH.16 - Application Acknowledgment Type	2	ID	X		0155	00016	Not Currently Used.
17	MSH.17 - Country Code	3	ID	O		0399	00017	This field contains the country of origin for the message. HL7 recommends using ISO table 3166 as the suggested values.
18	MSH.18 - Character Set	16	ID	X		0211	00018	Not Currently Used.
19	MSH.19 - Principal Language Of Message	250	CE	O			00019	This field contains the principal language of the message. HL7 recommends using ISO table 639 as the suggested values.
20	MSH.20 - Alternate Character Set Handling Scheme	20	ID	X		0356	00020	Not Currently Used.
21	MSH.21 - Conformance Statement ID	10	ID	X	Y	0449	00021	Not Currently Used.

The PID segment (patient identification)

The PID segment is used by all applications as the primary means of communicating patient identification information. This segment contains permanent patient identifying and demographic information that, for the most part, is not likely to change frequently.

Table 5 - Patient identification segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	PID.1 - Set ID - PID	4	SI	O			000104	This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc..
2	PID.2 - Patient ID	20	CX	X			00105	Not Currently Used.
3	PID.3 - Patient Identifier List	250	CX	R	Y		00106	This field contains the list of identifiers (one or more) used by the healthcare facility to uniquely identify a patient (e.g., medical record number, billing number, national unique individual identifier, etc.).
3	PID.3/CX.1		ST	R				The patient identifier.
3	PID.3/CX.4/HD.1		ST	R		0363		The name of the authority that assigned the patient identifier.
3	PID.3/CX.4/HD.2		IS	O				The code of the assigning authority.
3	PID.3/CX.4/HD.3		ID	O		0301		The coding system used to identify the assigning authority. (The universal id of the system that received the order.)
3	PID.3/CX.5		ID	O		0203		The type of identifier in PID.3/CX.1.
4	PID.4 – Alternate Patient ID - PID	20	CX	X	Y		00107	Not Currently Used.
5	PID.5 -Patient Name	250	XPN	R	Y		00108	This field contains the names of the patient.
5	PID.5/XPN.1/FN.1		ST	R				Patient's Family Name.
5	PID.5/XPN.2		ST	R				Patient's First Name.
5	PID.5/XPN.3		ST	O				Middle Names/and or initials.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
5	PID.5/XPN.4		ST	O				A name suffix follows a person's full name and provides additional information about the person, for example M.A, M.F.A, MBA, Ph.D.
5	PID.5/XPN.5		ST	O				A name prefix precedes a person's full name and provides additional information about the person, for example Dr, Mr.
5	PID.5/XPN.6		IS	O		0360		Qualifications.
5	PID.5/XPN.7		ID	O		0200		Name type code.
6	PID.6 -Mother's Maiden Name	250	XPN	O	Y		00109	This field contains the family name under which the mother was born (i.e., before marriage).
7	PID.7 -Date/Time of Birth	26	TS	C			00110	This field contains the patient's date and time of birth. This field should be populated if known. The structure of the field is YYYYMMDD. Thus, YYYY is used to specify a precision of "year", YYYYMM specifies a precision of "month" and YYYYMMDD specifies a precision of "day". The optionality of this field is further constrained than the HL7 standard optionality of (O). If the date of birth is known then it is strongly recommended that is supplied. If the date of birth is unknown, a default date of birth may be supplied and it is recommended that this is indicated using the PID.32 field.
8	PID.8 -Administrative Sex	1	IS	R		0001	00111	This field contains the patient's sex. The optionality of this field is further constrained than the HL7 standard optionality of (O).
9	PID.9 -Patient Alias	250	XPN	B	Y		00112	**This field has been retained for backward compatibility only.** It is recommended to use PID-5 - patient name for all patient names. This field contained the name(s) by which the patient has been known at some time.
10	PID.10 -Race	250	CE	O	Y	0005	00113	This field refers to the patient's race.
11	PID.11 -Patient Address	250	XAD	O	Y		00114	This field contains the mailing address of the patient.
11	PID.11/XAD.1/SAD.1		ST	O				Street Address.
11	PID.11/XAD.2		ST	O				Address line 2.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
11	PID.11/XAD.3		ST	O				Address line 3.
11	PID.11/XAD.4		ST	O				Address line 4.
11	PID.11/XAD.5		ST	O				Postal code.
12	PID.12 -County Code	4	IS	B		0289	00115	**This field has been retained for backward compatibility only.** This field contains the patient's county code.
13	PID.13 -Phone Number - Home	250	XTN	O	Y		00116	This field contains the patient's personal phone numbers.
13	PID.13/XTN.1		TN	O				This field is a telephone number to call when communicating with a patient
13	PID.13/XTN.2		ID	O		0201		Telecommunications use code.
13	PID.13/XTN.3		ID	O		0202		Telecommunications equipment type.
13	PID.13/XTN.4		ST	O				Email address
13	PID.13/XTN.6		NM	O				Area/city code
13	PID.13/XTN.7		ID	O				Telephone number
14	PID.14 -Phone Number - Business	250	XTN	O	Y		00117	This field contains the patient's business telephone numbers.
14	PID.14/XTN.1		TN	O				This field is a telephone number to call when communicating with a provider or organisation
14	PID.14/XTN.2		ID	O		0201		Telecommunications use code.
14	PID.14/XTN.3		ID	O		0202		Telecommunications equipment type.
14	PID.14/XTN.4		ST	O				Email address
14	PID.14/XTN.6		NM	O				Area/city code
14	PID.14/XTN.7		ID	O				Telephone number
15	PID.15 -Primary Language	250	CE	O		0296	00118	This field contains the patient's primary language. HL7 recommends using ISO table 639 as the suggested values.
15	PID.15/CE.1		ST	O				Primary language code.
15	PID.15/CE.2		ST	O				Description of coded language.
15	PID.15/CE.3		IS	O				Name of coding system used.
16	PID.16 -Marital Status	250	CE	O		0002	00119	This field contains the patient's marital status.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
17	PID.17 -Religion	250	CE	O		0006	00120	This field contains the patient's religion.
18	PID.18 -Patient Account Number	250	CX	O			00121	This field contains the patient account number assigned by accounting to which all charges, payments, etc., are recorded.
19	PID.19 -SSN Number - Patient	16	ST	B			00122	**This field has been retained for backward compatibility only.** It is recommended to use PID-3 - Patient Identifier List for all patient identifiers. However, in order to maintain backward compatibility, this field should also be populated.
20	PID.20 - Driver's License Number - Patient	25	DLN	X			00123	Not Currently Used.
21	PID.21 -Mother's Identifier	250	CX	O	Y		00124	This field is used, for example, as a link field for newborns. Typically a patient ID or account number may be used.
22	PID.22 -Ethnic Group	250	CE	O	Y	0189	00125	This field further defines the patient's ancestry.
23	PID.23 -Birth Place	250	ST	O			00126	This field indicates the location of the patient's birth.
24	PID.24 -Multiple Birth Indicator	1	ID	O		0136	00127	This field indicates whether the patient was part of a multiple birth.
25	PID.25 -Birth Order	2	NM	O			00128	When a patient was part of a multiple birth, a value (number) indicating the patient's birth order is entered in this field.
26	PID.26 -Citizenship	250	CE	O	Y	0171	00129	This field contains the patient's country of citizenship.
27	PID.27 -Veterans Military Status	250	CE	O		0172	00130	This field contains the military status assigned to a veteran.
28	PID.28 -Nationality	250	CE	B		0212	00739	**This field has been retained for backward compatibility only.** This field contains a code that identifies the nation or national grouping to which the person belongs. This information may be different from a person's citizenship in countries in which multiple nationalities are recognised (for example, Spain: Basque, Catalan, etc.).

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
29	PID.29 -Patient Death Date and Time	26	TS	C			00740	This field contains the date and time at which the patient death occurred. Please refer to the Death Notification message flow for specific usage of this field.
29	PID.29/TS.1		TS	C				The date and time of the patient's death.
30	PID.30 -Patient Death Indicator	1	ID	C		0136	00741	This field indicates whether the patient is deceased. Please refer to the Death Notification message flow for specific usage of this field.
31	PID.31 Identity Unknown Indicator	1	ID	O		0136	01535	This field indicates whether or not the patient's/person's identity is known.
32	PID.32 -Identity Reliability Code	20	IS	O	Y	0445	01536	This field contains a coded value used to communicate information regarding the reliability of patient/person identifying data transmitted via a transaction. Values could indicate that certain fields on a PID segment for a given patient/person are known to be false (e.g., use of default or system-generated values for Date of Birth)
33	PID.33 -Last Update Date/Time	26	TS	X			01537	Not Currently Used.
34	PID.34 -Last Update Facility	40	HD	X			01538	Not Currently Used.
35	PID.35 -Species Code	250	CE	X		0446	01539	Not Currently Used.
36	PID.36 -Breed Code	250	CE	X		0447	01540	Not Currently Used.
37	PID.37 -Strain	80	ST	X			01541	Not Currently Used.
38	PID.38 - Production Class Code	250	CE	X		0429	01542	Not Currently Used.

3.2 The EVN segment (event)

The EVN segment is used to communicate necessary trigger event information to receiving applications.

Table 6 - The EVN segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	EVN.1 - Event Type Code	3	ID	B		0003	00099	**This field has been retained for backward compatibility only.** HL7 recommend using the second component (trigger event) of *MSH-9 - Message Type* to transmit event type code information. This field contains the events corresponding to the trigger events described in this section, e.g., admission, transfer, or registration.
2	EVN.2 Recorded Date/Time	26	TS	R			00100	The date time that the event was recorded on the source system.
2	EVN.2/TS.1		TS	R				The date time that the event was recorded on the source system.
3	EVN.3 - Date/Time Planned Event	26	TS	X			00101	Not Currently Used.
4	EVN.4 - Event Reason Code	3	IS	X			00102	Not Currently Used.
5	EVN.5 - Operator ID	250	XCN	X			00103	Not Currently Used.
6	EVN.6 - Event Occurred	26	TS	X			01278	Not Currently Used.
7	EVN.7 Event Facility	180	HD	X			01534	Not Currently Used.

3.3 The PV1 segment (event type/ patient visit)

The PV1 segment is used by registration/patient administration applications to communicate information on an account or visit-specific basis.

Table 7 - The PV1 segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	PV1.1 - Set ID	4	SI	O			00131	This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc..
2	PV1.2 - Patient Class	1	IS	R		0004	00132	This field identifies the class of the patient in terms of Inpatient, Outpatient, Emergency, Unknown etc..
3	PV1.3 - Assigned Patient Location	80	PL	O			00133	This field contains the patient's initial assigned location or the location to which the patient is being moved e.g. Radiology Department. The first component may be the nursing station for inpatient locations, or clinic or department, for locations other than inpatient.
3	PV1.3/PL.4/HD.1		IS	O				The name of the assigned patient location.
3	PV1.3/PL.4/HD.2		ST	O				The code associated with the assigned patient location.
3	PV1.3/PL.4/HD.3		ID	O				The coding system used to identify the assigned patient location.
3	PV1.3/PL.9		ST	O				The location of the patient as plain text.
4	PV1.4 - Admission Type		IS	O		0007	00134	This field indicates the circumstances under which the patient was or will be admitted.
5	PV1.5 - Preadmit Number	250	CX	X			00135	Not Currently Used.
6	PV1.6 - Prior Patient Location	80	PL	X			00136	Not Currently Used.
7	PV1.7 - Attending Doctor	250	XCN	O	Y	0010	00137	This field identifies the healthcare practitioner responsible for care of the patient. It is recommended that the doctors' name and professional identifier are supplied.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
7	PV1.7/XCN.1		ST	O				The identifier for the attending doctor.
7	PV1.7/XCN.2/FN.1		ST	O				The family name of the attending doctor.
7	PV1.7/XCN.3		ST	O				The first name of the attending doctor.
7	PV1.7/XCN.4		ST	O				Middle names/and or initials.
7	PV1.7/XCN.5		ST	O				The name suffix. A name suffix follows a person's full name and provides additional information about the person, for example M.A, M.F.A, MBA, Ph.D.
7	PV1.7/XCN.6		ST	O				A name prefix precedes a person's full name and provides additional information about the person, for example Dr, Mr.
8	PV1.8 - Referring Doctor	250	XCN	O	Y	0010	00138	This field identifies the healthcare practitioner responsible for referring the patient. It is recommended that the doctors' name and professional identifier is supplied.
8	PV1.8/XCN.1		ST	O				The identifier for the doctor.
8	PV1.8/XCN.2/FN.1		ST	O				The family name of the referring doctor.
8	PV1.8/XCN.3		ST	O				The first name of the referring doctor.
8	PV1.8/XCN.4		ST	O				Middle names/and or initials.
8	PV1.8/XCN.5		ST	O				The name suffix. A name suffix follows a person's full name and provides additional information about the person, for example M.A, M.F.A, MBA, Ph.D.
8	PV1.8/XCN.6		ST	O				The name prefix. A name prefix precedes a person's full name and provides additional information about the person, for example Dr, Mr.
9	PV1.9 - Consulting Doctor	250	XCN	B	Y	0010	00139	**This field has been retained for backward compatibility only**. This field contains the consulting physician information. Some hospital use this field to identify other healthcare professionals involved in this episode of care.
9	PV1.9/XCN.1		ST	O				The identifier for the consulting doctor.
9	PV1.9/XCN.2/FN.1		ST	O				The family name of the consulting doctor.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
9	PV1.9/XCN.3		ST	O				The first name of the consulting doctor.
9	PV1.9/XCN.4		ST	O				The middle names/and or initials of the consulting doctor.
9	PV1.9/XCN.5		ST	O				The name suffix. A name suffix follows a person's full name and provides additional information about the person, for example M.A, M.F.A, MBA, Ph.D.
9	PV1.9/XCN.6		ST	O				The name prefix. A name prefix precedes a person's full name and provides additional information about the person, for example Dr, Mr.
10	PV1.10 - Hospital Service	3	IS	X		0069	00140	Not Currently Used.
11	PV1.11- Temporary Location	80	PL	X			00141	Not Currently Used.
12	PV1.12- Preadmit Test Indicator	2	IS	X		0087	00142	Not Currently Used.
13	PV1.13 - Re-admission Indicator	2	IS	X		0092	00143	Not Currently Used.
14	PV1.14 - Admit Source	6	IS	C		0023	00144	This field indicates where the patient was admitted. Please refer to the A&E Notification and Admission Notification workflows for specific usage of this field.
15	PV1.15 - Ambulatory Status	2	IS	O	Y	0009	00145	This field indicates any permanent or transient disability.
16	PV1.16 - VIP Indicator	2	IS	X		0099	00146	Not Currently Used.
17	PV1.17 - Admitting Doctor	250	XCN	X	Y	0010	00147	Not Currently Used.
18	PV1.18 - Patient Type	2	IS	X		0018	00148	Not Currently Used.
19	PV1.19 - Visit Number	250	CX	O			00149	This field contains the unique number assigned to each patient visit.
19	PV1.19/CX.1		ST	O				The hospitals episode number.
20	PV1.20 - Financial Class	50	FC	O	Y	0064	00150	This field contains the financial class(es) assigned to the patient for the purpose of identifying sources of reimbursement.
20	PV1.20/FC.1		IS	O				Financial class code of the patient, as per the user defined table.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
20	PV1.20/FC.2		TS	O				Effective date.
21	PV1.21 - Charge Price Indicator	2	IS	X		0032	00151	Not Currently Used.
22	PV1.22 - Courtesy Code	2	IS	X		0045	00152	Not Currently Used.
23	PV1.23- Credit Rating	2	IS	X		0046	00153	Not Currently Used.
24	PV1.24 - Contract Code	2	IS	X	Y	0044	00154	Not Currently Used.
25	PV1.25 - Contract Effective Date	8	DT	X	Y		00155	Not Currently Used.
26	PV1.26 - Contract Amount	12	NM	X	Y		00156	Not Currently Used.
27	PV1.27- Contract Period	3	NM	X	Y		00157	Not Currently Used.
28	PV1.28 - Interest Code	2	IS	X		0073	00158	Not Currently Used.
29	PV1.29 - Transfer to Bad Debt Code	1	IS	X		0110	00159	Not Currently Used.
30	PV1.30- Transfer to Bad Debt Date	8	DT	X			00160	Not Currently Used.
31	PV1.31 - Bad Debt Agency Code	10	IS	X		0021	00161	Not Currently Used.
32	PV1.32- Bad Debt Transfer Amount	12	NM	X			00162	Not Currently Used.
33	PV1.33- Bad Debt Recovery Amount	12	NM	X			00163	Not Currently Used.
34	PV1.34- Delete Account Indicator	1	IS	X		0111	00164	Not Currently Used.
35	PV1.35 - Delete Account Date	8	DT	X			00165	Not Currently Used.
36	PV1.36 - Discharge Disposition	3	IS	C		0112	00166	This field contains the disposition of the patient at time of discharge (i.e., discharged to home, expired, etc.). The optionality of this field is further constrained than the HL7 standard optionality of (O). Please refer to message flow Discharge Summary message flow for specific usage of this field.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
37	PV1.37 - Discharged to Location	25	CM	C		0113	00167	This field indicates the healthcare facility to which the patient was discharged. The optionality of this field is further constrained than the HL7 standard optionality of (O). Please refer to discharge summary message flow for specific usage of this field.
37	PV1.37/DLD.1		IS	O				If the patient is discharged to another coded location it should be indicated here.
38	PV1.38 - Diet Type	250	CE	X		0114	00168	Not Currently Used.
39	PV1.39 - Servicing Facility	2	IS	X		0115	00169	Not Currently Used.
40	PV1.40 - Bed Status	1	IS	X		0116	00170	Not Currently Used.
41	PV1.41 - Account Status	2	IS	X		0117	00171	Not Currently Used.
42	PV1.42- Pending Location	80	PL	X			00172	Not Currently Used.
43	PV1.43- Prior Temporary Location	80	PL	X			00173	Not Currently Used.
44	PV1.44- Admit Date/Time	26	TS	C			00174	The date/time the patient was admitted. The optionality of this field is further constrained than the HL7 standard optionality of (O). Please refer to the A&E Notification and Admission Notification workflow for specific usage of this field.
45	PV1.45- Discharge Date/Time	26	TS	C	Y		00175	The date/time the patient was discharged. The optionality of this field is further constrained than the HL7 standard optionality of (O). Please refer to message flow Please refer to Discharge Notification and Discharge summary message flow
46	PV1.46 - Current Patient Balance	12	NM	X			00176	Not Currently Used.
47	PV1.47- Total Charges	12	NM	X			00177	Not Currently Used.
48	PV1.48- Total Adjustments	12	NM	X			00178	Not Currently Used.
49	PV1.49- Total Payments	12	NM	X			00179	Not Currently Used.
50	PV1.50 - Alternate Visit ID	250	CX	X		0203	00180	Not Currently Used.
51	PV1.51- Visit Indicator	1	IS	O		0326	01226	This field specifies the level on which data are being

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
								sent.
52	PV1.52- Other Healthcare Provider	250	XCN	X	Y	0010	01274	Not Currently Used.

3.4 The PV2 segment (event type additional information)

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

Table 8 - The PV2 segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	PV2.1 - Prior Pending Location	80	PL	X			00181	Not Currently Used.
2	PV2.2 - Accommodation Code	250	CE	X		0129	00182	Not Currently Used.
3	PV2.3 - Admit Reason	250	CE	X			00183	Not Currently Used.
4	PV2.4 - Transfer Reason	250	CE	X			00184	Not Currently Used.
5	PV2.5 - Patient Valuables	25	ST	X	Y		00185	Not Currently Used.
6	PV2.6 - Patient Valuables Location	25	ST	X			00186	Not Currently Used.
7	PV2-7 - Visit User Code	2	IS	X	Y	0130	00187	Not Currently Used.
8	PV2.8 - Expected Admit Date/Time	26	TS	X			00188	Not Currently Used.
9	PV2.9 - Expected Discharge Date/Time	26	TS	X			00189	Not Currently Used.
10	PV2.10 - Estimated Length of Inpatient Stay	3	NM	X			00711	Not Currently Used.
11	PV2.11 - Actual Length of Inpatient Stay	3	NM	X			00712	Not Currently Used.
12	PV2.12 - Visit Description	50	ST	X			00713	Not Currently Used.
13	PV2.13 - Referral Source Code	250	XCN	X	Y		00714	Not Currently Used.
14	PV2.14 - Previous Service Date	8	DT	X			00715	Not Currently Used.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
15	PV2.15 - Employment Illness Related Indicator	1	ID	X		0136	00716	Not Currently Used.
16	PV2.16 - Purge Status Code	1	IS	X		0213	00717	Not Currently Used.
17	PV2.17 - Purge Status Date	8	DT	X			00718	Not Currently Used.
18	PV2.18 - Special Program Code	2	IS	X		0214	00719	Not Currently Used.
19	PV2.19 - Retention Indicator	1	ID	X		0136	00720	Not Currently Used.
20	PV2.20 - Expected Number of Insurance Plans	1	NM	X			00721	Not Currently Used.
21	PV2.21 - Visit Publicity Code	1	IS	X		0215	00722	Not Currently Used.
22	PV2.22 - Visit Protection Indicator	1	ID	X		0136	00723	Not Currently Used.
23	PV2.23 - Clinic Organisation Name	250	XON	X	Y		00724	Not Currently Used.
24	PV2.24 - Patient Status Code	2	IS	X		0216	00725	Not Currently Used.
25	PV2.25 - Visit Priority Code	1	IS	X		0217	00726	Not Currently Used.
26	PV2.26 - Previous Treatment Date	8	DT	X			00727	Not Currently Used.
27	PV2.27 - Expected Discharge Disposition	2	IS	X		0112	00728	Not Currently Used.
28	PV2.28 - Signature on File Date	8	DT	X			00729	Not Currently Used.
29	PV2.29 - First Similar Illness Date	8	DT	X			00730	Not Currently Used.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
30	PV2.30 - Patient Charge Adjustment Code	250	CE	X		0218	00731	Not Currently Used.
31	PV2.31 - Recurring Service Code	2	IS	X		0219	00732	Not Currently Used.
32	PV2.32 - Billing Media Code	1	ID	X		0136	00733	Not Currently Used.
33	PV2.33 - Expected Surgery Date and Time	26	TS	X			00734	Not Currently Used.
34	PV2.34 - Military Partnership Code	1	ID	X		0136	00735	Not Currently Used.
35	PV2.35 - Military Non-Availability Code	1	ID	X		0136	00736	Not Currently Used.
36	PV2.36 - Newborn Baby Indicator	1	ID	X		0136	00737	Not Currently Used.
37	PV2.37 - Baby Detained Indicator	1	ID	X		0136	00738	Not Currently Used.
38	PV2.38 - Mode of Arrival Code	250	CE	O		0430	01543	Identifies how the patient was brought to the healthcare facility.
38	PV2.38/CE.1		ST	O				The code indicating how the patient arrived at the healthcare facility.
38	PV2.38/CE.2		ST	O				The accompanying text for the code in PV2.38/CE.1.
38	PV2.38/CE.3		IS	O		0396		The coding system used in PV2.38/CE.1.
39	PV2.39 - Recreational Drug Use Code	250	CE	X	Y	0431	01544	Not Currently Used.
40	PV2.40 - Admission Level of Care Code	250	CE	X		0432	01545	Not Currently Used.
41	PV2.41 - Precaution Code	250	CE	X	Y	0433	01546	Not Currently Used.
42	PV2.42 - Patient Condition Code	250	CE	X		0434	01547	Not Currently Used.
43	PV2.43 - Living Will Code	2	IS	X		0315	00759	Not Currently Used.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
44	PV2.44 - Organ Donor Code	2	IS	X		0316	00760	Not Currently Used.
45	PV2.45 - Advance Directive Code	250	CE	X	Y	0435	01548	Not Currently Used.
46	PV2.46 - Patient Status Effective Date	8	DT	X			01549	Not Currently Used.
47	PV2.47 - Expected LOA Return Date/Time	26	TS	X			01550	Not Currently Used.

3.5 The PRD segment (provider data)

This segment will be employed as part of a patient referral message and its related transactions.

Table 9 - The PRD segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	PRD.1 - Provider Role	250	CE	R	Y		01155	This field contains the contact role that defines the relationship of the person described in this segment to the patient being referred.
1	PRD.1/CE.1		ST	R		0286		The provider role. This field contains the contact role that defines the relationship of the person described in this segment to the patient being referred.
1	PRD.1/CE.2		ST	O				This field contains the free text for information concerning the provider role
1	PRD.1/CE.3		IS	O				This field contains the name of the coding system for the provider role
2	PRD.2 Provider Name	250	XPN	C	Y		01156	This field contains the name of the provider. Please refer to the Online Referral workflow for specific usage of this field.
2	PRD.2/XPN.1		ST	O				The provider's family name.
2	PRD.2/XPN.2		ST	O				The provider's first name.
2	PRD.2/XPN.3		ST	O				Middle names and/or initials
2	PRD.2/XPN.4		ST	O				Name suffix. A name suffix follows a person's full name and provides additional information about the person, for example M.A, M.F.A, MBA, Ph.D.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
2	PRD.2/XPN.5		ST	O				Name prefix. A name prefix precedes a person's full name and provides additional information about the person, for example Dr, Mr.
2	PRD.2/XPN.6		IS					The degree (e.g., MD) for the provider role
3	PRD.3 Provider Address	250	XAD	C	Y		01157	This field contains the mailing address of the provider identified in this segment. Please refer to the Online Referral work flow for specific usage of this field.
3	PRD.3/XAD.1/SAD.1		ST	O				Street Address.
3	PRD.3/XAD.2		ST	O				Address Line 2.
3	PRD.3/XAD.3		ST	O				Address Line 3.
3	PRD.3/XAD.4		ST	O				Address Line 4.
4	PRD.4 Provider Location	60	PL	C			01158	This field contains the location of the provider as needed when a provider that may be external to a given enterprise must be referenced. Please refer to the Online Referral work flow for specific usage of this field.
4	PRD.4/PL.1		IS	O				Point of Care.
4	PRD.4/PL.6		IS	O				Person Location Type.
4	PRD.4/PL.9		ST	O				Location Description.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
5	PRD.5 Provider Communication Information	250	XTN	C	Y		01159	This field contains information, such as the phone number or electronic mail address, used to communicate with the provider or organisation. Please refer to the Online Referral workflow for specific usage of this field.
5	PRD.5/XTN.1		TN	O				This field is a telephone number to call when communicating with a patient
5	PRD.5/XTN.2		ID	O		0201		Telecommunications use code.
5	PRD.5/XTN.3		ID	O		0202		Telecommunications equipment type.
5	PRD.5/XTN.4		ST	O				Email address
5	PRD.5/XTN.6		NM	O				Area/city code
5	PRD.5/XTN.7		ID	O				Telephone number
6	PRD.6 Preferred Method of Contact - Provider	250	CE	X		0185	00684	Not Currently Used.
7	PRD.7 Provider Identifiers	100	CM	C	Y		01162	Provider identifiers. Please refer to the Online Referral workflow for specific usage of this field.
7	PRD.7/PI.1		ID	O				This repeating field contains the provider's unique identifiers.
7	PRD.7/PI.2		IS	O				Type of ID number (IS).
7	PRD.7/PI.3		ST	O				Other qualifying information.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
8	PRD.8 Effective Start Date of Provider Role	26	TS	X			01163	Not Currently Used.
9	PRD.9 Effective End Date of Provider Role	26	TS	X			01164	Not Currently Used.

