hiso Health Information Standards Organisation
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Referrals, Status and Discharges Implementation Guide

HISO 10011.3

To provide guidance for HISO 10011.1 Referrals, Status, and Discharge Business Process Standard and HISO 10011.2 Referrals, Status, and Discharge Messaging Standard

Updates – 10011.3 Referrals, Status and Discharges Implementation Guide

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Committee representation

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

Representative	Nominating Organisation
Doug Neilson	Accident Compensation Corporation
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Angela Pidd	Ministry of Health
Stephen Chu	New Zealand HL7 User Group
Martin Wilson	Pegasus Health Group
Muir Hutchison	Pharmacy Guild of New Zealand
Kim Wong	Waikato District Health Board

Related Documents

The documents listed below have been referred to in the development of this Standard. They may provide clarification of this Standard, if required.

AS/NZS Standard

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

AS Standards

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

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

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

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

Other Standards

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

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

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

ISO

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

Other Publications

SNZ HB 8169:2002 Health Network Code of Practice (Amendment 1 2006)
Health Information Privacy Code 1994

1 INTRODUCTION

This document is a guide for developing applications compliant with the HISO Referrals, Status and Discharges (RSD) Standards suite. It is not a detailed step-by-step guide to implementing the Standards. It should be read in conjunction with these documents. The full suite comprises:

Document Number	Document Title	Purpose
10011.1	Business Process Standard	Describes the business process supported by the Messaging Standard
10011.2	Messaging Standard	Describes the structure and content of the message exchanges between sender and receiver
10011.3	Implementation Guide	Designed to provide assistance when implementing systems which utilise the Standards in this suite

Table 1: Related Documents

NOTE: *This Guide does not cover encryption.*

The above suite of Standards is based on Health Level Seven (HL7) version 2.4.

This Guide covers HL7 message structure, deployment information and how segment fields are used within New Zealand.

Appendix A contains a list of variances to HL7 in this suite of Standards.

The Standards in this suite are intended to replace earlier implementations of the HL7 Standard. They may not be backward compatible. Instances where backward compatibility is required are noted in the RSD Standards.

2 HL7 MESSAGE STRUCTURE

2.1 Overview of HL7 Message Structure

An HL7 message comprises several segments which are used to carry information for a specific purpose. E.g. an REF^I12 message will contain a request for a referral.

Refer to the Messaging Standard for full details of message structure.

2.2 Message Types

The message type is defined in the REF or RRI message by a three-character code, which cannot be altered. Refer to the Messaging Standard for full definitions of message types, especially Chapter 3. The message type codes are:

Type	Description
REF	Request message
RRI	Response message

Table 2: HL7 Message Types

2.3 Segments

Messages are constructed from a pre-defined order of segments. Each segment is identified by a unique three capital letter code, known as a segment ID, e.g. MSH (message header), MSA (message acknowledgement), ERR (error).

Segments can be defined as required or optional and may be permitted to repeat. Optional segments can be suppressed in the message. Required segments must always be present. Segments are terminated using a carriage return code.

For relevant segment definitions, refer to chapter 4 in the Messaging Standard, which describes segment groups, and chapter 5, which describes the segments and associated fields.

2.4 Message Structure

The HL7 message is constructed as follows:

(a) A message consists of multiple segments (segment groups);
(b) Segments consist of one or more fields;
(c) Fields can be divided into components and sub components.

When constructing HL7 messages, the following special characters are used:

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

Table 3: Delimiters

Refer to the Messaging Standard for details about the use of delimiters.

2.5 Data Types

For relevant data types, refer to Chapter 5.1.6 in the Messaging Standard.

2.6 Tables

The Messaging Standard contains a full set of tables relating to the structure and content of messages. A complete table list is included in the Contents section of the Messaging Standard.

2.7 Logging

In order to meet the business requirements of reliable messaging and to support an audit trail, it is important that systems that send and receive messages should implement a messaging log.

The message log should contain:

(a) Message ID;
(b) Copy of the message;
(c) Date/time sent;
(d) Address sent to;
(e) Date/time of receipt acknowledgement.

This will assist in re-sending the message if an error occurs, or if the recipient requests that the message be re-sent.