3.6 The DG1 segment (diagnosis)

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

Table 10 - The DG1 segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	DG1.1 - Set ID - DG1	4	SI	R			00375	This field contains the number that identifies this transaction. For the first occurrence of the segment the sequence number shall be 1, for the second occurrence it shall be 2, etc..
2	Dg1.2 - Diagnosis Coding Method	2	ID	(B) R		0053	00376	**This field has been retained for backward compatibility only.** Use the components of DG1.3 instead of this field.
3	DG1.3 - Diagnosis Code	250	CE	O		0051	00377	This field contains the diagnosis code. Use this field instead of DG1.2 and DG1.4.
3	DG1.3/CE.1		ST	O		0051		Local Code for the diagnosis.
3	DG1.3/CE.2		ST	O				The diagnosis text associated with the code in DG1.3/CE.1.
3	DG1.3/CE.3		IS	O				The coding system used in DG1.3/CE.1. The should contain 'L' if used.
4	DG1.4 - Diagnosis Description	40	ST	B			00378	**This field has been retained for backward compatibility only.** It is recommended to use the components of DG1-3 - diagnosis code-DG1 field instead of this field.
5	DG1.5 - Diagnosis Date/Time	26	TS	O			00379	This field contains the date/time that the diagnosis was determined.
6	DG1.6 - Diagnosis Type	2	IS	R		0052	00380	This field contains a code that identifies the type of diagnosis being sent.
7	DG1.7 - Major Diagnostic Category	250	CE	X		0118	00381	Not Currently Used.
8	DG1.8 - Diagnostic Related Group	250	CE	X		0055	00382	Not Currently Used.
9	DG1.9 - DRG Approval Indicator	1	ID	X		0136	00383	Not Currently Used.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
10	DG1.10 - DRG Grouper Review Code	2	IS	X		0056	00384	Not Currently Used.
11	DG1.11 - Outlier Type	250	CE	X		0083	00385	Not Currently Used.
12	DG1.12 - Outlier Days	3	NM	X			00386	Not Currently Used.
13	DG1.13 - Outlier Cost	12	CP	X			00387	Not Currently Used.
14	DG1.14 - Grouper Version And Type	4	ST	X			00388	Not Currently Used.
15	DG1.15 - Diagnosis Priority	2	ID	X		0359	00389	Not Currently Used.
16	DG1.16 - Diagnosing Clinician	250	XCN	O	Y		00390	This field contains the individual responsible for generating the diagnosis information.
16	DG1.16/XCN.1		ST	O				The individual responsible for the diagnosis.
16	DG1.16/XCN.2/FN.1		ST	O				The family name of the diagnosing clinician.
16	DG1.16/XCN.3		ST	O				The first name of the diagnosing clinician.
16	DG1.16/XCN.4		ST	O				Middle names and/or initials.
16	DG1.16/XCN.5		ST	O				The name suffix. A name suffix follows a person's full name and provides additional information about the person, for example M.A, M.F.A, MBA, Ph.D.
16	DG1.16/XCN.6		ST	O				The name prefix. A name prefix precedes a person's full name and provides additional information about the person, for example Dr, Mr.
17	DG1.17 - Diagnosis Classification	3	IS	X		0228	00766	Not Currently Used.
18	DG1.18 - Confidential Indicator	1	ID	X		0136	00767	Not Currently Used.
19	DG1.19 - Attestation Date/Time	26	TS	X			00768	Not Currently Used.

3.7 The NTE segment (notes and comments)

The NTE segment is commonly used for sending notes and comments.

Table 11 - The NTE segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	NTE.1 - Set ID - NTE	4	SI	O			00096	This field may be used where multiple NTE segments are included in a message. Their numbering must be described in the application message definition.
2	NTE.2 - Source of Comment	8	ID	O		0105	00097	This field is used when source of comment must be identified.
3	NTE.3 - Comment	65536	FT	O	Y		00098	This field contains the comment contained in the segment.
4	NTE.4 - Comment Type	250	CE	X		0364	01318	Not Currently Used.

3.8 The OBR segment (observation request)

The observation request segment is used to transmit information specific to an order for a diagnostic study or observation, physical exam, or assessment. In the reporting of clinical data, the OBR serves as the report header. It includes the relevant ordering information when that applies. It contains many of the fields that usually apply to all of the included observations. When a set of observations is ordered, the order message contains an OBR segment. However, observations can be collected and reported without an antecedent order. When observations are reported, the report message also includes one or more OBR segments.

Table 12 - The OBR segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	OBR.1 - Set ID	4	SI	R			00237	For the first order transmitted, the sequence number shall be 1; for the second order, it shall be 2 and so on. The optionality of this field is further constrained than the HL7 standard optionality of (O).
2	OBR.2 - Placer Order Number	22	EI	C			00216	This field is a case of the Entity Identifier data type. Please refer to message flow Laboratory Order and Referral workflows for specific usage of this field.
2	OBR.2/EI.1		ST	C				If the system that placed the order provided a reference to the filler, then it should be entered here.
3	OBR.3 - Filler Order Number	22	EI	C			00217	This field is the order number associated with the filling application. Please refer to message flow Laboratory and Radiology Results work flows for specific usage of this field. The optionality of this field is further constrained than the HL7 standard optionality of (O). It is strongly recommended that one of OBR.3/EI.1,

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
								OBR.3/EI.2 or OBR.3/EI.3 is populated.
3	OBR.3/EI.1		ST	C		0363		The order number of the system that received the order.
3	OBR.3/EI.2		IS	C				The numeric identifier of the system that received the order.
3	OBR.3/EI.3		ST	C				The name of the system that received the order.
3	OBR.3/EI.4		ID	C		0301		The universal id of the system that received the order.
4	OBR.4 - Universal Service Identifier	250	CE	R			00238	This field is the identifier code for the requested observation/test/battery.
4	OBR.4/CE.1		ST	O				The code for observation/test.
4	OBR.4/CE.2		ST	R				Meaningful description of the test being ordered or a meaningful description of the overall set of OBX's included under each OBR. For example: Hemoglobin, Urea & Electrolytes.
4	OBR.4/CE.3		IS	O		0396		The coding system used in OBR.4/CE.1.
4	OBR.4/CE.4		ST	O				Code for the observation/test. Reserved for adoption of national coding system.
4	OBR.4/CE.5		ST	O				Meaningful description of the Lab/Radiology Test. Reserved for adoption of national coding system.
4	OBR.4/CE.6		IS	O		0396		Coding system used in OBR.4/CE.4. Reserved for adoption of national coding system.
5	OBR.5 - Priority - OBR	2	ID	X			00239	Not Currently Used.
6	OBR.6 - Requested Date/Time	26	TS	X			00240	Not Currently Used.
7	OBR.7 - Observation Date/Time	26	TS	C			00241	This field is the clinically relevant date/time of the observation. When the OBR is transmitted as part of a report message, the field **must** be filled in. If it is transmitted as part of a request **and** a sample has been sent along as part of the request, this field

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
								must be filled in because this specimen time is the physiologically relevant date/time of the observation. Please refer to Laboratory Results and Radiology Results message flows for specific usage of this field.
7	OBR.7/TS.1		TS	C				The date and time the specimen was collected or obtained.
8	OBR.8 - Observation End Date/Time	26	TS	O			00242	This field contains the end date and time of a study or timed specimen collection.
9	OBR.9 - Collection Volume	20	CQ	O			00243	For laboratory tests, the collection volume is the volume of a specimen.
10	OBR.10 - Collector Identifier	250	XCN	O	Y		00244	When a specimen is required for the study, this field will identify the person, department, or facility that collected the specimen.
11	OBR.11 - Specimen Action Code	1	ID	O		0065	00245	This field identifies the action to be taken with respect to the specimens that accompany or precede this order.
12	OBR.12 - Danger Code	250	CE	O			00246	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.
13	OBR.13 - Relevant Clinical Info.	300	ST	O			00247	This field contains any additional clinical information about the patient or specimen. It is strongly recommended that this field is populated where clinically appropriate.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
14	OBR.14 - Specimen Received Date/Time	26	TS	C			00248	The time that the specimen was received at dispatch. Please refer to message flow Laboratory Order and Laboratory Results workflow for specific usage of this field.
15	OBR.15 – Specimen Source	300	CM	O		0070	00249	This field identifies the site where the specimen should be obtained or where the service should be performed.
15	OBR.15/SPS.1/CE.1		ST	O				The specimen source code.
15	OBR.15/SPS.1/CE.2		ST	O		0070		Meaningful specimen source code description.
15	OBR.15/SPS.1/CE.3		IS	O				Coding system used in CE.1
15	OBR.15/SPS.1/CE.4		ST	O				Alternate specimen source code.
15	OBR.15/SPS.1/CE.5		ST	O				Alternate specimen description.
15	OBR.15/SPS.1/CE.6		IS	O				Alternate coding system used in CE.4
15	OBR.15/SPS.2		ST	O				Text describing additives.
15	OBR.15/SPS.3		ST	O				Simple free text.
15	OBR.15/SPS.4/CE.1		ST	O		0163		Identifier of body site.
15	OBR.15/SPS.4/CE.2		ST	O				Text description of body site.
15	OBR.15/SPS.4/CE.3		IS	O				Name of coding system.
15	OBR.15/SPS.5/CE.1		ST	O				Identifier of site modifier.
15	OBR.15/SPS.5/CE.2		ST	O				Text description of site modifier.
15	OBR.15/SPS.5/CE.3		IS	O				Name of coding system.
15	OBR.15/SPS.6/CE.1		ST	O				Identifier of collection method.
15	OBR.15/SPS.6/CE.2		ST	O				Text description of collection method.
15	OBR.15/SPS.6/CE.3		IS	O				Name of coding system.
16	OBR.16 - Ordering Provider	250	XCN	O	Y		00226	This field identifies the provider who ordered the test. Either the identifier code or the name, or both, may be present. This is the same as ORC-12-Ordering provider.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
16	OBR.16/XCN.1		ST	O				Identifier of the person ordering.
16	OBR.16/XCN.2		FN	O				Family name.
16	OBR.16/XCN.3		ST	O				Given name.
16	OBR.16/XCN.4		ST	O				Second or further given names or initials thereof.
16	OBR.16/XCN.5		ST	O				A name suffix follows a person's full name and provides additional information about the person, for example M.A, M.F.A, MBA, Ph.D.suffix (e.g., JR or III).
16	OBR.16/XCN.6		ST	O				Name prefix. A name prefix precedes a person's full name and provides additional information about the person, for example Dr, Mr.
16	OBR.16/XCN.16		CE	O		0448		<Copy To> Indicator Prefix. Please refer to use cases Unsolicited Laboratory Result, Unsolicited Radiology Result and Corrected Result for specific usage of this field.
17	OBR.17 - Order Callback Phone Number	250	XTN	O	Y/2		00250	This field is the telephone number to call when reporting a status or a result.
17	OBR.17/XTN.1		TN	O				This field is a telephone number to call when when reporting a status or a result.
17	OBR.17/XTN.2		ID	O		0201		Telecommunications use code.
17	OBR.17/XTN.3		ID	O		0202		Telecommunications equipment type.
17	OBR.17/XTN.4		ST	O				Email address.
17	OBR.17/XTN.6		NM	O				Area/city code.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
17	OBR.17/XTN.7		ID	O				Telephone number.
18	OBR.18 - Placer Field 1	60	ST	X			00251	Not Currently Used.
19	OBR.19 - Placer Field 2	60	ST	X			00252	Not Currently Used.
20	OBR.20 - Filler Field 1	60	ST	X			00253	Not Currently Used.
21	OBR.21 - Filler Field 2	60	ST	X			00254	Not Currently Used.
22	OBR.22 - Results Rpt/Status Chng - Date/Time	26	TS	C			00255	This field specifies the date/time when the results were reported or status changed.
23	OBR.23 - Charge to Practice	40	CM	X			00256	Not Currently Used.
24	OBR.24 - Diagnostic Serv Sect ID	10	ID	C		0074	00257	This field is the section of the diagnostic service where the observation was performed. If the study was performed by an outside service, the identification of that service should be recorded here. Please refer to message flow Laboratory Results, Radiology Results for specific usage of this field.
25	OBR.25 - Result Status	1	ID	C		0123	00258	This field is the status of results for this order. Please refer to Laboratory Results and Radiology Results and Corrected Results work flows for specific usage of this field.
26	OBR.26 – Parent Result	400	CM	O			00259	This field is defined to make it available for other types of linkages (e.g., toxicology). This important information, together with the information in *OBR-29-parent,* uniquely identifies the parent result's OBX segment related to this order. The value of this OBX segment in the parent result is the organism or chemical species about which this battery reports.
27	OBR.27 - Quantity/Timing	200	TQ	O	Y		00221	This field contains information about how many services to perform at one service time and how often the service times are repeated, and to fix duration of the request.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
27	OBR.27/TQ.1		CQ	O				Quantity.
28	OBR.28 - Result Copies To	250	XCN	O	Y/5		00260	This field is the people who are to receive copies of the results. By local convention, either the identifier number or the name may be absent.
28	OBR.28/XCN.1		ST	O				Identifier of the person being copied (e.g. GP's GP code).
28	OBR.28/XCN.2/FN.1		ST	O				Family name.
28	OBR.28/XCN.3		ST	O				First name.
28	OBR.28/XCN.4		ST	O				Middle/ other names.
28	OBR.28/XCN.5		ST	O				Name suffix. A name suffix follows a person's full name and provides additional information about the person, for example M.A, M.F.A, MBA, Ph.D.
28	OBR.28/XCN.6		ST	O				Name prefix. A name prefix precedes a person's full name and provides additional information about the person, for example Dr, Mr.
28	OBR.28/XCN.16		CE	O		0448		<Copy To> indicator string. Please refer to use cases Unsolicited Laboratory Result, Unsolicited Radiology Result and Corrected Result for specific usage of this field.
29	OBR.29 - Parent	200	CM	O			00261	This field is identical to *ORC-8-parent*. This field relates a child to its parent when a parent/child relationship exists.
30	OBR.30 - Transportation Mode	20	ID	X		0124	00262	Not Currently Used.
31	OBR.31 - Reason for Study	250	CE	X	Y		00263	Not Currently Used.
32	OBR.32 - Principal Result Interpreter	200	CM	O			00264	This field identifies the physician or other clinician who interpreted the observation and is responsible for the report content.
33	OBR.33 - Assistant Result Interpreter	200	CM	X	Y		00265	Not Currently Used.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
34	OBR.34 - Technician	200	CM	X	Y		00266	Not Currently Used.
35	OBR.35 - Transcriptionist	200	CM	X	Y		00267	Not Currently Used.
36	OBR.36 - Scheduled Date/Time	26	TS	X			00268	Not Currently Used.
37	OBR.37 - Number of Sample Containers	4	NM	X			01028	Not Currently Used.
38	OBR.38 - Transport Logistics of Collected Sample	250	CE	X	Y		01029	Not Currently Used.
39	OBR.39 - Collector's Comment	250	CE	X	Y		01030	Not Currently Used.
40	OBR.40 - Transport Arrangement Responsibility	250	CE	X			01031	Not Currently Used.
41	OBR.41 - Transport Arranged	30	ID	X		0224	01032	Not Currently Used.
42	OBR.42 - Escort Required	1	ID	X		0225	01033	Not Currently Used.
43	OBR.43 - Planned Patient Transport Comment	250	CE	X	Y		01034	Not Currently Used.
44	OBR.44 - Procedure Code	250	CE	X		0088	00393	Not Currently Used.
45	OBR.45 - Procedure Code Modifier	250	CE	X	Y	0340	01316	Not Currently Used.
46	OBR.46 - Placer Supplemental Service Information	250	CE	X	Y	0411	01474	Not Currently Used.
47	OBR.47 - Filler Supplemental Service Information	250	CE	X	Y	0411	01475	Not Currently Used.

3.9 The OBX segment (observation result)

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

Table 13 - The OBX segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	OBX.1 - Set ID	4	SI	R			00569	This field contains the sequence number. For compatibility with ASTM. The optionality of this field is further constrained than the HL7 standard optionality of (O).
2	OBX.2- Value Type	2	ID	C		0125	00570	This field contains the format of the observation value in OBX. It must be valued if OBX-11-Observ result status is not valued with an 'X" meaning the result cannot be obtained or this observation.
3	OBX.3 - Observation Identifier	250	CE	R			00571	This field should contain a unique identifier for the observation.
3	OBX.3/CE.1		ST	R				The code for the OBX.3/CE.2 description.
3	OBX.3/CE.2		ST	R				A description of the test or observation.
3	OBX.3/CE.3		IS	R				The coding system used in CE.1.
3	OBX.3/CE.4		ST	O				Alternate code for the test or observation.
3	OBX.3/CE.5		ST	O				Alternate description of the radiology test.
3	OBX.3/CE.6		IS	O				The alternate coding system used in CE.4.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
4	OBX.4 - Observation Sub-ID	20	ST	O			00572	This field is used to distinguish between multiple OBX segments with the same observation ID organised under one OBR.
5	OBX.5 - Observation Value	65536	*	C	Y		00573	This field contains the value observed by the observation producer. OBX-2-value type contains the data type for this field according to which observation value is formatted. It is not a required field because some systems will report only the normalcy/abnormalcy (OBX-8), especially in product experience reporting.
6	OBX.6 - Units	250	CE	O			00574	When an observation's value is measured on a continuous scale, one must report the measurement units within the units field of the OBX segment.
6	OBX.6/CE.1		ST	O				The code for the units used.
6	OBX.6/CE.2		ST	O				The actual units used as text (not a code).
6	OBX.6/CE.3		IS	O				The coding system used for the units.
7	OBX.7 - References Range	60	ST	O			00575	This field contains the reference range for this particular test.
8	OBX.8 - Abnormal Flags	5	IS	O	Y/5	0078	00576	This field contains a table lookup indicating the normalcy status of the result. This field may not be valued for certain laboratory results e.g. Microbiology Results.
9	OBX.9 - Probability	5	NM	X			00577	Not Currently Used.
10	OBX.10 - Nature of Abnormal Test	2	ID	X	Y	0080	00578	Not Currently Used.
11	OBX.11 - Observation Result Status	1	ID	R		0085	00579	This field contains the observation result status. This field reflects the current completion status of the results for one Observation Identifier. Please refer to message flow Unsolicited Laboratory

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
								Result, Unsolicited Radiology Result and Corrected Result workflow for updated results for specific usage of this field.
12	OBX.12 - Date Last Observation Normal Value	26	TS	X			00580	Not Currently Used.
13	OBX.13 - User Defined Access Checks	20	ST	X			00581	Not Currently Used.
14	OBX.14 - Date/Time of the Observation	26	TS	O			00582	In the case of tests performed on specimens, the relevant date-time is the specimen's collection date-time. In the case of observations taken directly on the patient (e.g., X-ray images, history and physical), the observation date-time is the date-time that the observation was performed.
15	OBX.15 - Producer's ID	250	CE	O			00583	This field contains a unique identifier of the responsible producing service. It should be reported explicitly when the test results are produced at outside laboratories.
16	OBX.16 - Responsible Observer	250	XCN	O	Y		00584	When required, this field contains the identifier of the individual directly responsible for the observation (i.e., the person who either performed or verified it).
17	OBX.17 - Observation Method	250	CE	X	Y		00936	Not Currently Used.
18	OBX.18 - Equipment Instance Identifier	22	EI	X	Y		01479	Not Currently Used.
19	OBX.19 - Date/Time of the Analysis	26	TS	X			01480	Not Currently Used.

3.10 The PDA segment (patient death and autopsy)

This segment carries information on a patient's death and possible autopsy.

Table 14 - The PDA segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	PDA.1 Death Cause Code	250	CE	C	Y		01574	This field is valued with the reason of the death. Please see the Death Notification workflow for specific recommendations.
1	PDA.1/CE.1		ST	O				The code indicating the cause of death.
1	PDA.1/CE.2		ST	O				The text for the cause of death.
1	PDA.1/CE.3		IS	O				The coding system used in PDA.1/CE.1.
2	PDA.2 Death Location	80	PL	C			01575	This field is valued with the place the death occurred. Please see the Death Notification workflow for specific recommendations.
2	PDA.2/PL.9		ST	O				The free text location of patient's death.
3	PDA.3 Death Certified Indicator	1	ID	X		0136	01576	Not Currently Used.
4	PDA.4 Death Certificate Signed Date/Time	26	TS	O			01577	This field is valued with the date and time the death certificate was signed.
4	PDA.4/TS.1		TS	O				The date and time the death certificate was signed.
5	PDA.5 Death Certified By	250	XCN	X			01578	Not Currently Used.
6	PDA.6 Autopsy Indicator	1	ID	X		0136	01579	Not Currently Used.
7	PDA.7 Autopsy Start and End Date/Time	53	DR	X			01580	Not Currently Used.
8	PDA.8 Autopsy Performed By	250	XCN	X			01581	Not Currently Used.
9	PDA.9 Coroner Indicator	1	ID	X		0136	01582	Not Currently Used.

3.11 The RGS segment (resource group)

The RGS segment is used to identify relationships between resources identified for a scheduled event.

Table 15 - The RGS segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	RGS.1 Set ID	4	SI	R			01203	This field contains a number that uniquely identifies the information represented by this segment in this transaction for the purposes of addition, change or deletion.
2	RGS.2 Segment Action Code	3	ID	C		0206	0763	This field contains the action to be taken when updating or modifying information in this segment from previously sent interface transactions.
3	RGS.3 Resource Group ID	250	CE	O			01204	This field contains an identifier code describing the group of resources following this RGS segment.

3.12 The AIP segment (appointment information – personnel resources)

The AIP segment contains information about the personnel types that can be scheduled.

Table 16 - The AIP segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	AIP.1 - Set ID - AIP	4	SI	R			00906	This field contains a number that uniquely identifies the information represented by this segment in this transaction for the purposes of addition, change or deletion.
2	AIP.2 - Segment Action code	3	ID	C		0206	00763	This field contains the action to be taken when updating or modifying information in this segment from previously sent interface transactions.
3	AIP.3 - Personnel Resource ID	250	XCN	C	Y		00913	This field contains the ID number and name of the person being requested or scheduled for an appointment.
4	AIP.4 - Resource Role	250	CE	R			00907	This field identifies the role of the personnel requested/scheduled for an appointment.
5	AIP.5 - Resource Group	250	CE	X			00899	Not Currently Used.
6	AIP.6 - Start Date/Time	26	TS	X			01202	Not Currently Used.
7	AIP.7 - Start Date/Time Offset	20	NM	X			00891	Not Currently Used.
8	AIP.8 - Start Date/Time Offset Units	250	CE	X			00892	Not Currently Used.
9	AIP.9 - Duration	20	NM	X			00893	Not Currently Used.
10	AIP.10 - Duration Units	250	CE	X			00894	Not Currently Used.
11	AIP.11 - Allow Substitution Code	10	IS	X		0279	00895	Not Currently Used.
12	AIP.12 - Filler Status Code	250	CE	X		0278	00889	Not Currently Used.

3.13 The SCH segment (scheduling activity information)

The SCH segment contains general information about the scheduled appointment.

Table 17 -The SCH segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	SCH.1 - Placer Appointment ID	75	EI	X			00860	Not Currently Used.
2	SCH.2 – Filler Appointment ID	75	EI	C			00861	This field contains the filler application's permanent identifier for the appointment request (and the scheduled appointment itself, when it has been confirmed as a booked slot by the filler application).
2	SCH.2/EI.1		ST	O				Entity identifier.
2	SCH.2/EI.2		IS	O				Namespace ID.
2	SCH.2/EI.3		ST	C				Universal ID.
2	SCH.2/EI.4		ID	C				Universal ID Type.
3	SCH.3 - Occurrence Number	5	NM	C			00862	This field is used in conjunction with SCH-1-Placer appointment ID and/or SCH-2-Filler appointment ID to uniquely identify an individual occurrence (a child) of a parent repeating schedule appointment.
4	SCH.4 - Placer Group Number	22	EI	X			00218	Not Currently Used.
5	SCH.5 - Schedule ID	250	CE	X			00864	Not Currently Used.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
6	SCH.6 - Event Reason	250	CE	R			00883	This field contains an identifier code for the reason that the notification event was triggered. This field may contain a code describing the cancel reason, the delete reason, the discontinue reason, the add reason, the block reason or any other code describing the reason that a specific event will occur.
6	SCH.6/CE.1		ST	O				The code (local code) for the event reason.
6	SCH.6/CE.2		ST	R				The reason for this message event.
6	SCH.6/CE.3		IS	O				The coding system used in SCH.6/CE.1.
7	SCH.7 - Appointment Reason	250	CE	X		0276	00866	Not Currently Used.
8	SCH.8 - Appointment Type	250	CE	X		0277	00867	Not Currently Used.
9	SCH.9 - Appointment Duration	20	NM	X			00868	Not Currently Used.
10	SCH.10 - Appointment Duration Units	250	CE	X			00869	Not Currently Used.
11	SCH.11 - Appointment Timing Quantity	200	TQ	R	Y		00884	This field contains the scheduled appointment's timing and quantity, as scheduled by the filler application.
11	SCH.11/TQ.4		TS	R				The start time of the appointment.
11	SCH.11/TQ.6		ST	O				The priority time of the appointment. The following are suggested values based on HL7 v2.4 for the priority component:

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
								Priority component (ST) Definition: This field describes the urgency of the request. The following values are suggested (the default for Priority is R): S = Stat With highest priority A = ASAP Fill after S orders R = Routine Default P = Preop C = Callback T = Timing critical A request implying that it is critical to come as close as possible to the requested time, e.g., for a trough antimicrobial level. PRN = As needed
12	SCH.12 - Placer Contact Person	250	XCN	X	Y		00874	Not Currently Used.
13	SCH.13 - Placer Contact Phone Number	250	XTN	X			00875	Not Currently Used.
14	SCH.14 - Placer Contact Address	250	XAD	X	Y		00876	Not Currently Used.
15	SCH.15 - Placer Contact Location	80	PL	X			00877	Not Currently Used.
16	SCH.16 - Filler Contact Person	250	XCN	R	Y		00885	This field identifies the person responsible for the scheduling of the requested appointment. Most often, this person will be the same person responsible for maintaining the schedule and for reviewing appointment requests.
16	SCH.16/XCN.1		ST	O				The identifier of the filler contact person.
16	SCH.16/XCN.2/FN.1		ST	O				The family name of the filler contact person.
16	SCH.16/XCN.3		ST	O				The first name of the filler contact person.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
16	SCH.16/XCN.4		ST	O				The middle names of the filler contact person.
16	SCH.16/XCN.5		ST	O				The name suffix of filler contact person. A name suffix follows a person's full name and provides additional information about the person, for example M.A, M.F.A,MBA, Ph.D.
16	SCH.16/XCN.6		ST	O				The name prefix of filler contact person. A name prefix precedes a person's full name and provides additional information about the person, for example Dr, Mr.
17	SCH.17 - Filler Contact Phone Number	250	XTN	X			00886	Not Currently Used.
18	SCH.18 - Filler Contact Address	250	XAD	X	Y		00887	Not Currently Used.
19	SCH.19 - Filler Contact Location	80	PL	X			00888	Not Currently Used.
20	SCH.20 - Entered by Person	250	XCN	R	Y		00878	This field identifies the person responsible for entering the request for the scheduling of an appointment. It is included to provide an audit trail of persons responsible for the request. This person may be someone other than the placer contact person, who is responsible for entering orders and requests.
20	SCH.20/XCN.1		ST	O				The identifier of the entered by contact person.
20	SCH.20/XCN.2/FN.1		ST	O				The family name of the entered by contact person.
20	SCH.20/XCN.3		ST	O				The first name of the entered by contact person.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
20	SCH.20/XCN.4		ST	O				The middle names and/or initials of the entered by contact person.
20	SCH.20/XCN.5		ST	O				The name suffix of the entered by contact person. A name suffix follows a person's full name and provides additional information about the person, for example M.A, M.F.A, MBA, Ph.D.
20	SCH.20/XCN.6		ST	O				The name prefix. A name prefix precedes a person's full name and provides additional information about the person, for example Dr, Mr.
21	SCH.21 - Entered by Phone Number	250	XTN	X	Y		00879	Not Currently Used.
22	SCH.22 - Entered by Location	80	PL	X			00880	Not Currently Used.
23	SCH.23 - Parent Placer Appointment ID	75	EI	X			00881	Not Currently Used.
24	SCH.24 - Parent Filler Appointment ID	75	EI	X			00882	Not Currently Used.
25	SCH.25 - Status Code	250	CE	O			00889	This field contains a code describing the status of the appointment with respect to the filler application.
25	SCH.25/CE.1		ST	O		0278		The status code of the appointment as seen by the filler (hospital).
25	SCH.25/CE.2		ST	O				The status text.
25	SCH.25/CE.3		IS	O		0396		The coding system used in CE.1.
26	SCH.26 - Placer Order Number	22	EI	X	Y		00216	Not Currently Used.
27	SCH.27 - Filler Order Number	22	EI	X	Y		00217	Not Currently Used.

3.14 The AIL segment (appointment information – location resource)

The AIL segment contains information about location resources (meeting rooms, operating rooms, examination rooms, or other locations) that can be scheduled. Resources included in a transaction using this segment are assumed to be controlled by a schedule on a schedule filler application. Resources not controlled by a schedule are not identified on a schedule request using this segment. Location resources are identified with this specific segment because of the specific encoding of locations used by the HL7 standard.

Table 18 - The AIL segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	AIL.1 - Set ID - AIL	4	SI	R			00902	This field contains a number that uniquely identifies the information represented by this segment in this transaction for the purposes of addition, change or deletion.
2	AIL.2 - Segment Action Code	3	ID	C		0206	00763	This field contains the action to be taken when updating or modifying information in this segment from previously sent interface transactions.
3	AIL.3 - Location Resource ID	80	PL	C			00903	This field contains a coded identification of the location being requested or scheduled for an appointment.
4	AIL.4 - Location Type-AIL	250	CE	R			00904	This field identifies the role of the location requested/scheduled for this appointment.
5	AIL.5 - Location Group	250	CE	X			00905	Not Currently Used.
6	AIL.6 - Start Date/Time	26	TS	X			01202	Not Currently Used.
7	AIL.7 - Start Date/Time Offset	20	NM	X			00891	Not Currently Used.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
8	AIL.8 - Start Date/Time Offset Units	250	CE	X			00892	Not Currently Used.
9	AIL.9 - Duration	20	NM	X			00893	Not Currently Used.
10	AIL.10 - Duration Units	250	CE	X			00894	Not Currently Used.
11	AIL.11 - Allow Substitution Code	10	IS	X		0279	00895	Not Currently Used.
12	AIL.12 - Filler Status Code	250	CE	X		0278	00889	Not Currently Used.

3.15 The ORC segment (common order segment)

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

Table 19 - The ORC Segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	ORC.1 - Order Control	2	ID	R	N	0119	00215	Determines the function of the order segment.
2	ORC.2 - Placer Order Number						00216	Not Currently Used.
3	ORC.3 - Filler Order Number	22	EI	X			00217	Not Currently Used.
4	ORC.4 - Placer Group Number	22	EI	X			00218	Not Currently Used.
5	ORC.5 - Order Status	2	ID	X	N	0038	00219	Not Currently Used.
6	ORC.6 - Response Flag	1	ID	X		0121	00220	Not Currently Used.
7	ORC.7 - Quantity/Timing	200	TQ	X	Y		00221	Not Currently Used.
8	ORC.8 - Parent	200	CM	X			00222	Not Currently Used.
9	ORC.9 - Date/Time of Transaction	26	TS	X			00223	Not Currently Used.
10	ORC.10 - Entered By	250	XCN	X	Y		00224	Not Currently Used.
11	ORC.11 - Verified By	250	XCN	X	Y		00225	Not Currently Used.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
12	ORC.12 - Ordering Provider	250	XCN	X	Y		00226	Not Currently Used.
13	ORC.13 - Enterer's Location	80	PL	X			00227	Not Currently Used.
14	ORC.14 - Call Back Phone Number	250	XTN	O	Y/2		00228	This field contains the telephone number to call for clarification of a request or other information regarding the order.
14	ORC.14/XTN.1		TN	O				This field is a telephone number displayed as an emergency number
14	ORC.14/XTN.2		ID	O		0201		Telecommunications use code.
14	ORC.14/XTN.3		ID	O		0202		Telecommunications equipment type.
14	ORC.14/XTN.4		ST	O				Email address.
14	ORC.14/XTN.6		NM	O				Area/city code.
14	ORC.14/XTN.7		ID	O				Telephone number.
15	ORC.15 - Order Effective Date/Time	26	TS	X			00229	Not Currently Used.
16	ORC.16 - Order Control Code Reason	250	CE	X			00230	Not Currently Used.
17	ORC.17 - Entering Organisation	250	CE	X			00231	Not Currently Used.
18	ORC.18 - Entering Device	250	CE	X			00232	Not Currently Used.
19	ORC.19 - Action By	250	XCN	X	Y		00233	Not Currently Used.
20	ORC.20 - Advanced Beneficiary Notice Code	250	CE	X		0339	01310	Not Currently Used.
21	ORC.21 - Ordering Facility Name	250	XON	X	Y		01311	Not Currently Used.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
22	ORC.22 - Ordering Facility Address	250	XAD	X	Y		01312	Not Currently Used.
23	ORC.23 - Ordering Facility Phone Number	250	XTN	X	Y		01313	Not Currently Used.
24	ORC.24 - Ordering Provider Address	250	XAD	X	Y		01314	Not Currently Used.
25	ORC.25 - Order Status Modifier	250	CWE	X	N		01473	Not Currently Used.

3.16 The RF1 segment (referral information)

This segment represents information that may be useful when sending referrals from the referring provider to the referred-to provider.

Table 20 - The RF1 segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	RF1.1 - Referral Status	250	CE	C		0283	01137	This field contains the status of the referral as defined by either the referred-to or the referred-by provider. Please refer to the Online Referral workflow for specific usage of this field.
2	RF1.2 - Referral Priority	250	CE	C		0280	01138	This field contains the urgency of the referral. Please refer to the Online Referral workflow for specific usage of this field.
3	RF1.3 - Referral Type	250	CE	C		0281	01139	This field contains the type of referral. It is loosely associated with a clinical specialty or type of resource. Please refer to the Online Referral work flow for specific usage of this field.
4	RF1.4 - Referral Disposition	250	CE	O	Y	0282	01140	This field contains the type of response or action that the referring provider would like from the referred-to provider.
5	RF1.5 - Referral Category	250	CE	O		0284	01141	This field contains the location at which the referral will take place.
6	RF1.6 - Originating Referral Identifier	30	EI	R			01142	This field contains the originating application's permanent identifier for the referral. This is a composite field.
7	RF1.7 - Effective Date	26	TS	C			01143	This field contains the date on which the referral is effective. Please refer to the Online Referral work flow for specific usage of this field.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
8	RF1.8 - Expiration Date	26	TS	O			01144	This field contains the date on which the referral expires.
9	RF1.9 - Process Date	26	TS	O			01145	This field contains the date on which the referral originated.
10	RF1.10 - Referral Reason	250	CE	O	Y	0336	01228	This field contains the reason for which the referral will take place.
11	RF1.11 - External Referral Identifier	30	EI	O	Y		01300	This field contains an external application's permanent identifier for the referral.

3.17 The SAC segment (specimen container detail)

The container detail segment is the data necessary to maintain the containers that are being used throughout the laboratory automation system.

Table 21 - The SAC segment

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
1	SAC.1 - External Accession Identifier	80	EI	O			01329	This field identifies the laboratory accession (see section *Glossary*). This identifier is assigned by the external laboratory information system. Example: If laboratory A sends a specimen to laboratory B, then within laboratory B this field contains accession identifier of lab A.
2	SAC.2 - Accession Identifier	80	EI	X			01330	Not Currently Used.
3	SAC.3 - Container Identifier	80	EI	X			01331	Not Currently Used.
4	SAC.4 - Primary (parent) Container Identifier	80	EI	X			01332	Not Currently Used.
5	SAC.5 - Equipment Container Identifier	80	EI	X			01333	Not Currently Used.
6	SAC.6 - Specimen Source	300	CM	X		0070/ 0369	00249	Not Currently Used.
7	SAC.7 - Registration Date/Time	26	TS	X			01334	Not Currently Used.
8	SAC.8 - Container Status	250	CE	X		0370	01335	Not Currently Used.
9	SAC.9 - Carrier Type	250	CE	X		0378	01336	Not Currently Used.
10	SAC.10 - Carrier Identifier	80	EI	X			01337	Not Currently Used.
11	SAC.11 - Position in Carrier	80	NA	X			01338	Not Currently Used.
12	SAC.12 - Tray Type - SAC	250	CE	X		0379	01339	Not Currently Used.
13	SAC.13 - Tray Identifier	80	EI	X			01340	Not Currently Used.
14	SAC.14 - Position in Tray	80	NA	X			01341	Not Currently Used.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
15	SAC.15 - Location	250	CE	X	Y		01342	Not Currently Used.
16	SAC.16 - Container Height	20	NM	X			01343	Not Currently Used.
17	SAC.17 - Container Diameter	20	NM	X			01344	Not Currently Used.
18	SAC.18 - Barrier Delta	20	NM	X			01345	Not Currently Used.
19	SAC.19 - Bottom Delta	20	NM	X			01346	Not Currently Used.
20	SAC.20 - Container Height/Diameter/Delta Units	250	CE	X			01347	Not Currently Used.
21	SAC.21 - Container Volume	20	NM	X			00644	Not Currently Used.
22	SAC.22 - Available Volume	20	NM	X			01349	Not Currently Used.
23	SAC.23 - Initial Specimen Volume	20	NM	X			01350	Not Currently Used.
24	SAC.24 - Volume Units	250	CE	X			01351	Not Currently Used.
25	SAC.25 - Separator Type	250	CE	X		0380	01352	Not Currently Used.
26	SAC.26 - Cap Type	250	CE	X		0381	01353	Not Currently Used.
27	SAC.27 - Additive	250	CE	X	Y	0371	00647	Not Currently Used.
28	SAC.28 - Specimen Component	250	CE	X			01355	Not Currently Used.
29	SAC.29 - Dilution Factor	20	SN	X			01356	Not Currently Used.
30	SAC.30 - Treatment	250	CE	X		0373	01357	Not Currently Used.
31	SAC.31 - Temperature	20	SN	X			01358	Not Currently Used.
32	SAC.32 - Hemolysis Index	20	NM	X			01359	Not Currently Used.
33	SAC.33 - Hemolysis Index Units	250	CE	X			01360	Not Currently Used.
34	SAC.34 - Lipemia Index	20	NM	X			01361	Not Currently Used.
35	SAC.35 - Lipemia Index Units	250	CE	X			01362	Not Currently Used.
36	SAC.36 - Icterus Index	20	NM	X			01363	Not Currently Used.
37	SAC.37 - Icterus Index Units	250	CE	X			01364	Not Currently Used.

HL7 Seq	HL7 Element Name	Max Len	HL7 Data Type	Opt	Repeat	Table	Item #	Description
38	SAC.38 - Fibrin Index	20	NM	X			01365	Not Currently Used.
39	SAC.39 - Fibrin Index Units	250	CE	X			01366	Not Currently Used.
40	SAC.40 - System Induced Contaminants	250	CE	X	Y	0374	01367	Not Currently Used.
41	SAC.41 - Drug Interference	250	CE	X	Y	0382	01368	Not Currently Used.
42	SAC.42 - Artificial Blood	250	CE	X		0375	01369	Not Currently Used.
43	SAC.43 - Special Handling Considerations	250	CE	X	Y	0376	01370	Not Currently Used.
44	SAC.44 - Other Environmental Factors	250	CE	X	Y	0377	01371	Not Currently Used.

3.19 The MSA segment (message acknowledgement)

The MSA segment contains information sent while acknowledging another message.

Table 22 - The MSA segment

HL7 SEQ	HL7 ELEMENT NAME	MAX LEN	HL7 Data Type	OPT	Repeat	Table	Item #	Description
1	MSA.1 Acknowledgment Code	2	ID	R		0008	00018	This field contains an acknowledgment code.
2	MSA.2 Message Control ID	20	ST	R			00010	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	MSA.3 Text Message	80	ST	O			00020	This optional field further describes an error condition. This text may be printed in error logs or presented to an end user. Use the ERR Segment rather than MSA.3 or MSA.6 for descriptions of error conditions.
4	MSA.4 Expected Sequence Number	15	NM	O			00021	This optional numeric field is used in the sequence number protocol.
5	MSA.5 Delayed Acknowledgment Type	1	ID	B		0102	00022	
6	MSA.6 Error Condition	250	CE	O		0357	00023	This field allows the acknowledging system to use a user-defined error code to further specify AR or AE type acknowledgments. This field is a generalised replacement for *MSA-3-text message*.

3.20 The ERR segment (message error)

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

Table 23- The ERR segment

HL7 SEQ	HL7 ELEMENT NAME	MAX LEN	HL7 Data Type	OPT	Repeat	Table	Item #	Description
1	ERR.1 Error Code and Location	80	CM	R	Y			This field identifies an erroneous segment in another message. The second component is an index if there is more than one segment of type <segment ID>. For systems that do not use the HL7 Encoding Rules, the data item number may be used for the third component. The fourth component (which references HL7 Table 0357 - Message error condition codes, is restricted from having any subcomponents as the subcomponent separator is now the CE's component separator.

3.21 The QRD segment (Query Definition Segment)

The QRD segment is used to define a query.

Table 24 - The QRD segment

HL7 SEQ	HL7 ELEMENT NAME	MAX LEN	HL7 Data Type	OPT	Repeat	Table	Item #	Description
1	Query Date/Time	26	TS	R			25	Date the query was generated by the application program.
2	Query Format Code	1	ID	R		106	26	Valid format codes are given in *HL7 Table 0106 - Query/response format code*.
3	Query Priority	1	ID	R		91	27	Time frame in which the response is expected. Table values and subsequent fieldsspecify time frames for response. *HL7 Table 0091 - Query priority* gives valid codes.
4	Query ID	10	ST	R			28	Unique identifier for the query. Assigned by the querying application. Returned intactby the responding application.
5	Deferred Response Type	1	ID	O		107	29	Valid entries are from *HL7 Table 0107 - Deferred response type*, to indicate before orlater than the date/time specified.
6	Deferred Response Date/Time	26	TS	O			30	Date/time before or after which to send a deferred response. If not present, theresponse can be sent when it is available.

7	Quantity Limited request	10	CQ	R		126	31	Maximum length of the response that can be accepted by the requesting system. Valid responses are numerical values given in units specified in the second HL7 Table 0126- Quantity limited request gives valid entries, with codes for characters, lines, pages, records, or locally defined. The default value is lines.component.
8	Who Subject Filter	60	XCN	R	Y		32	The subject of the query or who the inquiry is about. The field is allowed to repeat.
9	What Subject Filter	60	CE	R	Y	48	33	Describes the kind of information required to satisfy the request. Valid codes are given in HL7 Table 0048 - What subject filter and may be extended locally during implementation
10	What Department Data Code	60	CE	R	Y		34	Can include drug code, item number, etc., consistent with the subject in 2.24.4.9. Can contain multiple occurrences separated by repetition delimiters.
11	What data Code Value Qualifier	20	CM	O	Y		35	Further refines the inquiry by data code qualifiers by providing a window or range to further refine the inquiry. This field contains components giving start and stop code values.
12	Query Results Level	1	ID	O		108	36	Used to control level of detail in results. *HL7 Table 0108 - Query results level* gives valid values valid values.

3.22 The QRF segment (Query Filter Segment)

The QRF segment is used with the QRD segment to further refine the content of a query.

Table 25- The QRF segment

HL7 SEQ	HL7 ELEMENT NAME	MAX LEN	HL7 Data Type	OPT	Repeat	Table	Item #	Description
1	Where subject filter	20	ST	R	Y		00037	This field identifies the department, system, or subsystem to which the query pertains. This field may repeat as in LAB~HEMO, etc
2	When data start date/time	26	TS	O			00038	This field has been retained for backward compatibility only. It is recommended to use *QRF-9 – When quantity/timing qualifier*. When used for backward compatibility, this field contains the dates and times equal to or after which this value should be included.
3	When data end date/time	26	TS	O			00039	This field has been retained for backward compatibility only. It is recommended to use *QRF-9 – When quantity/timing qualifier*. When used for backward compatibility, this field contains the dates and times equal to or before which this date should be included. This field contains the dates and times equal to or before which this date should be included.
4	What user qualifier	60	ST	O	Y		00040	This field contains an identifier to further define characteristics of the data of interest.

5	Other query subject filter	60	ST	O	Y		00041	This field contains a filter defined locally for use between two systems. This filter uses codes and field definitions that have specific meaning only to the applications and/or site involved.
6	Which date/time qualifier	12	ID	O	Y	0156	00042	This field specifies the type of date referred to in *QRF-2-When data start date/time* and *QRF-3-When data end date/time*.
7	Which date/time status qualifier	12	ID	O	Y	0157	00043	This field specifies the status type of objects selected in date range defined by *QRF-2-When data start date/time* and *QRF-3-When data end date/time*.
8	Date/time selection qualifier	12	ID	O	Y	0158	00044	This field allows the specification of certain types of values within the date/time range.
9	When quantity/timing qualifier	60	TQ	O			00694	This field allows an interval definition to be used for specifying multiple responses to a query. With the addition of this filter, new query specifications should no longer use *QRF-2-When data start date/time* and *QRF-3-When data end date/time* in future implementations.
10	Search confidence threshold	10	NM	O			01442	This field contains a numeric value used to establish the minimum threshold match. The value instructs the responding system to return no records for patients whose "match weight" on the look-up was lower than this user-defined value.

3.23 The QAK segment (Query Response Status)

The QAK segment contains information sent with responses to a query.

HL7 SEQ	HL7 ELEMENT NAME	MAX LEN	HL7 Data Type	OPT	Repeat	Table	Item #	Description
1	Query Tag	32	ST	C			00696	This field may be valued by the initiating system to identify the query, and may be used to match response messages to the originating query. If it is valued, the responding system is required to echo it back as the first field in the query acknowledgment segment (QAK). This field differs from *MSA-2-message control ID* in that its value remains constant for each message (i.e., all continuation messages) associated with the query, whereas *MSA-2-Message control ID* may vary with each continuation message, since it is associated with each individual message, not the query as a whole. *QAK-1-Query tag* is not conditional on the presence of the *QRD-1-Query ID* field in the original mode queries: in the original mode queries *QAK-1-Query tag* is not used.
2	Query Response Status	2	ID	O		0208	00708	This field allows the responding system to return a precise response status. It is especially useful in the case where no data is found that matches the query parameters, but where there is also no error. It is defined with *HL7 Table 0208 - Query response status*.
3	Message Query Name	250	CE	O			01375	This field contains the name of the query. These names are assigned by the function-specific chapters of this specification. Site-specific event replay query names begin with the letter "Z." Refer to *User defined table 0471 - Query name* for suggested values.

4	Hit Count	10	NM	O			01434	This field, when used, contains the total number of records found by the server that matched the query. For tabular responses, this is the number of rows found. For other response types, the Conformance Statement defines the meaning of a "hit."
5	This Payload	10	NM	O			01622	This field, when used, contains the total number of matching records that the Server sent in the current response. Where the continuation protocol is used to transmit the response in partial installments, this number will differ from the value sent in *QAK-4-Hit count total*.
6	Hits Remaining	10	NM	O			01623	This field, when used, contains the number of matching records found by the Server that have yet to be sent. It is only meaningful when the Server uses the continuation protocol to transmit partial responses.

3.22 The TXA segment (Transcription Document Header Segment)

The TXA segment contains information specific to a transcribed document but does not include the text of the document.

Table 26- The TXA segment

HL7 SEQ	HL7 ELEMENT NAME	MAX LEN	HL7 Data Type	OPT	Repeat	Table	Item #	Description
1	Set ID- TXA	4	SI	R			00914	This field contains a number that uniquely identifies this transaction for the purpose of adding, changing, or deleting the transaction.
2	Document Type	30	IS	R		0270	00915	This field identifies the type of document (as defined in the transcription system). Refer to *User-defined Table 0270 - Document type* for suggested values. The organisation is free to add more entries.
3	Document Content Presentation	2	ID	C		0191	00916	This is a conditional field which is required whenever the message contains content as presented in one or more OBX segments. This field identifies the method by which this document was obtained or originated. Refer to *HL7 Table 0191 – Type of referenced data* for valid values.
4	Activity Date/Time	26	TS	O			00917	This field contains the date/time identified in the document as the date a procedure or activity was performed. This date can identify date of surgery, non-invasive procedure, consultation, examination, etc.
5	Primary Activity Provider Code/Name	250	XCN	C	Y		00918	This field contains the name of the person identified in the document as being responsible for performing the procedure or activity. This field includes the code and name (if available) of the caregiver. This field is conditional based upon the presence of a value in *TXA-4-Activity date/time*
6	Origination Date/Time	26	TS	O			00919	This field contains the date and time the document was created (i.e., dictated, recorded, etc.).

7	Transcription Date/Time	26	TS	C			00920	This field contains the date and time the input was actually transcribed. This field is conditional based upon the presence of a value in *TXA-17-Document completion status* of anything except "dictated."
8	Edit Date/Time	26	TS	O	Y		00921	This field contains the date and time the document was edited.
9	Originator Code/Name	250	XCN	O	Y		00922	This field identifies the person who originated (i.e., dictated) the document. The document originator may differ from the person responsible for authenticating the document.
10	Assigned Document Authenticator	250	XCN	O	Y		00923	This field identifies the person(s) responsible for authenticating the document, who may differ from the originator. Multiple persons may be responsible for authentication, especially in teaching facilities. This field is allowed to repeat an undefined number of times.
11	Transcriptionist Code/Name	250	XCN	C	Y		00924	This field identifies the person transcribing the document. This is a conditional value; it is required on all transcribed documents.
12	Unique Document Number	30	EI	R			00925	This field contains a unique document identification number assigned by the sending system. This document number is used to assist the receiving system in matching future updates to the document, as well as to identify the document in a query. When the vendor does not provide a unique document ID number, some type of document identifier should be entered here, or the Unique Document File name should be utilized. See Chapter 2, Section 2.9.55, "XTN - extended telecommunication number." Where the system does not customarily have a document filler number, this number could serve as that value, as well.

13	Parent Document Number	30	EI	C			00926	This field contains a document number that identifies the parent document to which this document belongs. The parent document number can be used to assist the receiving system in matching future updates to this document. This is a conditional field that is always required on T05 (document addendum notification), T06 (document addendum notification and content), T09 (document replacement notification), and T10 (document replacement notification and content) events.
14	Placer Order Number	22	EI	O	Y		00216	This field is the placer application's order number. This is a composite field. The first component is a string of characters that identifies an individual order (e.g., OBR). It is assigned by the placer (ordering application). It identifies an order uniquely among all orders from a particular ordering application. The second through fourth components contain the (filler) assigning authority of the placing application. The (filler) assigning authority is a string of characters that will be uniquely associated with an application. A given institution or group of intercommunicating institutions should establish a unique list of applications that may be potential placers and fillers and assign unique entity identifiers. The components are separated by component delimiters

15	Filler Order Number	22	EI	O			00217	This field is the order number associated with the filling application. Where a transcription service or similar organisation creates the document and uses an internally unique identifier, that number should be inserted in this field. Its first component is a string of characters that identifies an order detail segment (e.g., OBR). This string must uniquely identify the order (as specified in the order detail segment) from other orders in a particular filling application (e.g., transcription service). This uniqueness must persist over time. Where a number is reused over time, a date can be affixed to the non-unique number to make it unique.
16	Unique Document File Name	30	ST	O			00927	This field contains a unique name assigned to a document by the sending system. The file name is used to assist the receiving system in matching future updates to the document.
17	Document Completion Status	2	ID	R		0271	00928	This field identifies the current completion state of the document. This is a required, table-driven field. Refer to *HL7 table 0271 - Document completion status* for valid values.
18	Document Confidentiality Status	2	ID	O		0272	00929	This is an optional field which identifies the degree to which special confidentiality protection should be applied to this information. The assignment of data elements to these categories is left to the discretion of the healthcare organisation. Refer to *HL7 table 0272 - Document confidentiality status* for valid values.