3 OVERVIEW OF REFERRALS, STATUS AND DISCHARGES (RSD) MESSAGING

3.1 RSD Introduction

The Referrals, Status and Discharges (RSD) Messaging Standard provides the methodology for electronic request and response transactions for patient referrals, patient status and discharge information. It also supports the original sender making queries or status requests of the referral system.

The main elements of messaging are:

(a) The messages are structured;

(b) All messaging transactions occur in pairs of messages. E.g. a message is sent and a response or acknowledgement is received, which signifies the transaction is complete.

Any data passed between entities in a transaction is contained in the HL7 message. The major components of a message are referred to as message segments. It is the responsibility of the receiving application to manage the administrative, demographic and clinical details, which may be contained within messages. The Messaging Standard does not specify the method of communication to be used between transacting entities. Users are responsible for designing their systems to interface with various transmission methodologies.

However, any transmission system should enable a message to be re-sent if an error occurs, or if the recipient requests that the message be re-sent.

Figure 1, below, depicts a typical interaction of systems over the lifecycle of a referral message:

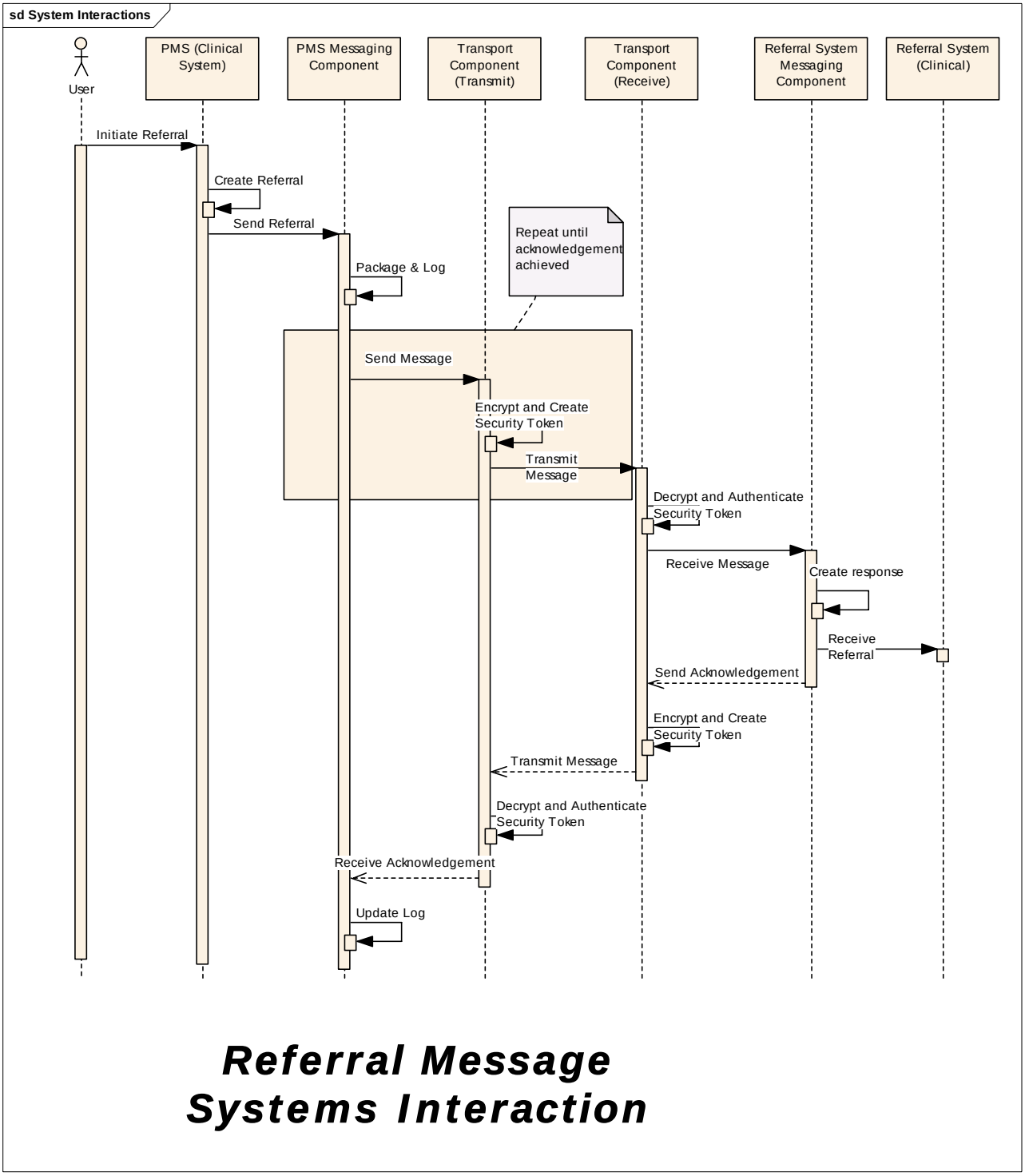

Figure 1: Typical Interaction of Systems in Referral Messaging

NOTE: *For lower layer protocols, refer to HL7 v2.4 Appendix B.*

3.2 Referral State

The processing of a referral may take place over a considerable period of time. During this time, the referral may change state a number of times. However, these state changes are discrete and sequential. Refer to Figure 2, replicated from the Business Process Standard, for a summary of referral states. Figure 3, from the Messaging Standard, uses the same diagram, with message text added to illustrate each referral state.

Messages are related to state changes or transitions in two main ways:

(a) An incoming message may trigger a state change (e.g. a new referral or a referral cancellation);

(b) A referral moves between states in response to an event and as the result of this state change, a message may be generated to the original sender.

For details of state changes, refer to chapter 2 in the Business Process Standard, as well as chapters 2 and 3 in the Messaging Standard.