19	Document Availability Status	2	ID	O		0273	00930	This is an optional field which identifies a document's availability for use in patient care. If an organisation's business rules allow a document to be used for patient care before it is authenticated, the value of this field should be set to "AV." If a document has been made available for patient care, it cannot be changed or deleted. If an erroneous document has been made available at any point in time and a replacement is not appropriate, then it may be marked as "Cancelled" and removed, as in the case of a document being assigned to the wrong patient. Additional information must be provided via an addendum, which is separately authenticated and date/time stamped. If the content of a document whose status is "Available" must be revised, this is done by issuing a replacement, which is separately authenticated and date/time stamped. Refer to *HL7 table 0273 - Document availability status* for valid values.
20	Document Storage Status	2	ID	O		0275	00932	This optional field identifies the storage status of the document. Refer to *HL7 table 0275 - Document storage status* for valid values.
21	Document Change Reason	30	ST	C			00933	This free text field (limited to 30 characters) contains the reason for document status change.

22	Authentication Person, Time Stamp	250	PPN	C	Y		00934	This is a conditional field. When the status of *TXA-17-Document completion status* is equal to AU (authenticated) or LA (legally authenticated), all components are required. This field contains a set of components describing by whom and when authentication was performed. Whenever any one of the ID number - Name type code components is valued, the when authenticated component, which is time stamp, must be valued as non-null. If the time component of a set is valued as non-null, the person component becomes required. These subcomponents are normally delimited by an ampersand (&). See Chapter 2.
23	Distributed Copies (Code and Name of Recipients)	250	XCN	O	Y		00935	This component identifies the person who has authenticated the document (either manually or electronically).

3.22 The DSC segment ()

The DSC segment is used in the continuation protocol.

Table 27- The DSC segment

HL7 SEQ	HL7 ELEMENT NAME	MAX LEN	HL7 Data Type	OPT	Repeat	Table	Item #	Description
1	DSC.1 Continuation Pointer	180	ST	O	Y		00014	This field contains the continuation pointer. In an initial query, this field is not present. If the responder returns a value of null or not present, then there is no more data to fulfill any future continuation requests. For use with continuations of unsolicited messages, see chapter 5 and section **Error! Reference source not found.**, "**Error! Reference source not found.**." Note that continuation protocols work with both display- and record-oriented messages.
2	DSC.2 Continuation Style	1	ID	O		0398	01354	Indicates whether this is a fragmented message (see Section **Error! Reference source not found.**, "**Error! Reference source not found.**"), or if it is part of an interactive continuation message (see Section 5.6.3, "Interactive continuation of response messages").

4 Message flows

This section describes the clinical scenarios, also known as message flows, supported by the Standard.

Each message flow will be described into four parts – use case, interaction model, message structure, and segment specialisation.

A brief description is provided of the use case associated with the message flow. The use case is described in technology-free terminology which treats the business process as a black box and describes the business process that is used by its business actors (healthcare professionals) to achieve their goals (e.g. order a test, send a referral).

An interaction model specifies a set of distinct artefacts that collectively describe the dynamic and static behaviour of the data exchanges. The artefacts consist of a set of interactions, each describes a single one-way communication. Trigger events, actors and message types will be identified in the interaction model.

For each interaction, the abstract message type will be identified and the minimum segments recommended for inclusion in the message are documented.

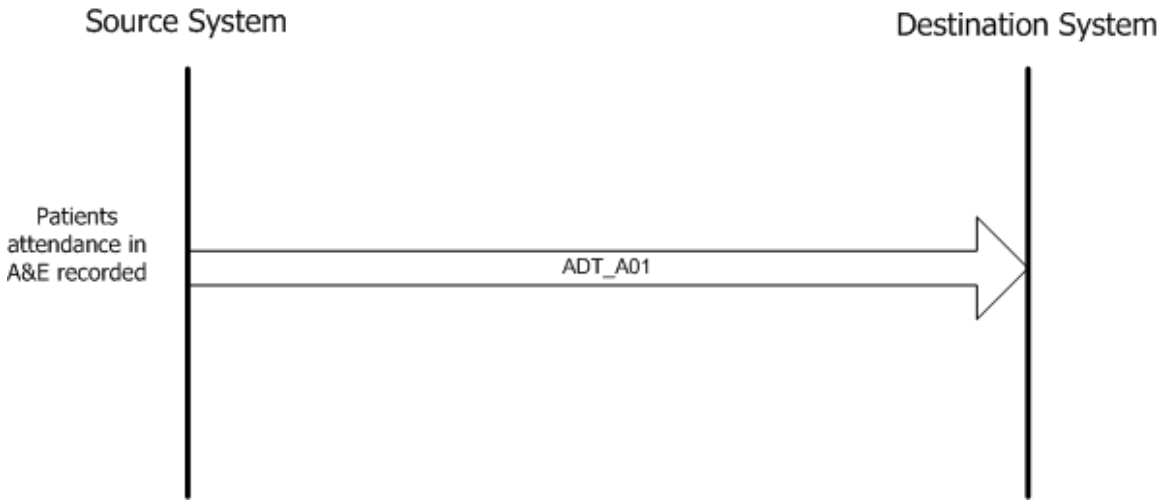
Finally, where there are further constraints for a segment element in a specific message flow, these constraints and conditions will be described in the segment specialisation section.

The message flows covered by the GPMS are:

- Emergency Department Attendance
- Admission Notification
- Administrative Discharge
- Clinical Discharge Summary
- Death Notification
- Cooperative Discharge Summary
- Outpatient Department Appointment
- Waiting List Notification
- Online Referral and Response
- Laboratory Order
- Unsolicited Laboratory Result
- Unsolicited Radiology Result
- Corrected Results.

4.1 Emergency Department (ED) attendance

Use case: A person attends an emergency department and the attendance is recorded on the local system. An electronic notification of the attendance may be sent to other systems.



The message type used is the ADT_A01 message type. For the purpose of this standard the minimum emergency department attendance notification message contains the following segments:

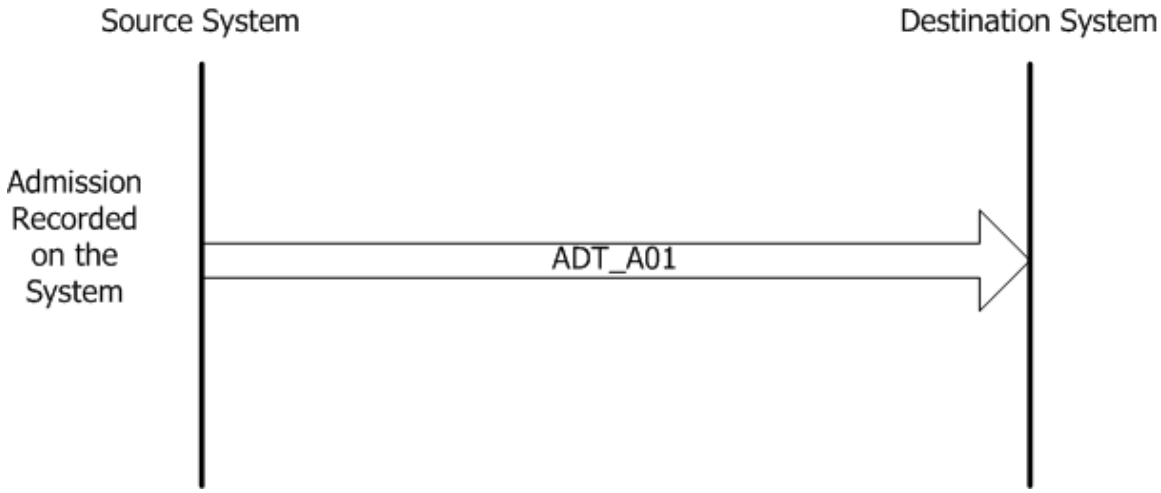
MSH Message Header
PID Patient Identification
EVN Event Segment
PV1 Event Type/Patient Visit
PV2 Event Type/Additional information.

The following conditions apply when generating an emergency department attendance notification message:

- PV1.14 (Admit Source). This element is required
- PV1.44 (Admit Date/Time.) This element is required.

4.2 Admission

Use case: A patient is admitted as an inpatient to a healthcare facility and this event is recorded on the local system. An electronic notification of the admission of the patient is sent to other systems.



The message type used is the ADT_A01 message type. For the purpose of this standard the minimum admission notification message contains the following segments:

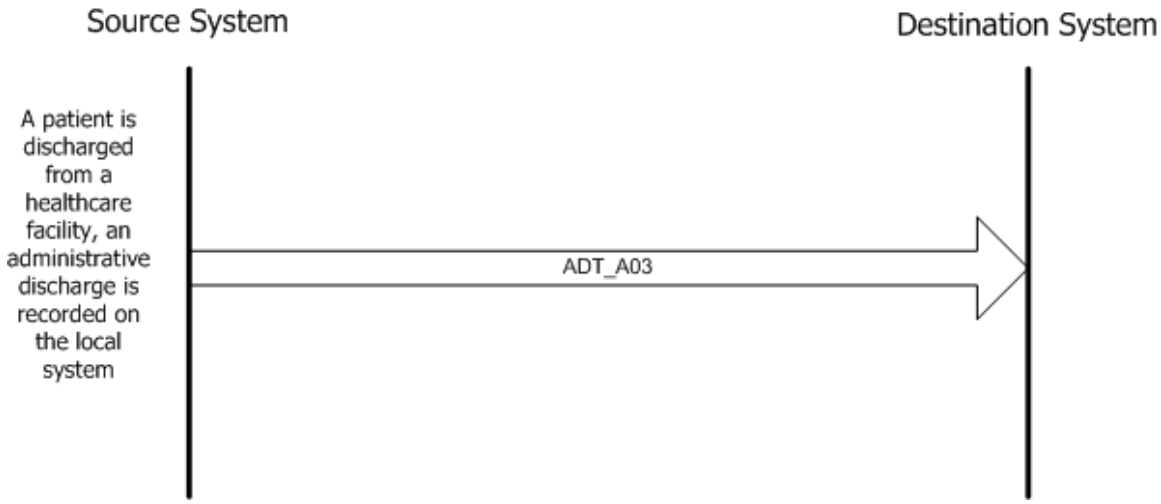
MSH Message Header
PID Patient Identification
EVN Event Segment
PV1 Event Type/Patient Visit
PV2 Event Type/Additional information.

The following conditions apply when generating an admission notification message

- PV1.14 (Admit Source). This element is required
- PV1.44 (Admit Date/Time). This element is required.

4.3 Administrative discharge

Use case: A person is discharged from a healthcare facility and the administrative event is recorded on the local system. A notification message is sent containing administrative information relating to the admission and discharge.



The message type used is the ADT_A03 message type. For the purpose of this standard the minimum administrative discharge notification message contains the following segments:

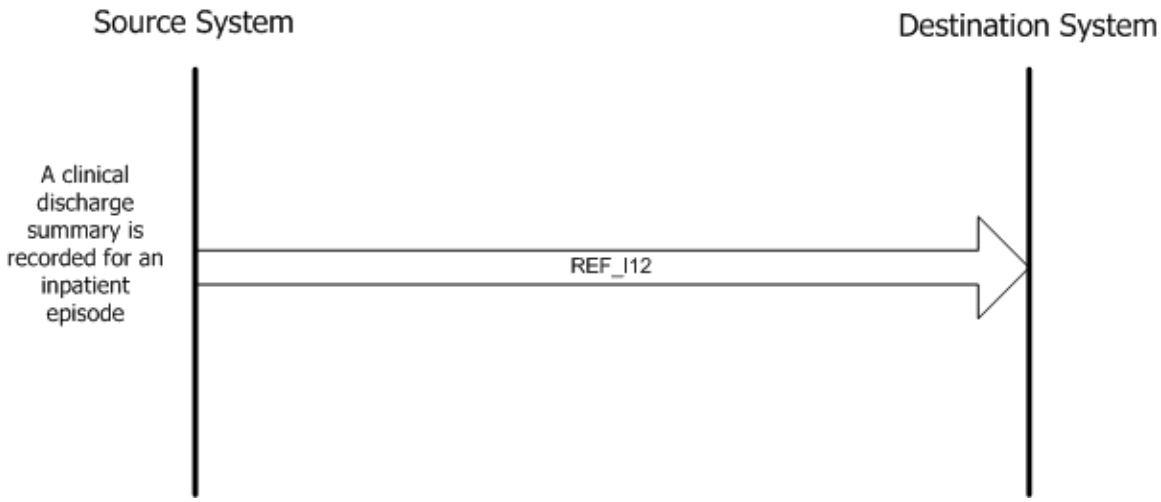
MSH	Message Header
PID	Patient Identification
EVN	Event Segment
PV1	Event Type/Patient Visit
PV2	Event Type/Additional information

The following conditions apply when an administrative discharge notification message:

- PV1.36 – (Discharge Disposition). This element is required
- PV1.37 – (Discharge to Location). This element is optional in this context but if know it is strongly recommended that it is populated.
- PV1.45 – (Discharge Date/Time). This element is required.

4.4 Admission Notification

Use case: A patient is discharged after an inpatient stay from a healthcare institution, a clinical discharge is recorded on the system and this clinical discharge is sent to other systems.



The message type used is the REF_I12 message type. For the purpose of this standard, the minimum clinical discharge summary message contains the following segments:

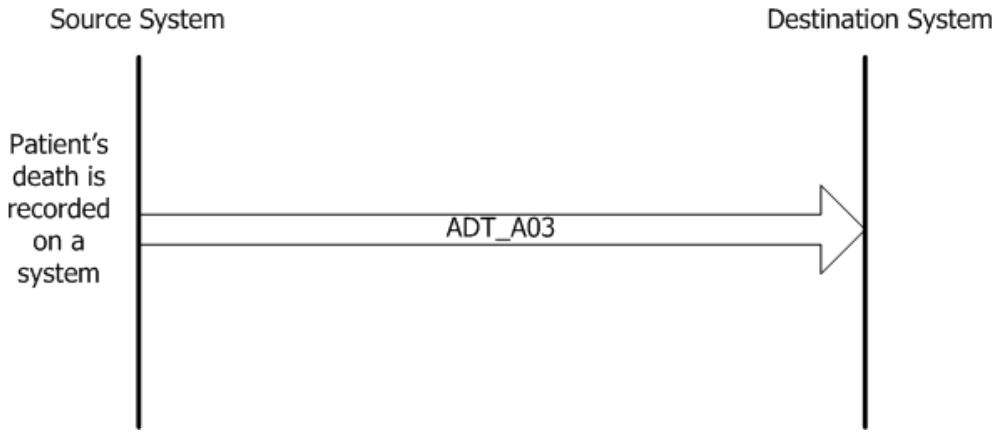
MSH	Message Header
PID	Patient Identification
PRD	Provider Data
DG1	Diagnosis
PV1	Patient Visit
NTE	Notes and Comments.

The following conditions apply when generating a clinical discharge summary message

- PV1.36 (Discharge Disposition). This element is required
- PV1.37 (Discharge to Location). This element is optional in this context but if know it is strongly recommended that it is populated
- PV1.45 (Discharge Date/Time). This element is required
- NTE.3 (Comment). It is strongly recommended that the clinical information is included in this element.

4.5 Death notification

Use case: The death of a patient is recorded on the local system. An electronic notification of the death of the patient is sent to other systems.



The message type used is the ADT_A03 message type. For the purpose of this standard the minimum death notification message contains the following segments:

MSH	Message Header
PID	Patient Identification
EVN	Event Segment
PV1	Event Type/Patient Visit
PDA	Patient Death and Autopsy
PV2	Event Type/Additional information

The following conditions apply when generating a death notification message:

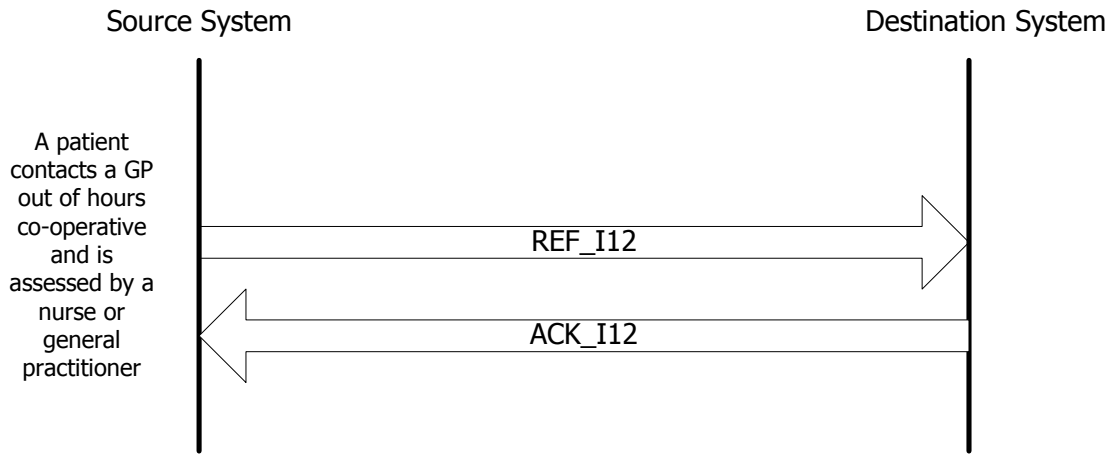
- PID.29 (Patient Death Date and Time). This element is required.
- PID.30 (Patient Death Indicator). This element is required.

The following recommendations apply when generating a death notification message:

- PDA.1 (Death Cause Code). This field is optional but if this information is available it is strongly recommended that this field is populated in the message
- PDA.2 (Death Location). This field is optional but if this information is available it is strongly recommended that this field is populated in the message.

4.6 Cooperative discharge summary

Use case: A patient contacts a GP out-of-hours cooperative and is assessed by a nurse or general practitioner. Clinical information relating to the patient is recorded on the system and a summary of this information is sent to the patient's general practitioner.

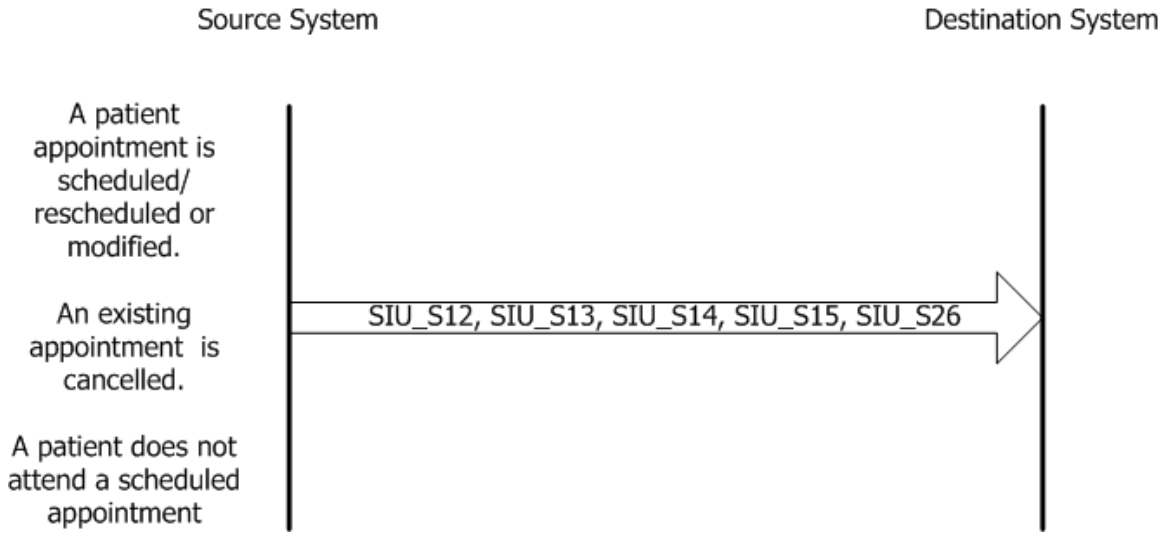


The message type used is the REF_I12 message type. For the purpose of this standard the minimum cooperative discharge summary message contains the following segments:

MSH	Message Header
PID	Patient Identification
PRD	Provider Data
DG1	Diagnosis
NTE	Notes and Comments
OBR	Observation Request
OBX	Observation Result

4.7 Outpatient department appointment

Use case: An appointment is scheduled for a patient on a hospitals administrative IT system. The appointment may be subsequently rescheduled, modified or cancelled or the patient may not attend the appointment. Notification of each of these events may be sent to the patient's recorded general practitioner.

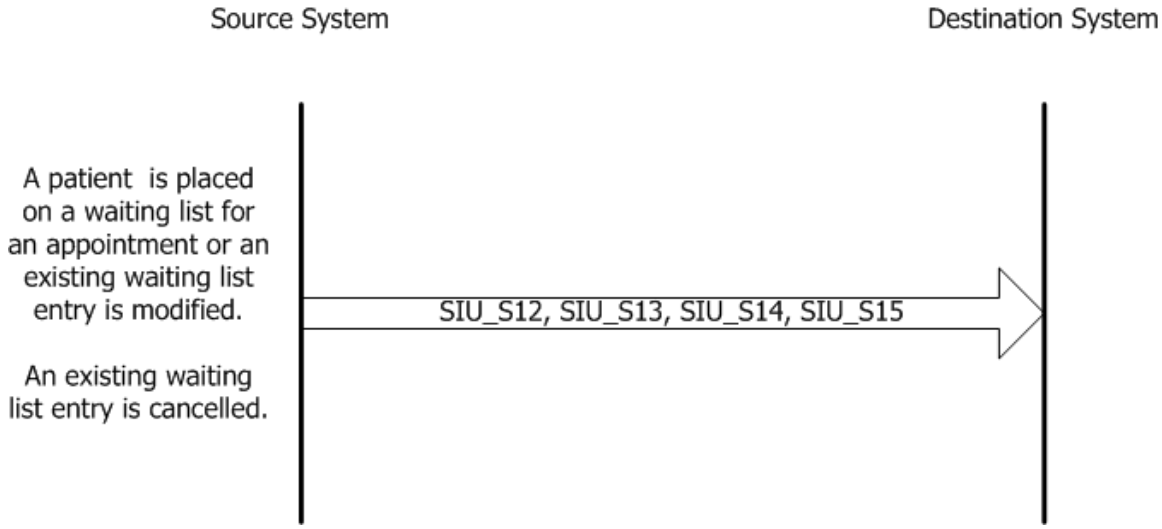


The message type used is the SIU message type. The event type may be S12, S13, S14, S15, S26 depending on the trigger. For the purpose of this standard the minimum outpatient department appointment message contains the following segments:

MSH	Message Header
PID	Patient Identification
RGS	Resource Group
AIP	Appointment Information – Personnel Information
SCH	Scheduling Activity Information
NTE	Notes and Comments.

4.8 Waiting list notification

Use case: A patient is placed on a waiting list for an appointment. The waiting list entry may be subsequently modified or removed. Notifications of these events may be messaged to the patient's general practitioner.

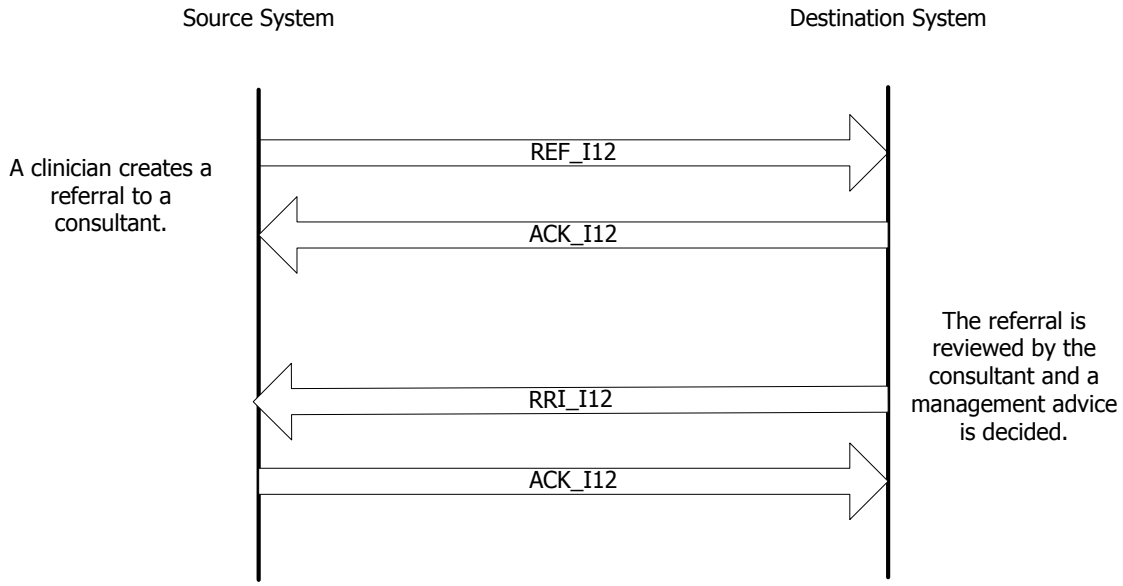


The message type used is the SIU message type. The event type may be S12, S13, S14, and S15 depending on the trigger. For the purpose of this standard the minimum waiting list notification message contains the following segments:

MSH	Message Header
PID	Patient Identification
RGS	Resource Group
AIL	Appointment Information – Location Information
AIP	Appointment Information – Personnel Information
SCH	Scheduling Activity Information
NTE	Notes and Comments.

4.9 Online Referral and Response

Use case: A GP refers a patient to a hospital consultant. The general practitioner records the details of the referral on the source system and the referral is available to the referred to provider. The referred to provider reviews the referral and advice or information on further management is provided to the referrer within an agreed time period.



The online referral workflow consists of a referral message and a referral response message. The message type used for the referral is the REF_I12 message type; the message type used for the referral response message is the RRI_I12 message type.

For the purpose of this standard the minimum referral message contains the following segments:

MSH	Message Header
RF1	Referral Details
PRD	Provider Data
PID	Patient Identification
OBR	Observation Request
OBX	Observation Response
PV1	Event Type/Patient visit
NTE	Notes and Comments.

For the purpose of this standard the minimum referral response message contains the following segments:

MSH	Message Header
RF1	Referral Details
PRD	Provider Data
PID	Patient Identification
OBR	Observation Request
OBX	Observation Response
NTE	Notes and Comments.

The following conditions apply when generating a referral message:

- OBR.2 (Placer Order Number). This element is required.

The following recommendations apply when generating a referral message:

- RF1.1 (Referral Status). This field is optional but if this information is available it is strongly recommended that this field is populated in the message
- RF1.2 (Referral Priority). This field is optional but if this information is available it is strongly recommended that this field is populated in the message
- RF1.3 (Referral type). This field is optional but if this information is available it is strongly recommended that this field is populated in the message
- RF1.7 (Effective Date). This field is optional but if this information is available it is strongly recommended that this field is populated in the message
- PRD.2 (Provider Name). This field is optional but if this information is available it is strongly recommended that this field is populated in the message
- PRD.3 (Provider Address). This field is optional but if this information is available it is strongly recommended that this field is populated in the message
- PRD.4 (Provider Location). This field is optional but if this information is available it is strongly recommended that this field is populated in the message
- PRD.5 (Provider Communication Information). This field is optional but if this information is available it is strongly recommended that this field is populated in the message
- PRD.7 (Provider Identifiers). This field is optional but if this information is available it is strongly recommended that this field is populated in the message.

The following conditions apply when generating a referral response acknowledgement message:

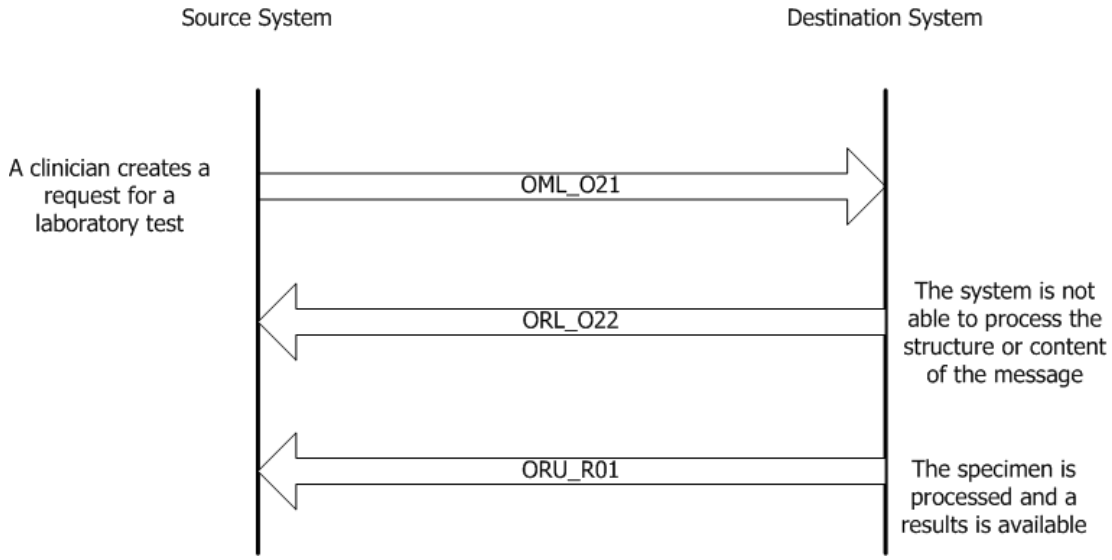
- OBR.2 (Placer Order Number). This element is required.

The following recommendations apply when generating a referral response message:

- PRD.2 (Provider Name). This field is optional but if this information is available it is strongly recommended that this field is populated in the message
- PRD.3 (Provider Address). This field is optional but if this information is available it is strongly recommended that this field is populated in the message
- PRD.4 (Provider Location). This field is optional but if this information is available it is strongly recommended that this field is populated in the message
- PRD.5 (Provider Communication Information). This field is optional but if this information is available it is strongly recommended that this field is populated in the message
- PRD.7 (Provider Identifiers). This field is optional but if this information is available it is strongly recommended that this field is populated in the message.

4.10 Laboratory order

Use case: A clinician orders a laboratory test for a patient. The clinician records the detail of the order on an electronic system and the details of the order are sent to the performing laboratory department. If there is an error in the structure or content of the message the destination system sends an error message in response to the order. When a result is available an electronic message containing the result will be returned to the original practitioner who ordered the test or to the healthcare practitioner(s) to whom a copy has been requested to be sent.



The laboratory order workflow consists of a laboratory order message, a laboratory order acknowledgement message and a laboratory result message. The message type used for the laboratory order is the OML_O21 message type. The message type used for the laboratory order acknowledgement is the ORL_O22 and the message type used for the laboratory result is the ORU_R01.

For the purpose of this standard, the minimum laboratory order message OML_O21 contains the following segments:

MSH	Message Header
PID	Patient Identification
PV1	Event Type/Patient Visit
ORC	Common Order Segment
OBR	Observation Request
SAC	Specimen Container Details
OBX	Observation Response
DG1	Diagnosis
NTE	Notes and Comments.

For the purpose of this standard, the minimum laboratory order acknowledgement message response ORL_O22 contains the following segments:

MSH	Message Header
MSA	Message Acknowledgement
ERR	Message Error Segment

For the purpose of this standard, the minimum laboratory result message ORU_R01 contains the following segments:

MSH	Message Header
PID	Patient Identification
PV1	Event Type/Patient Visit
OBR	Observation Request
OBX	Observation Response
NTE	Notes and Comments

The following conditions apply when generating a laboratory order message OML_O21:

- OBR.2 (Placer Order Number). This element is required
- OBR.7 (Observation Date/Time). This element is required when the specimen accompanies the laboratory order.

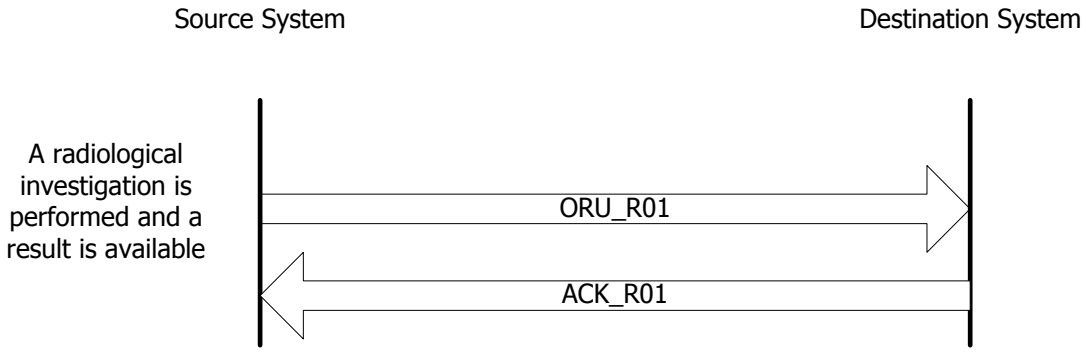
The following conditions apply when generating a laboratory results message ORU_R01:

- OBR.2 (Placer Order Number). This element is required
- OBR.7 (Observation Date/Time). This element is required
- OBR.14 (Specimen received Date/Time). This element is required
- OBR.24 (Diagnostic Serv Sect ID). This element is required.

Many report headers (OBR) may be sent after each patient segment, with many separate observation segments (OBX) after each OBR. Note segments (NTE) may be inserted as a PID, OBR, OBX segment. The note segment applies to the segment that immediately precedes it.

4.11 Unsolicited Radiology result

Use case: A radiology department performs a radiological investigation on a patient. When a result is reported this is communicated with the healthcare practitioner responsible for ordering the investigation or to the healthcare practitioner to whom a copy has been requested to be sent.



The radiology results workflow consists of a radiology result message; the message type used for the radiology result is the ORU_R01.

For the purpose of this standard the minimum radiology result message ORU_R01 contains the following segments:

MSH	Message Header
PID	Patient Identification
PV1	Event Type/Patient Visit
OBR	Observation Request
OBX	Observation Response
NTE	Notes and Comments.

The following conditions apply when generating a radiology order message ORU_R01:

- OBR.7 (Observation Date/Time). This element is required
- OBR.24 (Diagnostic Serv Sect ID). This element is required
- OBR.25 (Result Status). This element is required.

For the purpose of this standard the minimum unsolicited radiology result acknowledgement message response ACK_R01 contains the following segments:

MSH Message Header
MSA Message Acknowledgement
ERR Message Error Segment.

Many report headers (OBR) may be sent after each patient segment, with many separate observation segments (OBX) after each OBR. Note segments (NTE) may be inserted as a PID, OBR, OBX segment. The note segment applies to the segment that immediately precedes it.

Note: Status Information

The complete set of allowed values for the result status held in OBX-11 as defined by HL7 table (0123).

The following codes are in used in Ireland and can be expected in OBX.11:

Final Result (F) - This code indicates that the result is final. It can only be changed by a corrected result (C).

Preliminary Result (P) – This code indicates that a further result (for the same type of test) is expected.

Partial Result (S) - A test can be composed of multiple tests. If any of the tests are completed a partial result is reported. The report will indicate that the other tests will follow.

Wrong Result (W) – If a result has been verified as incorrect (wrong); a replacement (corrected) result may be transmitted later.

Corrected Result (C) - Code C indicates that data contained in the observation value field will be replaced because the previous results were wrong.

Note: Copy results to:

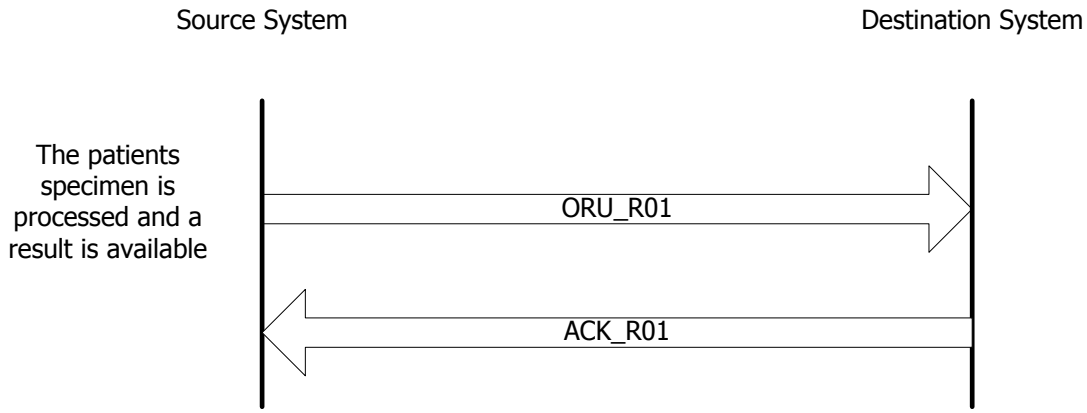
Results may be copied to other clinicians other than the clinician who ordered the tests in question. OBR.16 and OBR.28 fields are used in combination to indicate if the message is

- a copy sent to the ordering provider
- a copy sent to a clinician who was not the original ordering provider.

In the former scenario the XCN.16 component will not contain the value COPY_TO. In the latter scenario, the value in XCN.16 field in OBR.16 will be set to COPY_TO. In these instances vendor systems need to route the message to the individual identified in OBR.28 with the value COPY_TO set in XCN.16.

4.12 Unsolicited laboratory result

Use Case: A laboratory receives a specimen and analyses the specimen. When a result is available this is communicated to the healthcare practitioner responsible for ordering the investigation or to the healthcare practitioner to whom a copy has been requested to be sent.



The laboratory results workflow consists of a laboratory results message. The message type used for the laboratory result is the ORU_R01.

For the purpose of this standard the minimum laboratory result message ORU_R01 contains the following segments:

MSH	Message Header
PID	Patient Identification
PV1	Event Type/Patient Visit
OBR	Observation Request
OBX	Observation Response
NTE	Notes and Comments.

For the purpose of this standard the minimum unsolicited laboratory result acknowledgement message ACK_R01 response contains the following segments:

MSH	Message Header

MSA Message Acknowledgement
ERR Message Error Segment.

The following conditions apply when generating a laboratory order message ORU_R01:

- OBR.7 (Observation Date/Time). This element is required
- OBR.14 (Specimen Received Date/Time). This element is required
- OBR.24 (Diagnostic Serv Sect ID). This element is required.

Many report headers (OBR) may be sent after each patient segment, with many separate observation segments (OBX) after each OBR. Note segments (NTE) may be inserted as a PID, OBR, OBX segment. The NTE segment applies to the segment that immediately precedes it.

Note: Status Information

The complete set of allowed values for the result status held in OBX-11 as defined by HL7 table (0123).

The following codes are in used in Ireland and can be expected in OBX.11:

Final Result (F) - This code indicates that the result is final. It can only be changed by a corrected result (C).

Preliminary Result (P) – This code indicates that a further result (for the same type of test) is expected.

Partial Result (S) - A test can be composed of multiple tests. If any of the tests are completed a partial result is reported. The report will indicate that the other tests will follow.

Wrong Result (W) – If a result has been verified as incorrect (wrong); a replacement (corrected) result may be transmitted later.

Corrected Result (C) - Code C indicates that data contained in the observation value field will be replaced because the previous results were wrong.

Note: Copy results to:

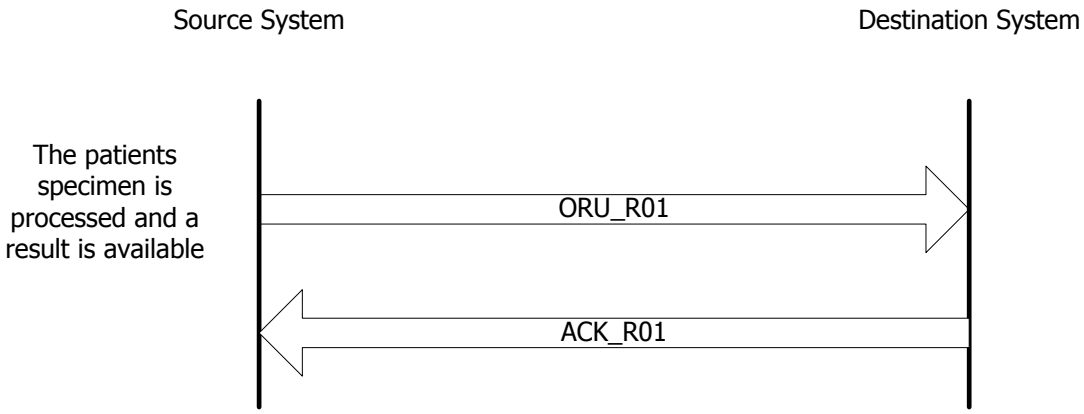
Results may be copied to other clinicians other than the clinician who ordered the tests in question. OBR.16 and OBR.28 fields are used in combination to indicate if the message is

- a copy sent to the ordering provider
- a copy sent to a clinician who was not the original ordering provider.

In the former scenario the XCN.16 component will not contain the value COPY_TO. In the latter scenario, the value in XCN.16 field in OBR.16 will be set to COPY_TO. In these instances vendor systems need to route the message to the individual identified in OBR.28 with the value COPY_TO set in XCN.16.

4.13 Corrected Results

A laboratory received a specimen, analysed the specimen and communicated the result to the healthcare practitioner responsible for ordering the specimen. Information in the message indicated the message was a final result for the tests requested. Subsequently, the result is corrected and the laboratory sends a message to the healthcare practitioner to indicate the previous result requires correction.



The laboratory results workflow consists of a laboratory results message. The message type used for the laboratory result is the ORU_R01.

For the purpose of this standard the minimum corrected result message ORU_R01 contains the following segments:

MSH	Message Header
PID	Patient Identification
PV1	Event Type/Patient Visit
OBR	Observation Request
OBX	Observation Response
NTE	Notes and Comments.

For the purpose of this standard the minimum corrected results message ACK_RO1 response contains the following segments:

MSH Message Header
MSA Message Acknowledgement
ERR Message Error Segment.

The following conditions apply when generating a laboratory order message ORU_R01:

- OBR.7 (Observation Date/Time). This element is required
- OBR.14 (Specimen Received Date/Time). This element is required
- OBR.24 (Diagnostic Serv Sect ID). This element is required
- OBR.25 (Result Status). This element is required
- OBX.11 (Observ Result Status). This element is required
- for each OBX segment corrected the value in the OBX.11 field should be set to 'C' and the value in the corresponding OBR.25 segment also should be set to 'C'.

Note: Code F in the OBX.25 field indicates that the result has been verified to be correct and final. Code C indicates that data contained in the OBX-5-observation value field are to replace previously transmitted (verified and) final result data with the same observation ID OBX.3 (including suffix, if applicable) and observation sub-ID usually because the previous results were wrong.

Note: Copy results to:

Results may be copied to other clinicians other than the clinician who ordered the tests in question. OBR.16 and OBR.28 fields are used in combination to indicate if the message is

- a copy sent to the ordering provider
- a copy sent to a clinician who was not the original ordering provider.

In the former scenario the XCN.16 component will not contain the value COPY_TO. In the latter scenario, the value in XCN.16 field in OBR.16 will be set to COPY_TO. In these instances vendor systems need to route the message to the individual identified in OBR.28 with the value COPY_TO set in XCN.16.

5 Electronic prescribing in the community

In 2013, the Authority reviewed ePrescribing and electronic transfer of prescriptions (ETP) initiatives internationally to inform the adoption of appropriate standards in Ireland. Each country reviewed focused mainly on prescribing and dispensing of medication in the community rather than from the hospital setting. This is explained as a consequence of both GPs and pharmacists having similar processes with their peers and hence being able to support computerisation of the process. By contrast, hospital medication management processes are typically more complex, making standardisation and computerisation more complicated [(1)].

Each country reviewed has also undertaken the processes in a phased and incremental approach, with paper systems either included as part of the solution or paper systems supported in parallel with the electronic messages. In initial phases the authoritative prescription continued to be the paper prescription; this carried a bar coded identifier of an electronic prescription which allowed dispensers to retrieve the electronic prescription from a message broker.

In subsequent phases the electronic prescription became the authoritative prescription; this required legislation for digital signatures. It is likely that a repository to store prescribed and dispensed medications can be facilitated at a later phase in the implementation of ETP and may function as a medication record. The implementation of patient medication records are considered out of scope for electronic transfer of prescription records but the ETP solutions may facilitate the implementation of such records.

The Authority has developed messaging specifications based on the HL7 V2.4 standard and the Clinical Document Architecture standard for the implementation of the electronic transfer of prescriptions.

Use cases for this project have been prepared in consultation with experts from the community pharmacy and primary care sectors. This section outlines the use cases with sample clinical scenarios which justify the use cases within the agreed scope of the project. The use cases are illustrated in figure 1 below.

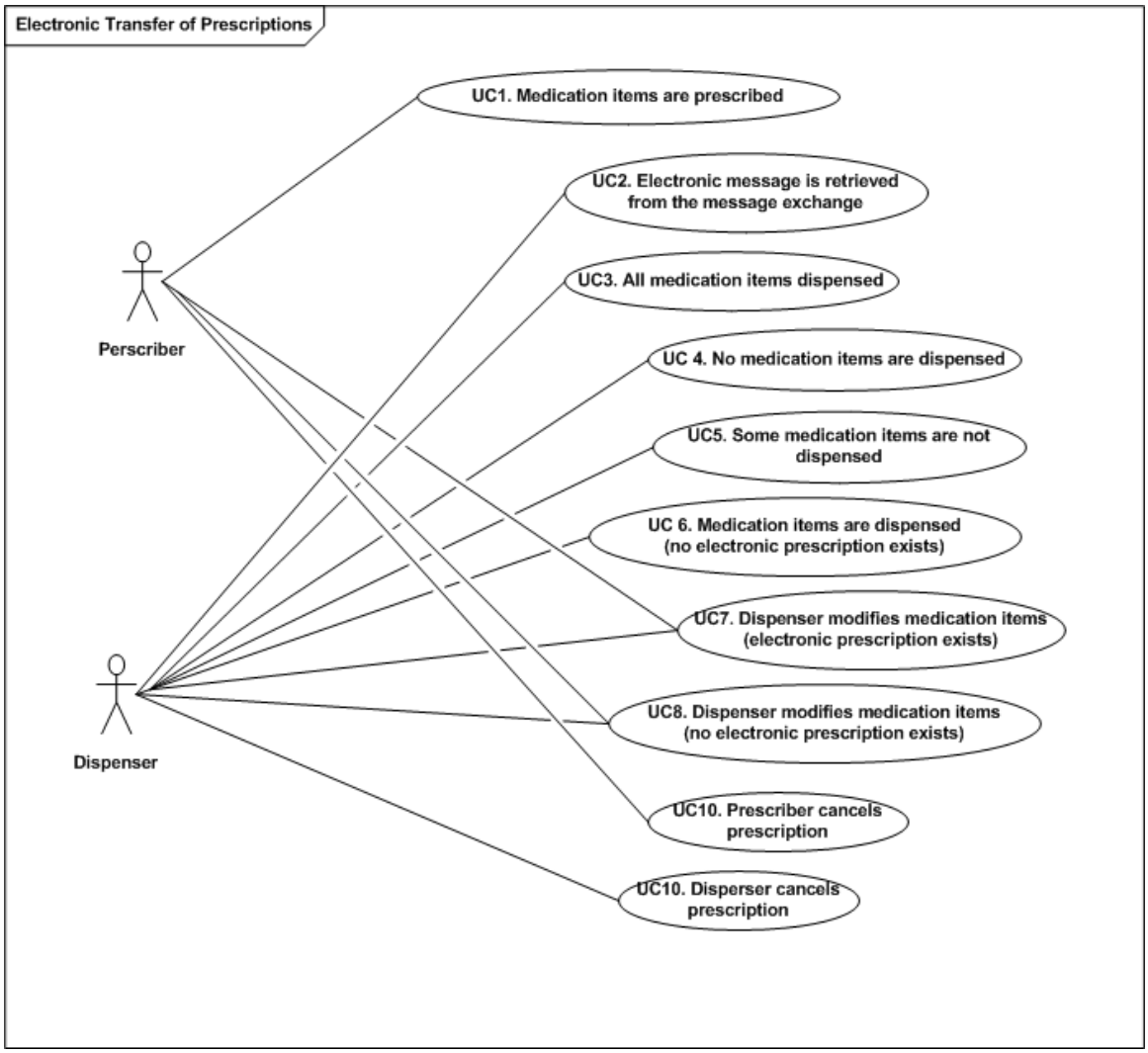


Figure 1. Electronic Transfer of Prescriptions

5.1 Scenario 1

A patient attends a prescriber who generates an electronic prescription which is sent and stored at the message exchange (Healthlink). The patient subsequently attends a dispenser and provides the dispenser with a bar coded paper prescription which allows the dispenser to identify and retrieve the prescription from the message exchange. The dispenser then dispenses the prescribed medication in accordance with the prescription information.

Finally, if no medications are dispensed for the prescription and the dispenser indicates this by returning the unfulfilled items in a message back to the message exchange.

The use cases (UCs) to support this scenario are depicted in Figure 2 below.

5.1.1 Clinical examples to inform use cases

- The patient attends a prescriber and is prescribed medication (UC 1)
- A patient may contact a prescriber requesting that a repeat prescription is issued. (UC 1)
- A next of kin or carer may request a prescription to be issued for a patient (UC 1)
- The patient or a person on their behalf attends the pharmacy of his/her choice in order to have medication items dispensed. The dispenser retrieves the electronic prescription from the message exchange. (UC 2)
- A prescription is presented to a dispenser, the person the prescription relates to may present in person or another person may collect the prescription on their behalf. The dispenser retrieves the electronic message from the message exchange. The dispenser is able to dispense all medication items on the prescription (UC 2 and UC 3).
- The patient receives a prescription from a prescriber and decides to have the price checked at the pharmacy without any of the prescribed medication items being dispensed. (UC 2 and UC 4)
- The patient attends the pharmacy of his/her choice but the pharmacy does not have the required medication in stock and no medication items are dispensed (UC 2 and UC 4).

5.1.2 Message flows

Figure 2 below illustrates the message flows generated when a patient attends a prescriber and subsequently attends a dispenser.

On generation of a paper prescription, the prescriber's practice management system creates an electronic version of the prescription which is sent to a message exchange.

On receipt of the paper prescription, which contains a unique identifier for the electronic prescription, the dispenser retrieves the electronic prescription from the message exchange and subsequently notifies the message exchange that the prescription has been dispensed.

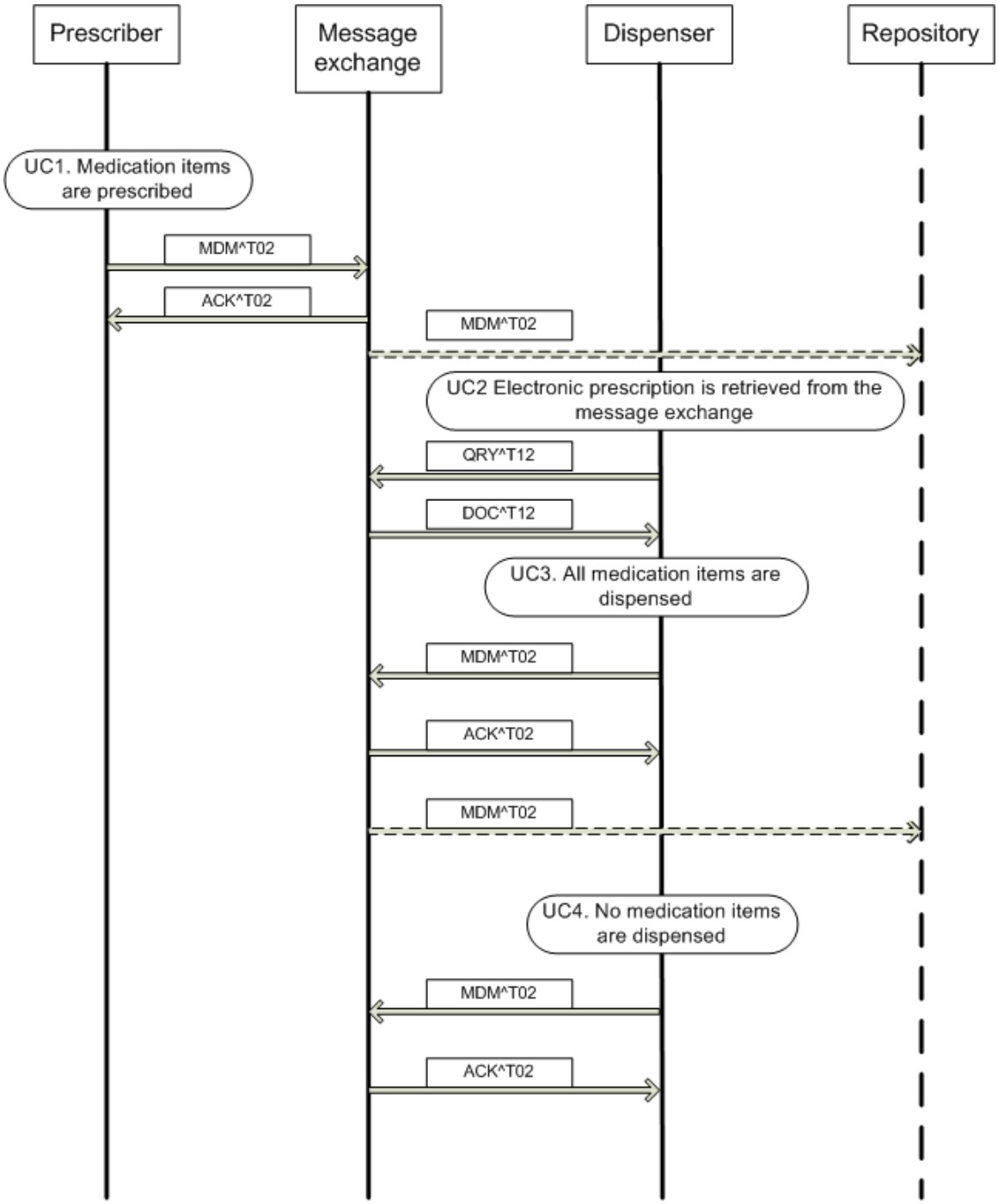


Figure 2. Electronic prescribing and dispensing of an electronic prescription[1]

[1] The repository is included in message flow diagrams for completeness but would be considered out of scope within the electronic transfer of prescription solution. Messages forwarded to the repository and from the repository should be seen as optional and possibly a future requirement.