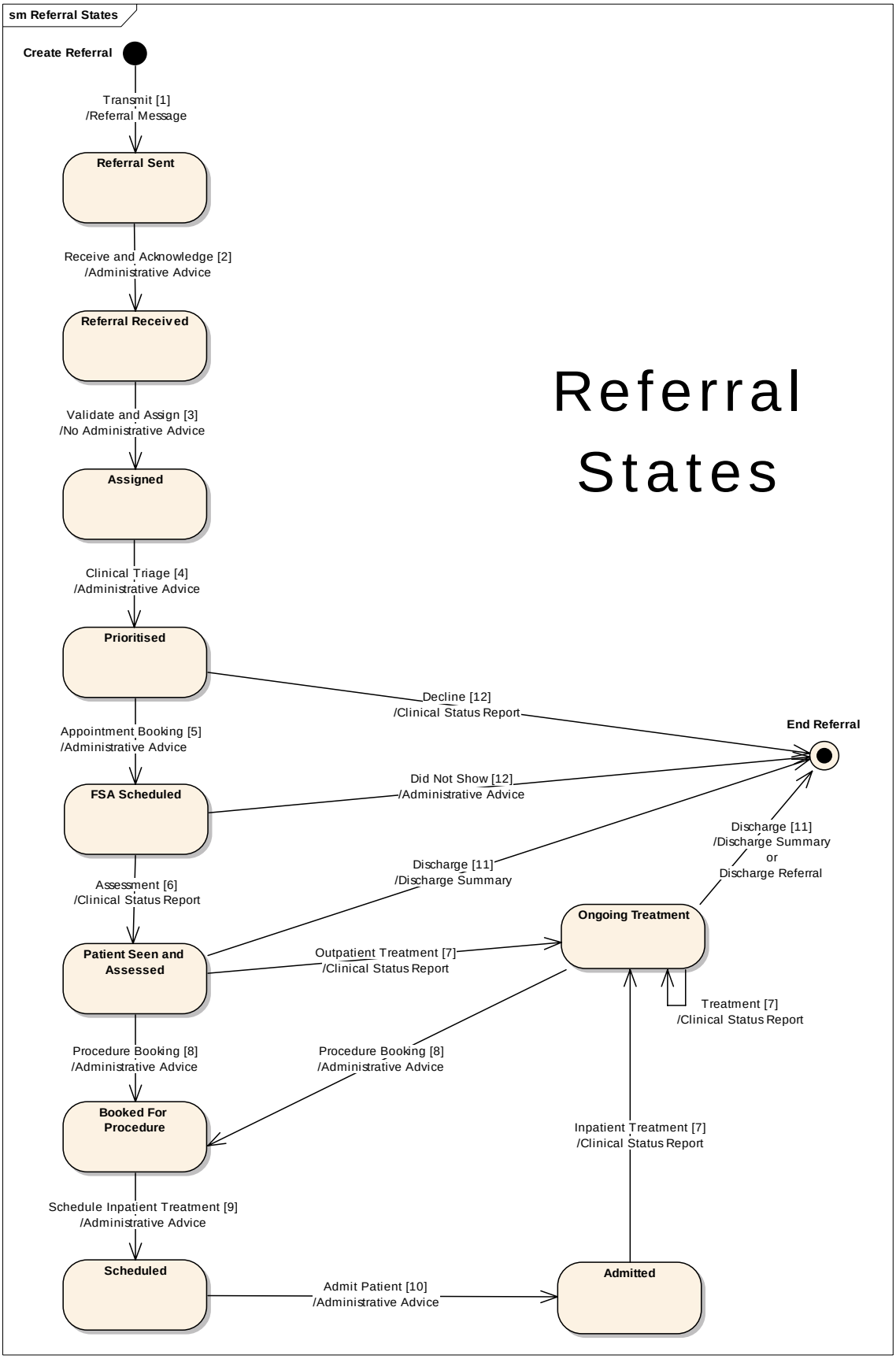

Figure 2: Referral States

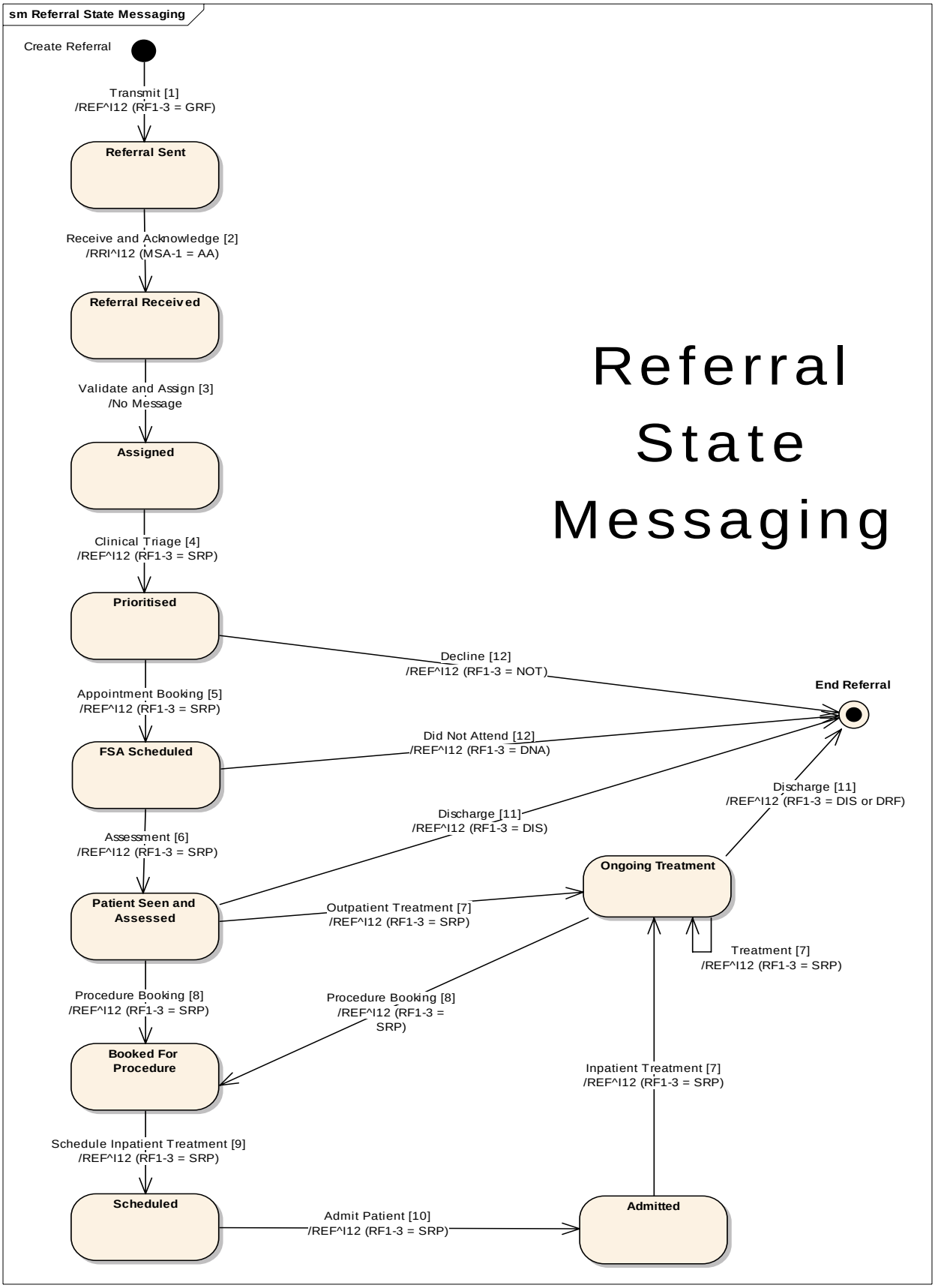

Figure 3: Referral State Messaging

3.3 Request and Response Messages

All messaging occurs in pairs of messages - a 'request' of type "REF", followed by a 'response' of type "RRI". The three types of message pairs defined in the Messaging Standard are shown in Table 3, below.

Request Message	Response Message	Purpose
REF^I12	RRI^I12	Create a new referral
REF^I14	RRI^I14	Cancel an existing referral
REF^I15	RRI^I15	Request information about the current state of an existing referral

Table 4: Message Pairs

> ***NOTE:*** *Both message types allow clinical information to be included within the message, with the exception of RRI^I12.*

It is mandatory to respond to a request. In the Messaging Standard, the response message is considered to be the acknowledgement of the original request. The response will employ the appropriate segment IDs (e.g. MSA, ERR).