Use case 1 – Medication items are prescribed

The message type used for the electronic prescription is MDM^T02 with a MIME encapsulated Clinical Document Architecture (CDA) prescription document carried in the OBX segment. For the purpose of this standard the MDM^T02 contains the following segments:

MSH Message Header
EVN Event Type
PID Patient Identification
PV1 Patient Visit
TXA Document Notification
OBX Observation/Result.

For the purpose of this standard the acknowledgement response to receiving an electronic prescription is ACK^T02. It consists of the following segments:

MSH Message Header
MSA Message Acknowledgement
ERR Error Information. Use case

Use case 2 – Electronic prescription is retrieved from the message exchange

The message type used to query the message exchange and retrieve the electronic prescription is QRY^T12. For the purpose of this standard the QRY^T12 contains the following segments:

MSH Message Header
QRD Query Definition
QRF Query Filter.

The message type used to return the relevant document for the query is DOC^T12. For the purpose of this standard the acknowledgement response to receiving an electronic prescription is DOC^T12.

MSH Message Header
MSA Message Acknowledgement
ERR Error Segment
QRD Query Definition
EVN Event Segment
PID Patient Identification

PV1 Event Type/Patient Visit
OBX Observation Response.

Use case 3 – All medication items dispensed

The message type used for the electronic prescription is MDM^T02 with a MIME encapsulated Clinical Document Architecture (CDA) prescription document carried in the OBX segment.

For the purpose of this standard the acknowledgement response to receiving an electronic prescription is ACK^T02.

Use case 4 – No medication items dispensed

The message type used for the electronic prescription is MDM^T02 with a MIME encapsulated Clinical Document Architecture (CDA) prescription document carried in the OBX segment.

For the purpose of this standard the acknowledgement response to receiving an electronic prescription is ACK^T02.

5.2 Scenario 2

The dispenser is able to prescribe some of the items prescribed. After the patient collects the medication the dispenser updates the message exchange of medications dispensed. If certain medications are not dispensed then the dispenser updates the medication exchange to indicate this.

5.2.1 Clinical examples

- The patient attends a prescriber and receives a prescription for one or more medication items. The pharmacist does not have all medications in stock but dispenses some of the medication items prescribed. (Use case 5).
- The patient attends the GP and receives a prescription for more than one medication. The patient decides to collect only part of the prescription; therefore some of the medication items are dispensed (Use case 5).
- A GMS patient attends the GP and receives a prescription for more than one medication item. Some medications are not covered under the GMS scheme and are therefore not dispensed (Use case 5).

5.1.2 Message flows

Figure 3 below illustrates message flows generated when a patient attends a dispenser and only some of the items on the prescription are dispensed.

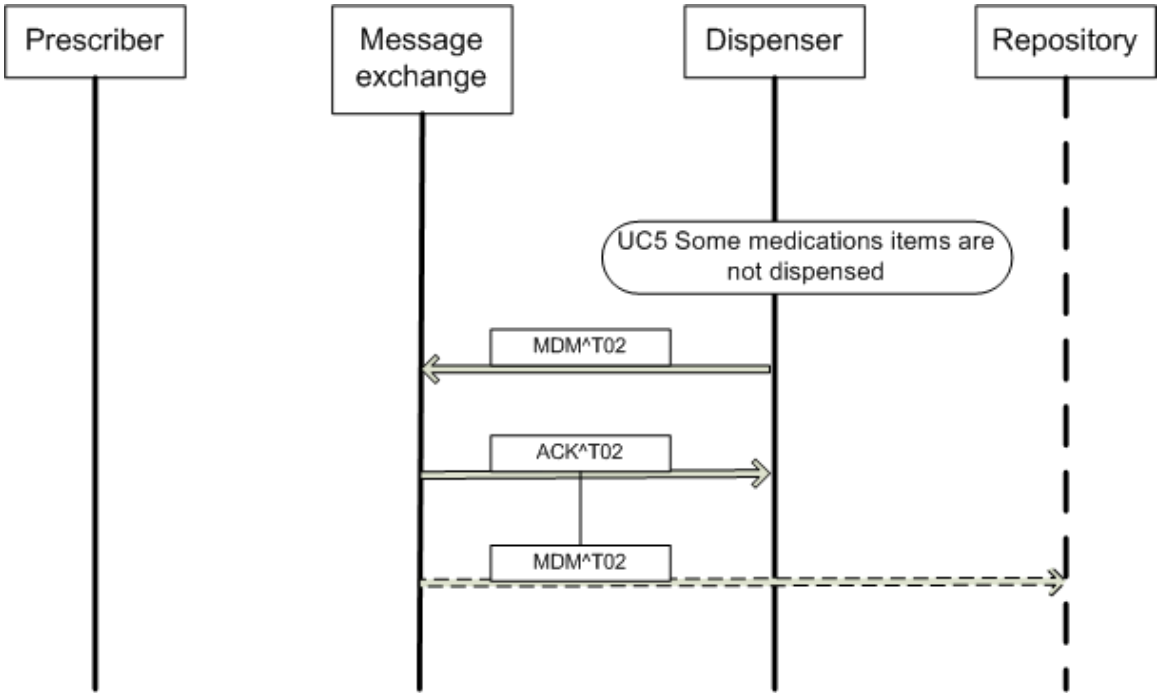


Figure 2. Some medications are not dispensed

Use case 5 – Some medication items are not dispensed

The message type used for the electronic prescription is MDM^T02 with a MIME encapsulated Clinical Document Architecture (CDA) prescription document carried in the OBX segment.

For the purpose of this standard the acknowledgement response to receiving an electronic prescription is ACK^T02.

5.3 Scenario 3

A patient attends a dispenser with a paper prescription. The pharmacist dispenses the medication items to the patient and records this on their computer system. No electronic prescription record exists for the prescription from the prescriber.

5.3.1 Clinical examples

- A patient attends a prescriber who has yet to computerise processes and is given a handwritten, typed or printed prescription (Use case 6).
- Information systems are not functioning and the prescriber must revert to manual processes and prescribe using a paper handwritten prescription (Use case 6).
- A patient is reviewed by a prescriber during a home visit and the prescriber writes a paper prescription.
- A patient is reviewed by a prescriber out of hours and the prescriber creates a paper prescription.

5.3.2 Message flows

Figure 4 below illustrates the message flows generated when a patient attends dispenser with a paper prescription and there is no electronic version of the prescription.

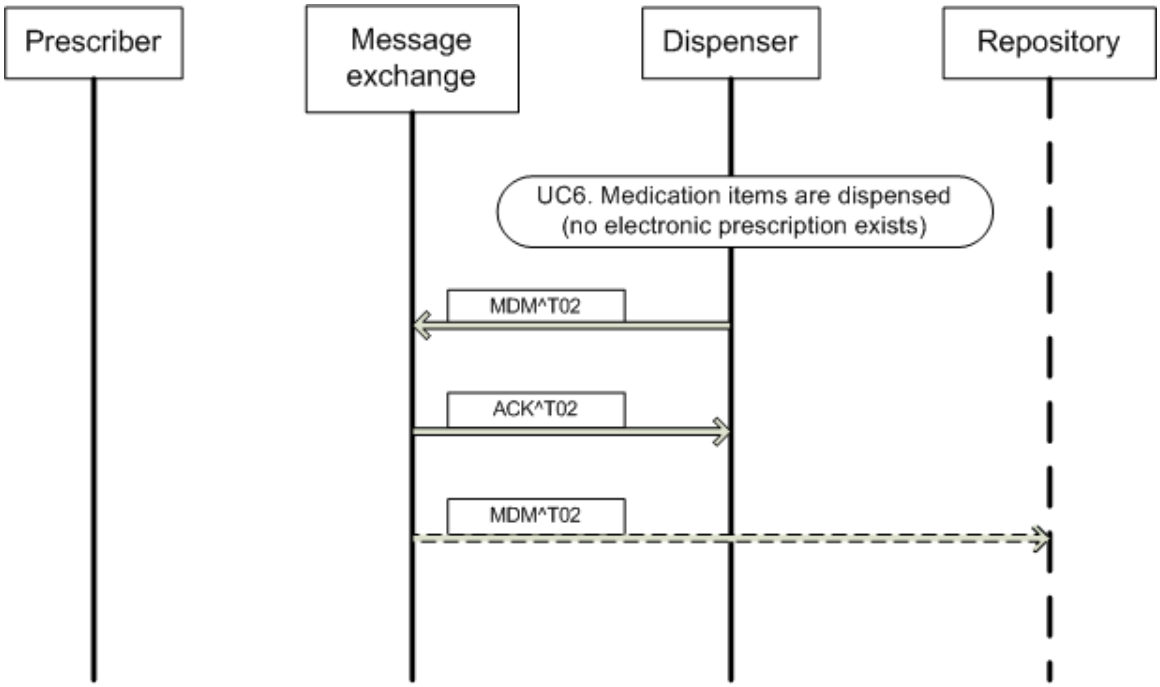


Figure 3. Medications are dispensed where no electronic prescription ever existed

Use case 6 – Medication items are dispensed (no electronic prescription exists)

The message type used for the electronic prescription is MDM^T02 with a MIME encapsulated Clinical Document Architecture (CDA) prescription document carried in the OBX segment.

For the purpose of this standard the acknowledgement response to receiving an electronic prescription is ACK^T02.

Note: if an electronic repository exists the message exchange broker may forward the MDM^T02 message to it. The electronic repository responds with ACK^T02.

5.4 Scenario 4

A patient attends a prescriber and is prescribed medication items. The patient visits a dispenser to have the medication items dispensed. Prior to dispensing a medication item, the dispenser decides a substitution is to be made for one of the medication items which requires authorisation by the prescriber. The authorisation to change the medication items is obtained and a prescriber subsequently issues an updated prescription.

5.4.1 Clinical examples

- It may occur that the dispenser feels it is necessary to change the dose of a medication due to an error on the prescription or other clinical factors (Use case 7).
- The duration that the medication is to be taken may require a change (Use case 7).
- The route of administration of the medication may need to be changed (Use case 7).
- The dispenser may have knowledge of an allergy that requires substitution for a different type of medication (Use case 7)

5.4.2 Message flows

Figure 5 below illustrates the message flows generated when a patient attends dispenser who modifies prescription items requiring authorisation from the prescriber.

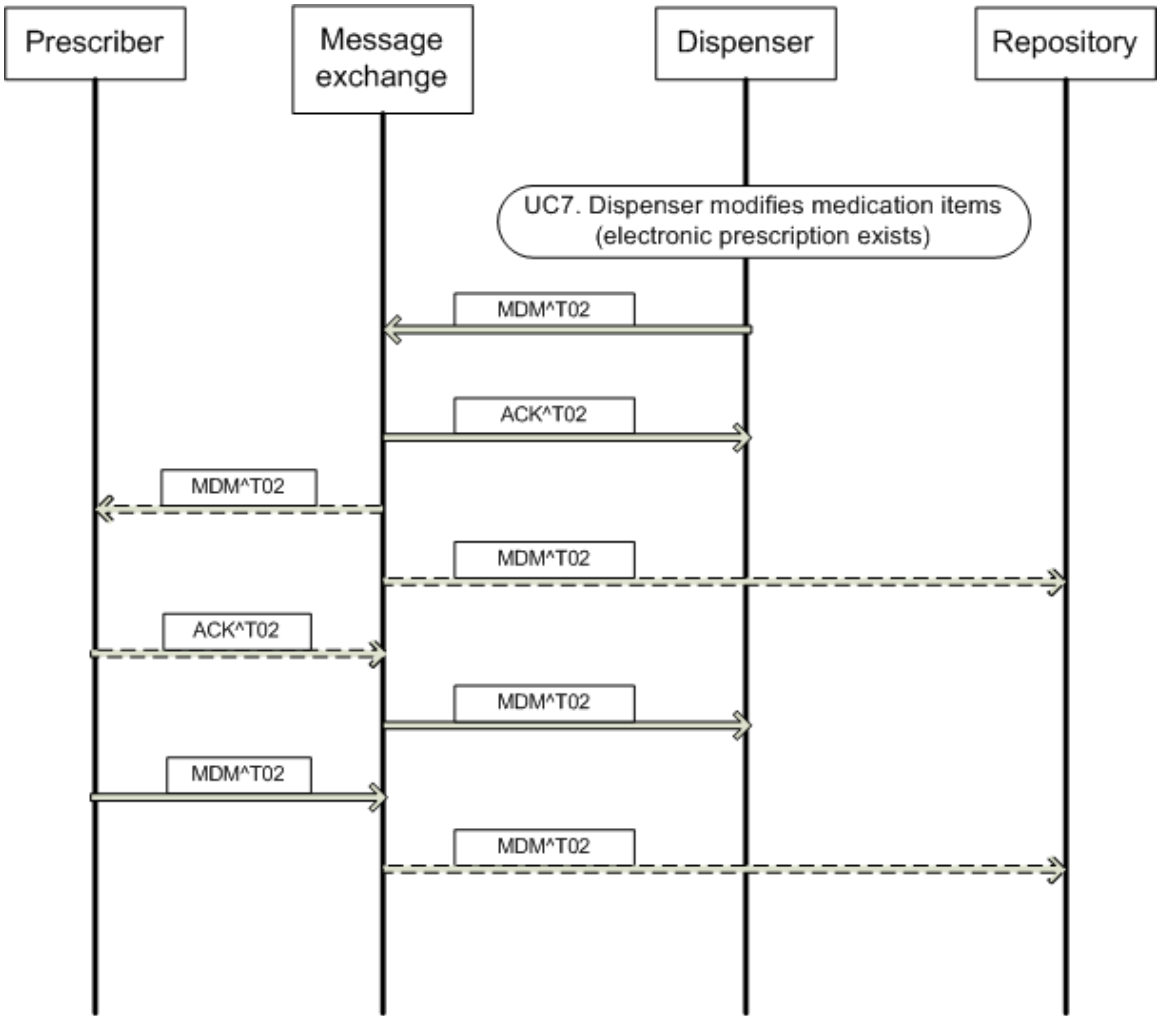


Figure 4 Dispenser modifies prescription item and this requires authorisation from the prescriber

Use case 7 – Dispenser modifies some medication items (electronic prescription exists)

A message is sent from the dispenser to the message exchange after substitution of a prescribed medication item. The message type used to indicate the medication items which were substituted is MDM^T02 and is sent from the dispenser to the message exchange. For the purpose of this standard, the acknowledgement response to receiving an electronic prescription is ACK^T02. This message may be sent back to the original prescriber.

The prescriber may update the original prescription to note the updated content. The message type used to indicate certain prescribed medications items were changed is MDM^T02 with a MIME encapsulated Clinical Document Architecture (CDA) prescription document carried in the OBX segment.

For the purpose of this standard the acknowledgement response to the indication of medications dispensed is ACK^T02. The message is sent to the message exchange and may be forwarded from there to an electronic repository.

5.5 Scenario 5

A patient attends a doctor and is prescribed medication items on a paper prescription. The patient visits a pharmacy to have the medication items dispensed. Prior to dispensing medication a substitution is made for one of the medication items which requires authorisation by the doctor. The authorisation is obtained and a doctor sends another paper prescription to the pharmacy.

5.5.1 Clinical examples

- It may occur that the pharmacist feels it is necessary to change the dose of a medication due to an error on the prescription or other clinical factors (Use case 8).
- The duration that the medication is to be taken may require a change (Use case 8).
- The route of administration of the medication may need to be changed (Use case 8).
- The pharmacist may have knowledge of an allergy that requires substitution for a different type of medication (Use case 8).

5.5.2 Message flows

Figure 6 below illustrates the message flows generated when a patient attends dispenser who modifies prescription items requiring authorisation from the prescriber. In this instance no electronic prescription existed.

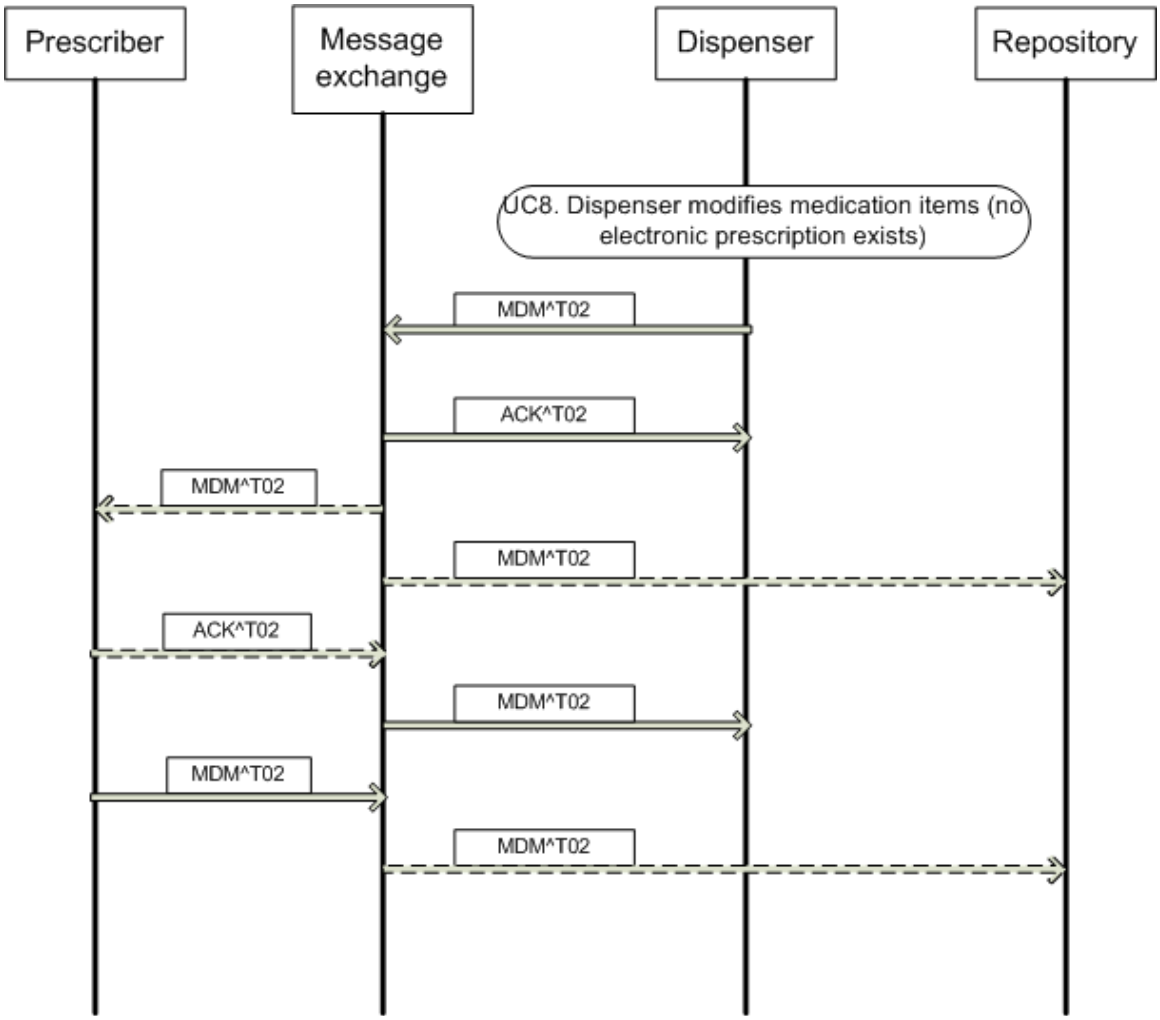


Figure 5 Pharmacist substitutes medication with required prescriber to authorise and issue a second prescription

UC8 – Dispenser modifies medication items (no electronic prescription exists)

The message type used for the dispenser to notify the message exchange that medication has been dispensed is MDM^T02. For the purpose of this standard, the response is ACK^T02. This message may also be forwarded to the electronic repository from the message exchange.

5.6 Scenario 6

A patient attends a prescriber who generates an electronic prescription which is sent and stored in the message exchange. After the patient has left, the prescriber decides the prescription should be cancelled.

The patient subsequently attends a dispenser and provides the dispenser with a bar coded paper prescription which allows the dispenser to identify and retrieve the prescription from the message exchange. The dispenser retrieves a cancelled prescription indicating that the prescriber has decided that the prescription is not required. The dispenser informs the patient of the cancellation.

A patient attends a prescriber who generates an electronic prescription which is sent and stored in the message exchange. The patient subsequently attends a dispenser and provides the dispenser with a bar coded paper prescription which allows the dispenser to identify and retrieve the prescription from the message exchange. The dispenser decides that the prescription should be cancelled. Authorisation is received from the prescriber and the dispenser cancels the prescription and informs the patient.

5.6.1 Clinical examples

- The prescriber or dispenser suspects medication misuse or abuse (Use case 9 and 10).
- The dispenser discovers the prescriber is not authorised to prescribe a certain type of medication (Use case 10).
- The dispenser may decide it is unsafe to dispense the medication prescribed (Use case 10).
- The dispenser may discover that the prescription is for an unlicensed medication and may cancel the prescription (Use case 10).

5.6.2 Message flows

Figure 7 below illustrates the message flows generated when either a prescriber or dispenser cancels a prescription.

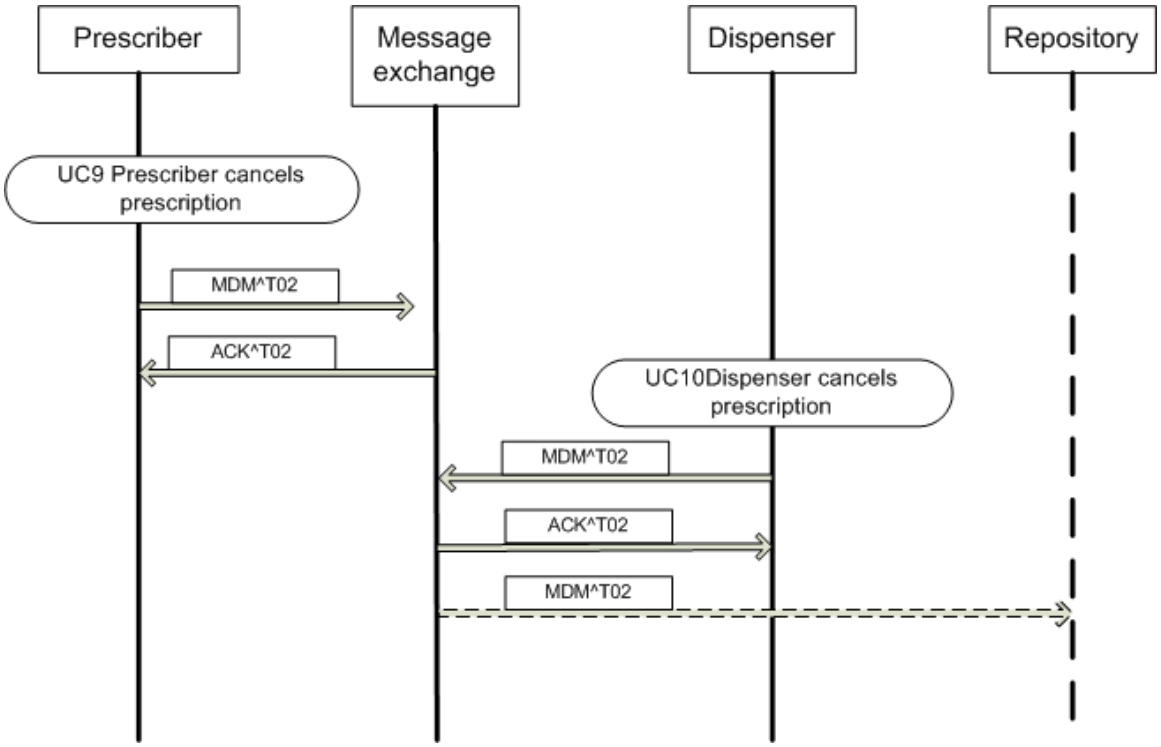


Figure 6 Prescriber or dispenser cancels prescription

Use case 9 – Prescriber cancels prescription

The message type used for the dispenser to notify the message exchange that medication has been dispensed is MDM^T02. For the purpose of this standard, the response is ACK^T02. This message may also be forwarded to the electronic repository from the message exchange.

Use case 10 – Dispenser cancels prescription

The message type used for the dispenser to notify the message exchange that medication has been dispensed is MDM^T02. For the purpose of this standard, the response is ACK^T02. This message may also be forwarded to the electronic repository from the message exchange.

6 General implementation comments

6.1 XML schema

The GPMS is based on the Health Level Seven (HL7) v2.4 messaging standard with XML encoding. Schema includes reference to the segments schema which includes reference to the fields schema which includes reference to the datatypes schema. For more information on this standard and HL7 v2.4 XML schema please see www.hl7.org.

6.2 CE datatype usage

The CE data type consists of six components and is used to transmit coded information. The components of the data type include:

- identifier
- text
- name of coding system
- alternative identifier
- alternative text
- name of alternative coding system.

The identifier component contains a sequence of characters (the code) that uniquely identifies the item being referenced by the text component. The name of coding system component will serve to identify the coding scheme being used in the identifier component. The combination of the identifier and name of coding system components will be a unique code for a data item. HL7 permits local codes to be carried in the first three components.

The three alternative components are defined analogously to the above for an alternate or local coding system. If the alternate text component is absent, and the alternate identifier is present, the alternate text will be taken to be the same as the text component. If the alternate coding system component is absent, it will be taken to mean the locally-defined system.

6.3 PID.32 element

This field contains a coded value used to communicate information regarding the reliability of patient/person identifying data transmitted via a transaction. Values could indicate that certain fields on a PID segment for a given patient/person are known to be false (e.g., use of default or system-generated values for date of birth or person name). Please refer to table 0445 - Identity reliability code for permitted values. If default values are supplied in the PID segment it is required that these values are identified through usage of the PID.32 field.

6.4 LOINC Codes

LOINC stands for Logical Observation Identifier Names and Codes. The LOINC database provides a set of universal names and ID codes for identifying laboratory and clinical test results. The purpose is to facilitate the exchange and pooling of results, such as blood haemoglobin or serum potassium for clinical care, outcomes management, and research.

The Regenstrief Institute maintains this database. The LOINC database (which identifies over 30,000 different lab tests and clinical observations), supporting documentation and the RELMA mapping program are all available through the Regenstrief Institute web site at http://www.regenstrief.org or at http://www.loinc.org. The LOINC Codes can be used and distributed free of charge, provided existing codes are not modified. New local codes can be added, but must start with X in the number field to identify them as locally defined. The LOINC copyright notice and licence is reproduced in full in Appendix 6.0 of this document. The current version of the LOINC codes is 2.36, released 30th June 2011.

LOINC codes are being used in Ireland for referral messaging. A list of these codes is available in Appendix 5.0 of this document.

6.5 HD Datatype

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

If the first component for the HD data type is present, the second and third components are optional. If the third component is present, then the second must also be present (although in this case the first is optional).

The second and third components must either both be valued (both non-null), or both be not valued (both null).This means that if all three components of the HD are valued, the entity identified by the first component is the same as the entity identified by components two and three taken together.

However, implementers may choose, by site agreement, to specify that if all three components of the HD are valued, the first component defines a member in the set defined by the second and third components.

7 Feedback on this document

The Authority is fully committed to consulting on its work as widely as possible. We invite you to provide comments and feedback on this document or elements of the Standard, using the form in Appendix 1.

Appendix 1 – Feedback form

The GPMS has been produced by the general practice messaging standards working group. We are happy to receive comments on the Standard and will endeavour to include them, where appropriate into the next revision of the Standard. Please complete the template below and sent your comment to:

Standards and Technology Manager
Health Information and Quality Authority
George's Court
George's Lane
Dublin 7.

or, by email to Kevin O'Carroll (kocarroll@hiqa.ie)

Name:				
Address:				
Organisation:				
Contact details:	Phone:		Email:	
Title of Standard:	General Practice Messaging Standard – Version 3.0			
General comments:				
Specific comments:				
No	Page number	Description of issue	Suggested change/alternative text	
1				
2				
3				

Appendix 2 – Abstract message definitions

This section lists the abstract message definitions used as the basis for work message flows.

Segment ID - The segment ID identifies each HL7 segment that may appear in the message. The segment IDs correspond to the IDs used in the standard HL7 documentation.

Segment Sequence and Nesting - The allowed sequence of segments in a message instance is indicated by the sequence of segments in the message structure. Braces {…..} surrounding a group of segments indicate one or more repetitions of the enclosed group may occur. Brackets [….] surrounding a group of segments indicates that the enclosed group is optional. If a group of segments is optional and may repeat it is enclosed in brackets and braces {[…..]}. The column named 'Chapter' refers to the relevant HL7 Chapter where the segment is defined.

Table 28 - The ADT A01 abstract message definition.

Segment ID	Name	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
[{		
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

Table 29 - The ADT A03 abstract message definition.

Segment ID	Name	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

Table 30 - The ORU_R01 abstract message definition

Segment ID	Name	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
		2
{[NTE]}	Notes and comments	
}		
[{FT1}]	Financial Transaction	6
{[CTI]}	Clinical Trial Identification	7
}		
}		
[DSC]	Continuation Pointer	2

Table 31 - The SUI abstract message definition

Segment ID	Name	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
}		
]		
}		

Table 32 - The REF_I12 abstract message definition

Segment ID	Name	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
]		
}		
]		
[		
{		
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

Table 33 - The OML_O21 abstract message definition

Segment ID	Name	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 result	4
OBR	Order Detail - previous result	4
{[NTE]}	Notes and Comments - previous result	2
{		
OBX	Observation/Result - previous result	7
[{NTE}]	Notes and Comments - previous result	2
}		
}		
}]		
]		
[{FT1}]	Financial Transaction	6
[{CTI}]	Clinical Trial Identification	7
[BLG]	Billing Segment	4
}		
]		

Table 34 - The RRI_I12 abstract message definition

Segment ID	Name	Chapter
MSH	Message Header	2
[MSA]	Message Acknowledgment	3
[RF1]	Referral Information	11
[		
AUT	Authorization Information	11
[CTD]	Contact Data	11
]		
{ PRD	Provider Data	11
[{CTD}]	Contact Data	11
}		
PID	Patient Identification	3
[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
]		
}		
]		
[		
{		
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
]		
[{NTE}]	Notes and Comments	2

Table 35 - The ORL_O22 abstract message definition

Segment ID	Name	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2
[{NTE}]	Notes and Comments (for Header)	2
[		
[PID	Patient Identification	3
{		
[SAC	Specimen Container Details	13
[{OBX}]	Additional Specimen Characteristics	7
]		
[{		
ORC	Common Order	4
[OBR	Observation Request	4
[{SAC}]	Specimen Container Details	13
]		
}]		
}		
]		
]		

Table 34 - The ACK^varies^ACK General Acknowledgement ACK abstract message definition

Segment ID	Name	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
{ERR}	Error	2

Table 35 The MDM^T02 abstract message definition

Segment ID	Name	Chapter
MSH	Message Header	2
[{SFT}]	Software Segment	2
EVN	Event Type	3
PID	Patient Identification	3
PV1	Patient Visit	3
[{		
ORC	Common order segment	4
[{		
TQ1	Timing/Quantity	4
[{TQ2}]	Timing/Quantity Order Sequence	4
}]		
OBR	Observation request segment	4
[{ NTE }]	Notes and comments about the observation (OBR)	2
}]		
TXA	Document Notification	9
{		
OBX	Observation/Result (one or more required)	9
[{ NTE }]	Notes and comments about the observation (OBX)	2
}		

Table 36 The QRY^T12 abstract message definition

Segment ID	Name	Chapter
MSH	Message Header	2
QRD	Query Definition	2
[QRF]	Query Filter	2

Table 37 The DOC^T12 abstract message definition

Segment ID	Name	Chapter
MSH	Message Header	2
MSA	Message Acknowledgement	2
[ERR]	Error	2
[QAK]	Query Acknowledgement	5
QRD	Query Definition	2
{		
[EVN]	Event Type	3
PID	Patient Identification	3
PV1	Patient Visit	3
TXA	Document Notification	9
[{OBX}]	Observation	7
}		
[DSC]	Continuation Pointer	2

Appendix 3 – Reference tables

Table 38 - HL7 User-defined Table 0001 – Administrative sex

Value	Description
F	Female
M	Male
O	Other
U	Unknown
A	Ambiguous
N	Not applicable
S	Unspecific

Table 39 - HL7 User-defined Table 0002 – Marital status

Value	Description
A	Separated
D	Divorced
M	Married
S	Single
W	Widowed
C	Common law
G	Living together
P	Domestic partner
R	Registered domestic partner
E	Legally Separated
N	Annulled
I	Interlocutory
B	Unmarried
U	Unknown
O	Other
T	Unreported
J	Civil Partner
K	Former Civil Partner
L	Surviving Civil Partner

Table 40- HL7 Table 0003 - Event type

Value	Description
A01	ADT/ACK - Admit/visit notification
A03	ADT/ACK - Discharge/end visit
I12	REF/RRI - Patient referral
O21	OML - Laboratory order
022	ORL - General laboratory order response message to any OML
R01	ORU/ACK - Unsolicited transmission of an observation message
S12	SIU/ACK - Notification of new appointment booking
S13	SIU/ACK - Notification of appointment rescheduling
S14	SIU/ACK - Notification of appointment modification
S15	SIU/ACK - Notification of appointment cancellation
S16	SIU/ACK - Notification of appointment discontinuation
S17	SIU/ACK - Notification of appointment deletion

Table 41 HL7 User-defined Table 0004 – Patient class

Value	Description
E	Emergency
I	Inpatient
O	Outpatient
P	Preadmit
R	Recurring patient
B	Obstetrics
C	Commercial Account
N	Not Applicable
U	Unknown
G	General Practitioner

Table 42- HL7 User-defined Table 0005 – Race

Value	Description
	No suggested values defined

Table 43 - HL7 User-defined Table 0006 – Religion

Value	Description
AGN	Agnostic
ATH	Atheist
BAH	Baha'i
BUD	Buddhist
BMA	Buddhist: Mahayana
BTH	Buddhist: Theravada
BTA	Buddhist: Tantrayana
BOT	Buddhist: Other
CFR	Chinese Folk Religionist
CHR	Christian
ABC	Christian: American Baptist Church
AMT	Christian: African Methodist Episcopal
AME	Christian: African Methodist Episcopal Zion
ANG	Christian: Anglican
AOG	Christian: Assembly of God
BAP	Christian: Baptist
CAT	Christian: Roman Catholic
CRR	Christian: Christian Reformed
CHS	Christian: Christian Science
CMA	Christian: Christian Missionary Alliance
COC	Christian: Church of Christ
COG	Christian: Church of God
COI	Christian: Church of God in Christ
COM	Christian: Community
COL	Christian: Congregational
EOT	Christian: Eastern Orthodox
EVC	Christian: Evangelical Church
EPI	Christian: Episcopalian
FWB	Christian: Free Will Baptist
FRQ	Christian: Friends
GRE	Christian: Greek Orthodox
JWN	Christian: Jehovah's Witness
LUT	Christian: Lutheran
LMS	Christian: Lutheran Missouri Synod

Value	Description
MEN	Christian: Mennonite
MET	Christian: Methodist
MOM	Christian: Latter-day Saints
NAZ	Christian: Church of the Nazarene
ORT	Christian: Orthodox
COT	Christian: Other
PRC	Christian: Other Protestant
PEN	Christian: Pentecostal
COP	Christian: Other Pentecostal
PRE	Christian: Presbyterian
PRO	Christian: Protestant
QUA	Christian: Friends
REC	Christian: Reformed Church
REO	Christian: Reorganized Church of Jesus Christ-LDS
SAA	Christian: Salvation Army
SEV	Christian: Seventh Day Adventist
SOU	Christian: Southern Baptist
UCC	Christian: United Church of Christ
UMD	Christian: United Methodist
UNI	Christian: Unitarian
UNU	Christian: Unitarian Universalist
WES	Christian: Wesleyan
WMC	Christian: Wesleyan Methodist
CNF	Confucian
ERL	Ethnic Religionist
HIN	Hindu
HVA	Hindu: Vaishnavites
HSH	Hindu: Shaivites
HOT	Hindu: Other
JAI	Jain
JEW	Jewish
JCO	Jewish: Conservative
JOR	Jewish: Orthodox
JOT	Jewish: Other
JRC	Jewish: Reconstructionist
JRF	Jewish: Reform
JRN	Jewish: Renewal
MOS	Muslim
MSU	Muslim: Sunni
MSH	Muslim: Shiite
MOT	Muslim: Other
NAM	Native American
NRL	New Religionist
NOE	Nonreligious
OTH	Other
SHN	Shintoist
SIK	Sikh
SPI	Spiritist
VAR	Unknown

Table 44 - HL7 User-defined Table 0007 – Admission type

Value	Description
A	Accident
E	Emergency
L	Labor and Delivery
R	Routine
N	Newborn (Birth in healthcare facility)
U	Urgent
C	Elective

Table 45 - HL7 Table 0008 - Acknowledgment code

Value	Description
AA	Original mode: Application Accept - Enhanced mode: Application acknowledgment: Accept
AE	Original mode: Application Error - Enhanced mode: Application acknowledgment: Error
AR	Original mode: Application Reject - Enhanced mode: Application acknowledgment: Reject
CA	Enhanced mode: Accept acknowledgment: Commit Accept
CE	Enhanced mode: Accept acknowledgment: Commit Error
CR	Enhanced mode: Accept acknowledgment: Commit Reject

Table 46 - HL7 User-defined Table 0009 – Ambulatory status

Value	Description
A0	No functional limitations
A1	Ambulates with assistive device
A2	Wheelchair/stretcher bound
A3	Comatose; non-responsive
A4	Disoriented
A5	Vision impaired
A6	Hearing impaired
A7	Speech impaired
A8	Non-English speaking
A9	Functional level unknown
B1	Oxygen therapy
B2	Special equipment (tubes, IVs, catheters)
B3	Amputee
B4	Mastectomy
B5	Paraplegic
B6	Pregnant
B7	Not Pregnant
B8	Pregnancy Unknown

Table 47 - HL7 User-defined Table 0010 – Physician ID

Value	Description
	No suggested values defined

Table 48 - HL7 User-defined Table 0023 – 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 healthcare facility
7	Emergency room
8	Court/law enforcement
9	Information not available

Table 49 – HL7 User-defined Table 0051 - Diagnosis code

Value	Description
	No suggested values defined

Table 50 - HL7 User-defined Table 0052 – Diagnosis type

Value	Description
A	Admitting
W	Working
F	Final

Table 51 - HL7 User-defined Table 0053 - Diagnosis coding method

Value	Description
	No suggested values defined

Table 52 - HL7 User-defined Table 0064 – Financial class

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

Table 53 - HL7 Table 0065 – Specimen action code

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

Table 54 - HL7 Table 0070 – Specimen source code

Value	Description
ABS	Abscess

Value	Description
AMN	Amniotic fluid
ASP	Aspirate
BPH	Basophils
BIFL	Bile fluid
BLDA	Blood arterial
BBL	Blood bag
BLDC	Blood capillary
BPU	Blood product unit
BLDV	Blood venous
BON	Bone
BRTH	Breath (use EXHLD)
BRO	Bronchial
BRN	Burn
CALC	Calculus (=Stone)
CDM	Cardiac muscle
CNL	Cannula
CTP	Catheter tip
CSF	Cerebral spinal fluid
CVM	Cervical mucus
CVX	Cervix
COL	Colostrum
CBLD	Cord blood
CNJT	Conjunctiva
CUR	Curettage
CYST	Cyst
DIAF	Dialysis fluid
DOSE	Dose med or substance
DRN	Drain
DUFL	Duodenal fluid
EAR	Ear
EARW	Ear wax (cerumen)
ELT	Electrode
ENDC	Endocardium
ENDM	Endometrium
EOS	Eosinophils
RBC	Erythrocytes
EYE	Eye
EXHLD	Exhaled gas (=breath)
FIB	Fibroblasts
FLT	Filter
FIST	Fistula
FLU	Body fluid, unsp
GAS	Gas
GAST	Gastric fluid/contents
GEN	Genital
GENC	Genital cervix
GENL	Genital lochia
GENV	Genital vaginal
HAR	Hair
IHG	Inhaled Gas
IT	Intubation tube
ISLT	Isolate
LAM	Lamella
WBC	Leukocytes
LN	Line
LNA	Line arterial

Value	Description
LNV	Line venous
LIQ	Liquid NOS
LYM	Lymphocytes
MAC	Macrophages
MAR	Marrow
MEC	Meconium
MBLD	Menstrual blood
MLK	Milk
MILK	Breast milk
NAIL	Nail
NOS	Nose (nasal passage)
ORH	Other
PAFL	Pancreatic fluid
PAT	Patient
PRT	Peritoneal fluid /ascites
PLC	Placenta
PLAS	Plasma
PLB	Plasma bag
PLR	Pleural fluid (thoracentesis fld)
PMN	Polymorphonuclear neutrophils
PPP	Platelet poor plasma
PRP	Platelet rich plasma
PUS	Pus
RT	Route of medicine
SAL	Saliva
SEM	Seminal fluid
SER	Serum
SKN	Skin
SKM	Skeletal muscle
SPRM	Spermatozoa
SPT	Sputum
SPTC	Sputum - coughed
SPTT	Sputum - tracheal aspirate
STON	Stone (use CALC)
STL	Stool = Fecal
SWT	Sweat
SNV	Synovial fluid (Joint fluid)
TEAR	Tears
THRT	Throat
THRB	Thrombocyte (platelet)
TISS	Tissue
TISG	Tissue gall bladder
TLGI	Tissue large intestine
TLNG	Tissue lung
TISPL	Tissue placenta
TSMI	Tissue small intestine
TISU	Tissue ulcer
TUB	Tube NOS
ULC	Ulcer
UMB	Umbilical blood
UMED	Unknown medicine
URTH	Urethra
UR	Urine
URC	Urine clean catch
URT	Urine catheter
URNS	Urine sediment

Value	Description
USUB	Unknown substance
VOM	Vomitus
BLD	Whole blood
BDY	Whole body
WAT	Water
WICK	Wick
WND	Wound
WNDA	Wound abscess
WNDE	Wound exudate
WNDD	Wound drainage
XXX	To be specified in another part of the message
B	Blood
BX	Biopsy
E	Effusion
ED	EDTA
GC	Guthrie Card
GS	Gallstones
HP	Heparinised Plasma
NF	Sodium Flouride
NT	No type
RS	Renal Stones
STORE	STORE
UFB	Urine Faeces EDTA
VAULT	VAULT

Table 55 - HL7 Table 0074 – Diagnostic service section ID

Message	Description
AU	Audiology
BG	Blood Gases
BLB	Blood Bank
CUS	Cardiac Ultrasound
CTH	Cardiac Catheterization
CT	CAT Scan
CH	Chemistry
CP	Cytopathology
EC	Electrocardiac (e.g., EKG, EEC, Holter)
EN	Electroneuro (EEG, EMG,EP,PSG)
HM	Hematology
ICU	Bedside ICU Monitoring
IMM	Immunology
LAB	Laboratory
MB	Microbiology
MCB	Mycobacteriology
MYC	Mycology
NMS	Nuclear Medicine Scan
NMR	Nuclear Magnetic Resonance
NRS	Nursing Service Measures
OUS	OB Ultrasound
OT	Occupational Therapy
OTH	Other
OSL	Outside Lab
PHR	Pharmacy
PT	Physical Therapy
PHY	Physician (Hx. Dx, admission note, etc.)
PF	Pulmonary Function
RAD	Radiology
RX	Radiograph
RUS	Radiology Ultrasound
RC	Respiratory Care (therapy)
RT	Radiation Therapy
SR	Serology
SP	Surgical Pathology
TX	Toxicology
VUS	Vascular Ultrasound
VR	Virology
XRC	Cineradiograph
HIS	Histopathology
CAR	Cardiology
BS	Blood Sciences
ML	Molecular Testing

Table 56 - HL7 Table 0076 – Message Type

Message	Description	Chapter
ACK	General acknowledgment message	2
ADT	ADT message	3
OML	Laboratory order message	4
ORL	Laboratory acknowledgment message (unsolicited)	7
ORU	Unsolicited transmission of an observation message	7
REF	Patient referral	11
RRD	Pharmacy/treatment dispense acknowledgment message	4
RRE	Pharmacy/treatment encoded order acknowledgment message	4
RRG	Pharmacy/treatment give acknowledgment message	4
RRI	Return referral information	11
SIU	Schedule information unsolicited	10

Table 57 - HL7 User-defined Table 0078 - Abnormal flags

Message	Description
L	Below low normal
H	Above high normal
LL	Below lower panic limits
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)
AA	Very abnormal (applies to non-numeric units, analogous to panic limits for numeric units)
null	No range defined, or normal ranges don't apply
U	Significant change up
D	Significant change down
B	Better--use when direction not relevant
W	Worse--use when direction not relevant
S	Susceptible. Indicates for microbiology susceptibilities only.
R	Resistant. Indicates for microbiology susceptibilities only.
I	Intermediate. Indicates for microbiology susceptibilities only.
MS	Moderately susceptible. Indicates for microbiology susceptibilities only.
VS	Very susceptible. Indicates for microbiology susceptibilities only.

Table 58 - HL7 Table 0085 – Observation results status codes interpretation

Value	Description
C	Record coming over is a correction and thus replaces a final result
D	Deletes the OBX record
F	Final results; Can only be changed with a corrected result.
I	Specimen in lab; results pending
N	Not asked; used to affirmatively document that the observation identified in the OBX was not sought when the universal service ID in OBR-4 implies that it would be sought.
O	Order detail description only (no result)
P	Preliminary results
R	Results entered -- not verified
S	Partial results
X	Results cannot be obtained for this observation
U	Results status change to final without retransmitting results already sent as 'preliminary.' E.g., radiology changes status from preliminary to final

Value	Description
W	Post original as wrong, e.g., transmitted for wrong patient

Table 59 - HL7 Table 0102 – Delayed acknowledgment type

Value	Description
D	Message received, stored for later processing
F	Acknowledgment after processing

Table 60 - HL7 Table 0103 – Processing ID

Value	Description
D	Debugging
P	Production
T	Training

Table 61 - HL7 Table 0104 – HL7 version identifier

Value	Description	Date
2.0	Release 2.0	September 1988
2.0D	Demo 2.0	October 1988
2.1	Release 2. 1	March 1990
2.2	Release 2.2	December 1994
2.3	Release 2.3	March 1997
2.3.1	Release 2.3.1	May 1999
2.4	Release 2.4	November 2000

Table 62 - HL7 Table 0105 – Source of comment

Value	Description
L	Ancillary (filler) department is source of comment
P	Orderer (placer) is source of comment
O	Other system is source of comment

Table 63 - HL7 User-defined Table 0112 – 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 organised home health service organisation
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

Value	Description
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 64 - HL7 User-defined Table 0113 – Discharged to location

Value	Description
	No suggested values defined

Table 65 - HL7 Table 0123 – Result status

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

Table 66 - HL7 Table 0125 – Value type

Value	Description
AD	Address
CE	Coded Entry
CF	Coded Element With Formatted Values
CK	Composite ID With Check Digit
CN	Composite ID And Name
CP	Composite Price
CX	Extended Composite ID With Check Digit
DT	Date
ED	Encapsulated Data
FT	Formatted Text (Display)
MO	Money
NM	Numeric
PN	Person Name
RP	Reference Pointer
SN	Structured Numeric
ST	String Data
TM	Time
TN	Telephone Number
TS	Time Stamp (Date & Time)
TX	Text Data (Display)
XAD	Extended Address
XCN	Extended Composite Name And Number For Persons
XON	Extended Composite Name And Number For Organisations
XPN	Extended Person Name
XTN	Extended Telecommunications Number

Table 67- HL7 Table 0127 – Allergen type code

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

Table 68 - HL7 Table 0128– Allergen severity code

Value	Description
SV	Severe
MO	Moderate
MI	Mild
U	Unknown

Table 69 - HL7 Table 0136 – Yes/no indicator

Value	Description
Y	Yes
N	No

Table 70 - HL7 Table 0155 – Acknowledgement type

Value	Description
AL	Always
NE	Never
ER	Error/reject conditions only
SU	Successful completion only

Table 71 - HL7 Table 0161 – Acknowledgement type

Value	Description
N	Substitutions are NOT authorized. (This is the default - null.)
G	Allow generic substitutions.
T	Allow therapeutic substitutions

Table 72 - HL7 Table 0161 – Route of Administration

Value	Description
AP	Apply Externally
B	Buccal
DT	Dental
EP	Epidural
ET	Endotrachial Tube*
GTT	Gastrostomy Tube
GU	GU Irrigant
IMR	Immerse (Soak) Body Part
IA	Intra-arterial
IB	Intrabursal

IC	Intracardiac
ICV	Intracervical (uterus)
ID	Intradermal
IH	Inhalation
IHA	Intrahepatic Artery
IM	Intramuscular
IN	Intranasal
IO	Intraocular
IP	Intraperitoneal
IS	Intrasynovial
IT	Intrathecal
IU	Intrauterine
IV	Intravenous
MTH	Mouth/Throat
MM	Mucous Membrane
NS	Nasal
NG	Nasogastric
NP	Nasal Prongs*
NT	Nasotrachial Tube
OP	Ophthalmic
OT	Otic
OTH	Other/Miscellaneous
PF	Perfusion
PO	Oral
PR	Rectal
RM	Rebreather Mask*
SD	Soaked Dressing
SC	Subcutaneous
SL	Sublingual
TP	Topical
TRA	Tracheostomy*
TD	Transdermal
TL	Translingual
UR	Urethral
VG	Vaginal
VM	Ventimask
WND	Wound

Table 73 - HL7 User-defined Table 0163 – Administration site

Value	Description
BE	Bilateral Ears
OU	Bilateral Eyes
BN	Bilateral Nares
BU	Buttock
CT	Chest Tube
LA	Left Arm
LAC	Left Anterior Chest
LACF	Left Antecubital Fossa
LD	Left Deltoid
LE	Left Ear
LEJ	Left External Jugular
OS	Left Eye
LF	Left Foot
LG	Left Gluteus Medius
LH	Left Hand
LIJ	Left Internal Jugular

Value	Description
LLAQ	Left Lower Abd Quadrant
LLFA	Left Lower Forearm
LMFA	Left Mid Forearm
LN	Left Naris
LPC	Left Posterior Chest
LSC	Left Subclavian
LT	Left Thigh
LUA	Left Upper Arm
LUAQ	Left Upper Abd Quadrant
LUFA	Left Upper Forearm
LVG	Left Ventragluteal
LVL	Left Vastus Lateralis
NB	Nebulized
PA	Perianal
PERIN	Perineal
RA	Right Arm
RAC	Right Anterior Chest
RACF	Right Antecubital Fossa
RD	Right Deltoid
RE	Right Ear
REJ	Right External Jugular
OD	Right Eye
RF	Right Foot
RG	Right Gluteus Medius
RH	Right Hand
RIJ	Right Internal Jugular
RLAQ	Rt Lower Abd Quadrant
RLFA	Right Lower Forearm
RMFA	Right Mid Forearm
RN	Right Naris
RPC	Right Posterior Chest
RSC	Right Subclavian
RT	Right Thigh
RUA	Right Upper Arm
RUAQ	Right Upper Abd Quadrant
RUFA	Right Upper Forearm
RVL	Right Vastus Lateralis
RVG	Right Ventragluteal

Table 74 - HL7 User-defined Table 0164 – Administration device

Value	Description
AP	Applicator
BT	Buretrol
HL	Heparin Lock
IPPB	IPPB
IVP	IV Pump
IVS	IV Soluset
MI	Metered Inhaler
NEB	Nebulizer
PCA	PCA Pump

Table 75 - HL7 User-defined Table 0165 – administration method

Value	Description
CH	Chew
DI	Dissolve
DU	Dust
IF	Infiltrate
IS	Insert
IR	Irrigate
IVPB	IV Piggyback
IVP	IV Push
NB	Nebulized
PT	Pain
PF	Perfuse
SH	Shampoo
SO	Soak
WA	Wash
WI	Wipe

Table 76 - HL7 User-defined Table 0166 – RX component type

Value	Description
B	Base
A	Additive

Table 77 - HL7 User-defined Table 0167 – Substitution status

Value	Description
N	No substitute was dispensed. This is equivalent to the default (null) value.
G	A generic substitution was dispensed.
T	A therapeutic substitution was dispensed.
0	No product selection indicated
1	Substitution not allowed by prescriber
2	Substitution allowed - patient requested product dispensed
3	Substitution allowed - pharmacist selected product dispensed
4	Substitution allowed - generic drug not in stock
5	Substitution allowed - brand drug dispensed as a generic
7	Substitution not allowed - brand drug mandated by law
8	Substitution allowed - generic drug not available in marketplace

Table 78 - HL7 User-defined Table 0171 – Citizenship

Value	Description
	No suggested values defined

Table 79 - HL7 User-defined Table 0172 – Veterans military status

Value	Description
	No suggested values defined

Table 80 - HL7 User-defined Table 0189 – Ethnic group

Value	Description
	No suggested values defined

Table 81 - HL7 Table 0200 – Name type

Value	Description
A	Alias Name
B	Name at Birth
C	Adopted Name
D	Display Name
I	Licensing Name
L	Legal Name
M	Maiden Name
N	Nickname /"Call me" Name/Street Name
P	Name of Partner/Spouse (retained for backward compatibility only)
R	Registered Name (animals only)
S	Coded Pseudo-Name to ensure anonymity
T	Indigenous/Tribal/Community Name
U	Unspecified

Table 82 - HL7 Table 0201 - Telecommunication use code

Value	Description
PRN	Primary Residence Number
ORN	Other Residence Number
WPN	Work Number
VHN	Vacation Home Number
ASN	Answering Service Number
EMR	Emergency Number
NET	Network (email) Address
BPN	Beeper Number

Table 83 - HL7 Table 0202 - Telecommunication equipment type

Value	Description
PH	Telephone
FX	Fax
MD	Modem
CP	Cellular Phone
BP	Beeper
Internet	Internet Address: Use Only If Telecommunication Use Code Is NET
X.400	X.400 email address: Use Only If Telecommunication Use Code Is NET

Table 84 - HL7 User-defined Table 0203 – Identifier type

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 patient id

Table 85 - HL7 Table 0206 – Segment action code

Value	Description
A	Add/Insert
D	Delete
U	Update

Table 86 - HL7 Table 0207 – Processing mode

Value	Description
A	Archive
R	Restore from archive
I	Initial load
T	Current processing, transmitted at intervals (scheduled or on demand)
Not present	Not present (the default, meaning current processing)

Table 87 - HL7 Table 0227 – Substance manufacturer name

Value	Description
AB	Abbott Laboratories *(includes Ross Products Division)*
AD	Adams Laboratories
ALP	Alpha Therapeutic Corporation
AR	Armour [**Inactive**–use CEN]
AVI	Aviron
BA	Baxter Healthcare Corporation
BAY	Bayer Corporation*(includes Miles, Inc. and Cutter Laboratories)*
BP	Berna Products [**Inactive**–use BPC]
BPC	Berna Products Corporation *(includes Swiss Serum and Vaccine Institute Berne)*
CEN	Centeon L.L.C. *(includes Armour Pharmaceutical Company)*
CHI	Chiron Corporation
CON	Connaught [**Inactive**–use PMC]
EVN	Evans Medical Limited (an affiliate of Medeva Pharmaceuticals, Inc.)
GRE	Greer Laboratories, Inc.

Value	Description
IAG	Immuno International AG
IM	Merieux [**Inactive**–use PMC]
IUS	Immuno-U.S., Inc.
JPN	The Research Foundation for Microbial Diseases of Osaka University (BIKEN)
KGC	Korea Green Cross Corporation
LED	Lederle [**Inactive**–use WAL]
MA	Massachusetts Public Health Biologic Laboratories
MED	MedImmune, Inc.
MIL	Miles [**Inactive**–use BAY]
MIP	Bioport Corporation (formerly Michigan Biologic Products Institute)
MSD	Merck & Co., Inc.
NAB	NABI (formerly North American Biologicals, Inc.)
NYB	New York Blood Center
NAV	North American Vaccine, Inc.
NOV	Novartis Pharmaceutical Corporation *(includes Ciba-Geigy Limited and Sandoz Limited)*
OTC	Organon Teknika Corporation
ORT	Ortho Diagnostic Systems, Inc.
PD	Parkedale Pharmaceuticals (formerly Parke-Davis)
PMC	Aventis Pasteur Inc. (formerly Pasteur Merieux Connaught; *includes Connaught Laboratories and Pasteur Merieux)*
PRX	Praxis Biologics [**Inactive**–use WAL]
SCL	Sclavo, Inc.
SI	Swiss Serum and Vaccine Inst. [**Inactive**–use BPC]
SKB	SmithKline Beecham
USA	United States Army Medical Research and Materiel Command
WA	Wyeth-Ayerst [**Inactive**–use WAL]
WAL	Wyeth-Ayerst *(includes Wyeth-Lederle Vaccines and Pediatrics, Wyeth Laboratories, Lederle Laboratories, and Praxis Biologics)*
OTH	Other manufacturer
UNK	Unknown manufacturer

Table 88- HL7 User-defined Table 0278 – Filler status codes

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 89 - HL7 User-defined Table 0280 – Referral priority

Value	Description
S	STAT/ With Highest Priority
A	ASAP/ As soon as possible (after S)
U	Urgent
E	Early
R	Routine

Table 90 - HL7 User-defined Table 0281 – Referral type

Value	Description
Lab	Laboratory
Rad	Radiology
Med	Medical
Skn	Skilled Nursing
Psy	Psychiatric
Hom	Home Care
Prostate	Prostate
Breast	Breast
Lung	Lung
Gastrointestinal	Gastrointestinal
Neurology	Neurology
Chest	Chest
MRI	MRI
General	General

Table 91 - HL7 User-defined Table 0282 – Referral disposition

Value	Description
WR	Send Written Report
RP	Return Patient After Evaluation
AM	Assume Management
SO	Second Opinion

Table 92 - HL7 User-defined Table 0283 – Referral status

Value	Description
A	Accepted
P	Pending
R	Rejected
E	Expired

Table 93 - HL7 User-defined Table 0284 – Referral category

Value	Description
I	Inpatient
O	Outpatient
A	Ambulatory
E	Emergency

Table 94 - HL7 User-defined table 0286 – Provider role

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

Table 95- HL7 User-defined Table 0289 – County code

Value	Description
	No values Defined

Table 96 - HL7 User-defined Table 0292 – County code

Value	Description
	No values Defined

Table 97 - HL7 User-defined Table 0296 – Primary language

Value	Description
	No suggested values defined

Table 98 HL7 User-defined Table 0301 - Universal ID type

Value	Description
DNS	An Internet dotted name. Either in ASCII or as integers
GUID	Same as UUID.
HCD	The CEN Healthcare Coding Scheme Designator. (Identifiers used in DICOM follow this assignment scheme.)
HL7	Reserved for future HL7 registration schemes
ISO	An International Standards Organization Object Identifier
L,M,N	These are reserved for locally defined coding schemes
Random	Usually a base64 encoded string of random bits.The uniqueness depends on the length of the bits. Mail systems often generate ASCII string "unique names," from a combination of random bits and system names. Obviously, such identifiers will not be constrained to the base64 character set.
UUID	Usually a base64 encoded string of random bits.
x400	The uniqueness depends on the length of the bits. Mail systems often
x500	generate ASCII string "unique names," from a combination of random bits
DOH	Department of Health
MCN.HLPracticeID	This code uses Ireland's national Medical Council Number concatenated using a '.' to the Healthlink Practice ID code to identify a GP at a practice.

Table 99 HL7 User-defined Table 0302 - Point of care

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

Table 100 - HL7 User-defined Table 0321 – Dispense method

Value	Description
TR	Traditional
UD	Unit Dose
F	Floor Stock
AD	Automatic Dispensing

Table 101 - HL7 User-defined Table 0326 – Visitor indicator

Value	Description
A	Account level (default)
V	Visit level

Table 102 - HL7 User-defined Table 0336 – Referral reason

Value	Description
S	Second Opinion
P	Patient Preference
O	Provider Ordered
W	Work Load

Table 103 - HL7 Table 0357 - Message error condition codes

Error Condition Code	Error Condition Text	Description/Comment
Success		
0	Message accepted	Success. Optional, as the AA conveys success. Used for systems that must always return a status code.
Errors		
100	Segment sequence error	The message segments were not in the proper order, or required segments are missing.
101	Required field missing	A required field is missing from a segment
102	Data type error	The field contained data of the wrong data type, e.g. an NM field contained "FOO".
103	Table value not found	A field of data type ID or IS was compared against the corresponding table, and no match was found.
Rejection		
200	Unsupported message type	The Message Type is not supported.
201	Unsupported event code	The Event Code is not supported.
202	Unsupported processing id	The Processing ID is not supported.
203	Unsupported version id	The Version ID is not supported.
204	Unknown key identifier	The ID of the patient, order, etc., was not found. Used for transactions other than additions, e.g. transfer of a non-existent patient.
205	Duplicate key identifier	The ID of the patient, order, etc., already exists. Used in response to addition transactions (Admit, New Order, etc.).
206	Application record locked	The transaction could not be performed at the application storage level, e.g. database locked.
207	Application internal error	A catchall for internal errors not explicitly covered by other codes.

Table 104 - HL7 User-defined Table 0360 - Degree

Value	Description
	No values Defined

Table 105- HL7 User-defined Table 0361 – Sending application

Value	Description
TOREX.HEALTHLINK.12	Torex, Healthlink Bridge Middleware, Discharge Notification Message
PAS.HEALTHLINK.12	Patient Administration System, 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

Value	Description
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	HSE SE Out of Hours Co-operative, CareDoc
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
COMPLETEGP	Message Generated by CompleteGP Practice Management System
MEDICOM	Message Generated by Medicom Practice Management System
GPMAC	Message Generated by GPMAC Practice Management System
AGFA	Message Generated by AGFA
DMF_OPENLIS	Message Generated by DMF_OPENLIS
DWISI	Message Generated by DWISI
HIPEHOS	Message Generated by HIPEHOS
ILAB	Message Generated by ILAB
IPM	Message Generated by IPM
IWM	Message Generated by IWM
MAXIMS-RIS	Message Generated by MAXIMS-RIS
MILLENIUM	Message Generated by MILLENIUM
NETACQUIRE	Message Generated by NETACOUIRE
TEAMS	Message Generated by TEAMS

Value	Description
TOREXPAS	Message Generated by TOREXPAS
DMF_EDS	Message Generated by DMF EDS
GE	Message generated by Euromedics radiology
MLP-Appollo	Message Generated by MLP-Appollo

Table106 - HL7 User-defined Table 0362 – Sending facility

Value	Description
0002	Caredoc
0003	Shannon Doc
0100	St. Mary's Hospital, Phoenix Park
0101	St. Colmcille's Hospital, Loughlinstown
0102	Naas General Hospital
0106	Cherry Orchard Hospital, Ballyfermot
0108	Connolly Hospital Blanchardstown
0201	Midland Regional Hospital, Portlaoise
0202	Midland Regional Hospital, Mullingar
0203	Midland Regional Hospital,Tullamore
0300	Midwestern Regional Hospital, Dooradoyle
0301	Midwestern Regional Maternity Hospital Limerick
0302	Midwestern Regional Orthopaedic Hospital, Croom
0304	Midwestern Regional Hospital, Nenagh
0305	Midwestern Regional Hospital, Ennis
0400	Louth County Hospital, Dundalk
0402	Cavan General Hospital
0403	Our Lady's Hospital, Navan
0404	Monaghan General Hospital
0500	Letterkenny General Hospital
0501	Sligo General Hospital
0502	Our Lady's Hospital, Manorhamilton
0600	Waterford Regional Hospital (Ardkeen)
0601	St. Luke's General Hospital, Kilkenny
0602	Lourdes Orthopaedic Hospital, Kilcreene
0605	Wexford General Hospital
0607	South Tipperary General Hospital, Clonmel
0608	Our Lady's Hospital, Cashel
0701	St. Mary's Orthopaedic Hospital, Gurranabraher
0703	Mallow General Hospital
0704	Bantry General Hospital
0705	St. Finbarr's Hospital, Cork
0724	Cork University Hospital
0726	Kerry General Hospital
0800	University College Hospital Galway (UCHG)
0801	Merlin Park University Hospital, Galway
0802	Mayo General Hospital
0803	Roscommon County Hospital
0805	Ballina District Hospital
0901	Adelaide Hospital, Dublin
0903	Meath Hospital, Dublin
0904	St. James's Hospital, Dublin
0908	Mater Misericordiae University Hospital, Dublin
0910	St. Vincent's University Hospital, Elm park
0912	St. Michael's Hospital, Dun Laoghaire

Value	Description
0913	Mercy University Hospital, Cork
0915	South Infirmary/Victoria, Cork
0918	St. John's Hospital, Limerick
0919	Portiuncula Hospital, Ballinasloe
0922	Our Lady of Lourdes Hospital, Drogheda
0923	Beaumont Hospital, Dublin
0925	Peamount Hospital, Newcastle
0930	Coombe Women and Infants University Hospital, Dublin
0931	National Maternity Hospital, Holles St, Dublin
0932	Rotunda Hospital, Dublin
0934	Waterford Maternity Hospital
0940	The Children's University Hospital, Temple St, Dublin
0941	Our Lady's Children's Hospital, Crumlin
0943	National Children's Hospital, Harcourt St
0945	St. Anne's Hospital, Dublin
0946	Hume St. Hospital, Dublin
0947	St. Luke's Hospital, Rathgar
0950	Royal Victoria Eye & Ear Hospital, Dublin
0954	Incorporated Orthopaedic Hospital, Clontarf
0955	National Orthopaedic Hospital, Cappagh
0956	St. Mary's Auxiliary Hospital, Baldoyle
0960	National Rehabilitation Hospital, (NHR), Dun Laoghaire
0978	Our Lady's Hospice, Harold's Cross, Dublin
1225	St. Joseph's Unit, Harold's Cross
1270	Adelaide, Meath Incorporating National Children's Hospital (AMNCH), Tallaght
1762	St. Joseph's Hospital, Raheny

* Please note that some hospitals listed above now closed/no longer acute hospitals but are included on this list to enable historical data analysis.

Table 107 - HL7 User-defined Table 0363 - Assigning Authority

Value	Description
0002	Caredoc
0003	Shannon Doc
0100	St. Mary's Hospital, Phoenix Park
0101	St. Colmcille's Hospital, Loughlinstown
0102	Naas General Hospital
0106	Cherry Orchard Hospital, Ballyfermot
0108	Connolly Hospital Blanchardstown
0201	Midland Regional Hospital, Portlaoise
0202	Midland Regional Hospital, Mullingar
0203	Midland Regional Hospital,Tullamore
0300	Midwestern Regional Hospital, Dooradoyle
0301	Midwestern Regional Maternity Hospital Limerick
0302	Midwestern Regional Orthopaedic Hospital, Croom
0304	Midwestern Regional Hospital, Nenagh
0305	Midwestern Regional Hospital, Ennis
0400	Louth County Hospital, Dundalk
0402	Cavan General Hospital
0403	Our Lady's Hospital, Navan
0404	Monaghan General Hospital
0500	Letterkenny General Hospital

Value	Description
0501	Sligo General Hospital
0502	Our Lady's Hospital, Manorhamilton
0600	Waterford Regional Hospital (Ardkeen)
0601	St. Luke's General Hospital, Kilkenny
0602	Lourdes Orthopaedic Hospital, Kilcreene
0605	Wexford General Hospital
0607	South Tipperary General Hospital, Clonmel
0608	Our Lady's Hospital, Cashel
0701	St. Mary's Orthopaedic Hospital, Gurranabraher
0703	Mallow General Hospital
0704	Bantry General Hospital
0705	St. Finbarr's Hospital, Cork
0724	Cork University Hospital
0726	Kerry General Hospital
0800	University College Hospital Galway (UCHG)
0801	Merlin Park University Hospital, Galway
0802	Mayo General Hospital
0803	Roscommon County Hospital
0805	Ballina District Hospital
0901	Adelaide Hospital, Dublin
0903	Meath Hospital, Dublin
0904	St. James's Hospital, Dublin
0908	Mater Misericordiae University Hospital, Dublin
0910	St. Vincent's University Hospital, Elm park
0912	St. Michael's Hospital, Dun Laoghaire
0913	Mercy University Hospital, Cork
0915	South Infirmary/Victoria, Cork
0918	St. John's Hospital, Limerick
0919	Portiuncula Hospital, Ballinasloe
0922	Our Lady of Lourdes Hospital, Drogheda
0923	Beaumont Hospital, Dublin
0925	Peamount Hospital, Newcastle
0930	Coombe Women and Infants University Hospital, Dublin
0931	National Maternity Hospital, Holles St, Dublin
0932	Rotunda Hospital, Dublin
0934	Waterford Maternity Hospital
0940	The Children's University Hospital, Temple St, Dublin
0941	Our Lady's Children's Hospital, Crumlin
0943	National Children's Hospital, Harcourt St
0945	St. Anne's Hospital, Dublin
0946	Hume St. Hospital, Dublin
0947	St. Luke's Hospital, Rathgar
0950	Royal Victoria Eye & Ear Hospital, Dublin
0954	Incorporated Orthopaedic Hospital, Clontarf
0955	National Orthopaedic Hospital, Cappagh
0956	St. Mary's Auxiliary Hospital, Baldoyle
0960	National Rehabilitation Hospital, (NHR), Dun Laoghaire
0978	Our Lady's Hospice, Harold's Cross, Dublin
1225	St. Joseph's Unit, Harold's Cross
1270	Adelaide, Meath Incorporating National Children's Hospital (AMNCH), Tallaght
1762	St. Joseph's Hospital, Raheny
PCRS	Primary Care Reimbursement Service

Table 108 - HL7 User-defined Table 0396 – Coding System

Value	Description

Value	Description
99zzz or L	Local general code (where z is an alphanumeric character)
ACR	American College of Radiology finding codes
ART	WHO Adverse Reaction Terms
AS4	ASTM E1238/ E1467 Universal
AS4E	AS4 Neurophysiology Codes
ATC	American Type Culture Collection
C4	CPT-4
C5	CPT-5
CAS	Chemical abstract codes
CD2	CDT-2 Codes
CDCA	CDC Analyte Codes
CDCM	CDC Methods/Instruments Codes
CDS	CDC Surveillance
CE	CEN ECG diagnostic codes
CLP	CLIP
CPTM	CPT Modifier Code
CST	COSTART
CVX	CDC Vaccine Codes
DCL	DICOM Class Label
DCM	DICOM modality codes
DQL	DICOM Query Label
E	EUCLIDES
E5	Euclides quantity codes
E6	Euclides Lab method codes
E7	Euclides Lab equipment codes
ENZC	Enzyme Codes
FDDC	First DataBank Drug Codes
FDDX	First DataBank Diagnostic Codes
FDK	FDA K10
HB	HIBCC
HCPCS	HCFA Common Procedure Coding System
HHC	Home Health Care
HI	Health Outcomes
HL7nnnn	HL7 Defined Codes where nnnn is the HL7 table number
HPC	HCFA Procedure Codes (HCPCS)
I10	ICD-10
I10P	ICD-10 Procedure Codes
I9	ICD9
ICDO	International Classification of Diseases for Oncology
ICS	ICCS
ICSD	International Classification of Sleep Disorders
ISOnnnn	ISO Defined Codes where nnnn is the ISO table number
IUPP	IUPAC/IFCC Property Codes
IUPC	IUPAC/IFCC Component Codes
JC8	Japanese Chemistry
LB	Local billing code
LN	Logical Observation Identifier Names and Codes (LOINC®)
MCD	Medicaid
MCR	Medicare
MDDX	Medispan Diagnostic Codes
MEDC	Medical Economics Drug Codes
MEDR	Medical Dictionary for Drug Regulatory Affairs (MEDDRA)
MEDX	Medical Economics Diagnostic Codes
MGPI	Medispan GPI
MVX	CDC Vaccine Manufacturer Codes

Value	Description
NDA	NANDA
NDC	National drug codes
NIC	Nursing Interventions Classification
NPI	National Provider Identifier
OHA	Omaha System
OHA	Omaha
POS	POS Codes
RC	Read Classification
SDM	SNOMED- DICOM Microglossary
SNM	Systemized Nomenclature of Medicine (SNOMED)
SNM3	SNOMED International
SNT	SNOMED topology codes (anatomic sites)
UC	UCDS
UMD	MDNS
UML	Unified Medical Language
UPC	Universal Product Code
UPIN	UPIN
W1	WHO rec# drug codes
W2	WHO rec# drug codes
W4	WHO rec# code with ASTM extension
WC	WHO ATC

Table 109 - HL7 User-defined Table 0430 – Mode of arrival code

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

Table 110 - HL7 User-defined Table 0445 - Identity reliability code

Value	Description
UD	Unknown/Default Date of Birth

Appendix 4 – Healthlink to HL7 mapping

Table 111 HL7 abstract message type mapping to Healthlink message type

Healthlink Message Type	HL7 Abstract Message Type	Healthlink Link Message Type ID
Laboratory Order	OML O21	1
Inpatient Admission	ADT A01	2
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 and Gastric Cancer Referral	REF_I12	18
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

Appendix 5 – LOINC Codes used for Referral Messaging in Ireland

Table 112 LOINC codes

Code	Description
10155-0	History of allergies
10157-6	History of family member diseases
10164-2	History of present illness
10167-5	History of surgical procedures
10177-4	Respiratory Symptoms and Diseases
10205-3	Physical Findings
11329-0	History General
11330-8	History of alcohol use
11348-0	History of past illness
11366-2	History of tobacco use
11391-0	Details of Chest Signs
11422-3	Chest signs
18726-0	Radiology Study Reports
19009-0	Current Medication
22029-3	Physical exam.total
24357-6	Urinalysis
24605-8	Previous Mammogram
24627-2	CT Scan
24642-1	Chest X-Ray
26436-6	Laboratory Studies
28189-9	Physical mobility impairment
2857-1	PSA Test
28620-3	Urology Study
29762-2	Social History
3137-7	Height
3141-9	Weight
32422-8	Breast Examination
39156-5	Body Mass Index
45669-9	History of Asthma
8462-4	Diastolic Blood Pressure
8480-6	Systolic Blood Pressure
8663-7	Cigarettes Smoked per day
8893-0	Pulse
42349-1	Reason for Referral

Appendix 6 – LOINC Copyright Notice and License

2. If the user elects to utilize the RELMA program, users receive the full RELMA database and associated search index files with the RELMA program, including the LOINC table and other database tables comprising the RELMA database. In addition to its use with the RELMA program, users may use the LOINC table by itself and may modify the LOINC table as permitted herein. Users may not use or modify the other database tables from the RELMA database or the associated search index files except in conjunction with their authorized use of the RELMA program, unless prior written permission is granted by the Regenstrief Institute,

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In the future, we expect to include many more survey instruments and questionnaires from third parties with permission (especially those required by the U.S. federal government for payment and reimbursement) and believe that cataloguing all of these data collection forms in one comprehensive system (the LOINC table) along with laboratory and other clinical variables will facilitate the use of this data in direct clinical care, research and practice management.

Taken from: www.loinc.org

Appendix 7 – Change History

List of Changes from GPMS v001 to GPMS v002

1. Change 'ENV' to correct abbreviation 'EVN' where needed.
2. MSH.3 - Comment added in description field about HD Datatype.
3. Changed the cardinality of MSH.3/HD.1/HD.2/HD.3 from 'R' to 'C'.
4. Changed the cardinality of MSH.4/HD.1/HD.2/HD.3 from 'O' to 'C'.
5. Changed the cardinality of MSH.5/HD.1/HD.2/HD.3 from 'O' to 'C'.
6. Changed the cardinality of MSH.6/HD.1/HD.2/HD.3 from 'O' to 'C'.
7. Deleted length values from all subcomponents. Only top level components will have datatypes.
8. Included table value 0363 for HL7 element PID.3/CX.4/HD.1 (copied contents of 0362 to 0363 and included value code and description for PCRS in table 0363.
9. Removed table 0203 from HL7 element PID.3/CX.4/HD.3 and replaced with table 0301.
10. The XTN.1/2/3/4/6 and 7 data types were updated for PID.13, PID.14, OBR.17 and PRD.XTN.5 (Country code) was excluded.
11. The comment "When used for backward compatibility, this field contains the patient's social security number" for PID.19 was removed.
12. OBR.25 - Result Status – Included a comment to refer the reader to the message flow for Corrected Results for workflow for updated results.
13. OBR.28/XCN.16 Included a comment to refer the reader "to use cases Unsolicited Laboratory Result, Unsolicited Radiology Result and Corrected Result for specific usage of this field".
14. OBX.11 - Observation Result Status, Included a comment to refer the reader "Please refer to message flow Corrected Results for workflow for updated results".
15. SCH.11/TQ.6 – There is no table available in HL7 v2.4 for priority component. The values suggested in the HL7 v2.4 spec for the priority component are listed in the GPMS.
16. The segment "PV2 Event Type/Additional information" was included in the list of segments in the death notification message flow.
17. Acknowledgement messages were represented in the referral and response message flows.
18. The segment "NTE Notes and Comments" was included in the list of segments in the laboratory order message flow.
19. The following segments were included in the minimum laboratory order acknowledgement message response ORL_O22 contains the following segments:MSH Message Header, MSA Message Acknowledgement and ERR Message Error Segment.

20. Acknowledgement messages were represented in the unsolicited radiology message flow.
21. Status information and copy to information were included in the notes section of the unsolicited radiology result message flow.
22. Acknowledgement messages were represented in the unsolicited laboratory message flow.
23. Status information and copy to information were included in the notes section of the unsolicited laboratory result message flow.
24. A new message flow for corrected results was created.
25. A new section (7) regarding LOINC codes was created and the LOINC codes currently available for referral messages listed in appendix 5.
26. Appendix 2.0 – Abstract message definitions; the general acknowledgement ACK abstract message definition was included.
27. Appendix 3.0 – Reference Tables. The value HLID:Healthlink ID was included in HL7 User-defined Table 0203 – Identifier type (GPMS Table 70).
28. Additional values were include in HL7 User-defined Table 0281 – Referral type provided by Healthlink.
29. A new table was created for HL7 User-defined Table 0301 - Universal ID type and populated with HL7v2.4 values and Department of Health (DOH).
30. Values (provided by Healthlink) were included in HL7 User-defined Table 0361 – sending application .
31. A new table HL7 User-defined Table 0363; 'assigning authority' was created. The contents from Table 0362 were copied and an additional value 'PCRS' was added.
32. A new table HL7 User-defined Table 0396; coding system was created.
33. A new table for LOINC codes was created.
34. Copyright and licensing was recreated from LOINC terms of use and is available in Appendix 6.

List of Changes from GPMS v002 to GPMS v003

35. New section added to incorporate the electronic transfer of prescriptions from GP's to community pharmacy including the outpatients of hospitals.
36. Addition of new values to table 0070
37. Addition on new value to table 0004
38. Addition of new value to table 0301
39. Addition of new values to table 0074
40. Addition of new value to table 0361
41. Addition of new value to table 0201
42. Addition of new codes to table 0002

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