There will only be a single 'response' to any 'request', including status request messages. This constitutes a variance to some HL7 implementations, in which a 'request' might generate two 'response' messages, one being a simple acknowledgement and the other being the actual response to the query.

If the message sender does not receive a response within 24 hours, then they know to re-send the message.

> ***Note:*** *The Message ID is set by the sender and should be unique for that sender.*

4 TRANSACTION FLOW

The Business Process Standard outlines a number of referral scenarios. The key scenarios are outlined below.

There are four key fields set by the message sender, as described in Table 4, below.

Field	Definition	Purpose
MSH-9	Message Type	Determines the message type, e.g. REF^I12 for the request message and RRI^I12 for the response.
RF1-1	Referral Status	Indicates the status of the referral to which this message applies. Options are: “P” – Pending; “A” – Accepted; “R” – Rejected; “E” – Expired; “C” – Cancelled; “F”– Final.
RF1-3	Referral Type	Indicates the type of referral. The options listed in the Messaging Standard include: “GRF” – General Referral; “DIS” – Discharge Summary; “DRF” – Discharge Referral; “DNA” – Did not attend; “SRP” – Status Report; “NOT” – Notification.
RF1-4	Referral Disposition	Provides further detail on the value in RF1-3. The options listed in the Messaging Standard include: “WR” – Send written report; “SO” – Request for second opinion; “RP” – Return patient after evaluation; “AM” – Assume management; “FI” – For your information.

Table 5: Key Fields

4.1 Standard Referral

In this scenario, the referrer sends a referral to the recipient. After the recipient has seen and treated the patient, they return a discharge summary to the referrer. During this time the referrer may request an update and the recipient may send a status report. Refer to Figure 4:

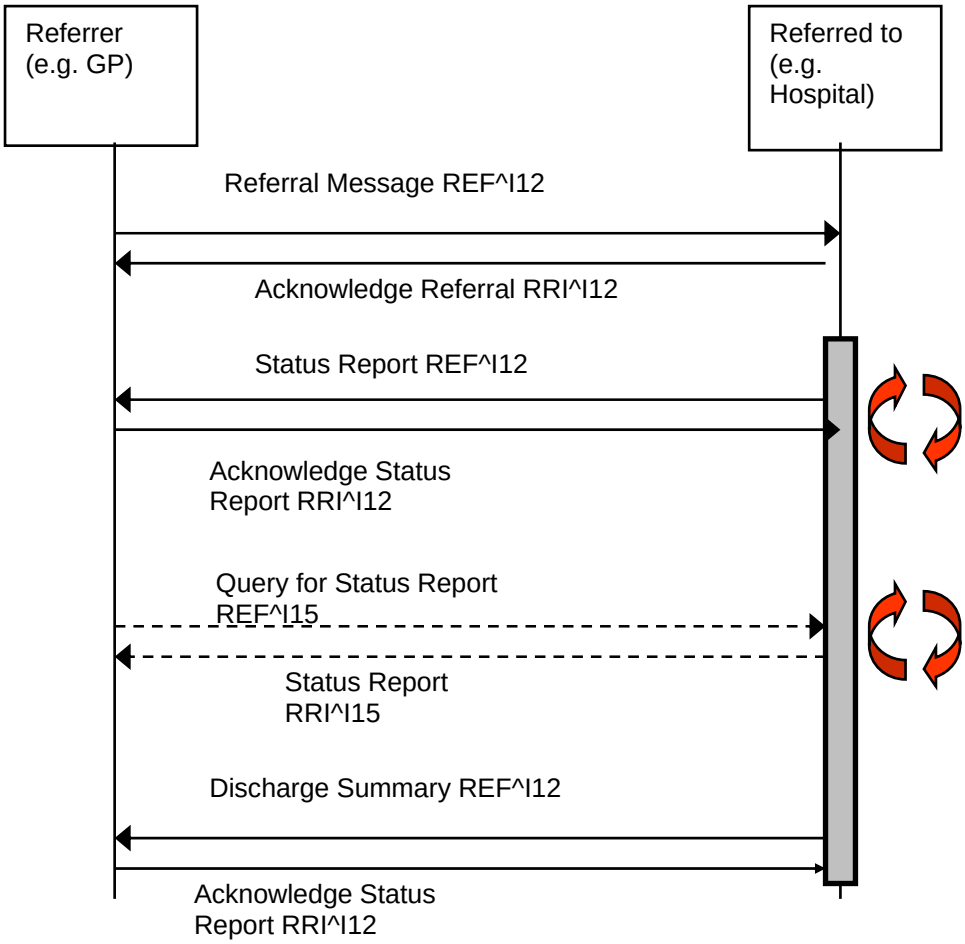

Figure 4: Standard Referral

4.1.1 Create Referral

The sequence starts with the referrer creating and sending an REF^I12 message containing the clinical data and the clinic accepting the referral. If the clinic were to decline the referral they would set RF1-1 to "R" for reject. Refer to Table 5, below:

	MSH-9	RF1-1	RF1-3	RF1-4	Containing Clinical Data
Event	REF^I12	P	GRF	AM	Yes
Response	RRI^I12	A		--	No

Table 6: Create Referral Sequence

Note: *RF1-4 is only AM if the patient is not expected back otherwise this should be RP*

4.1.2 Status Update

Within 24 hours of receipt, the recipient issues a status update of the referral. The recipient responds with a simple acknowledgement. Note that the referral is in the “Accept” state in both messages. Refer to Table 6, below:

	MSH-9	RF1-1	RF1-3	RF1-4	Containing Clinical Data
Event	REF^I12	A	SRP	--	Yes
Response	RRI^I12	A		--	No

Table 7: Status Update Sequence

4.1.3 Request Update

A similar set of messages applies when the initial referrer requests a status update. Refer to Table 7, below:

	MSH-9	RF1-1	RF1-3	RF1-4	Containing Clinical Data
Event	REF^I12	A		--	No
Response	RRI^I12	A		--	Yes

Table 8: Request Update Sequence

4.1.4 Discharge Summary

Finally, the recipient completes the referral and sends a status message back to the original referrer. Note that the RF1-1 has become “F” (indicating that the referral is complete) and the RF1-3 indicates that the message contains a discharge summary. Refer to Table 8, below:

	MSH-9	RF1-1	RF1-3	RF1-4	Containing Clinical Data
Event	REF^I12	F	DIS	AM	Yes
Response	RRI^I12			--	No

Table 9: Discharge Summary Sequence

4.2 Did Not Attend

In this scenario the referral was created and accepted, but the patient did not attend for an appointment:

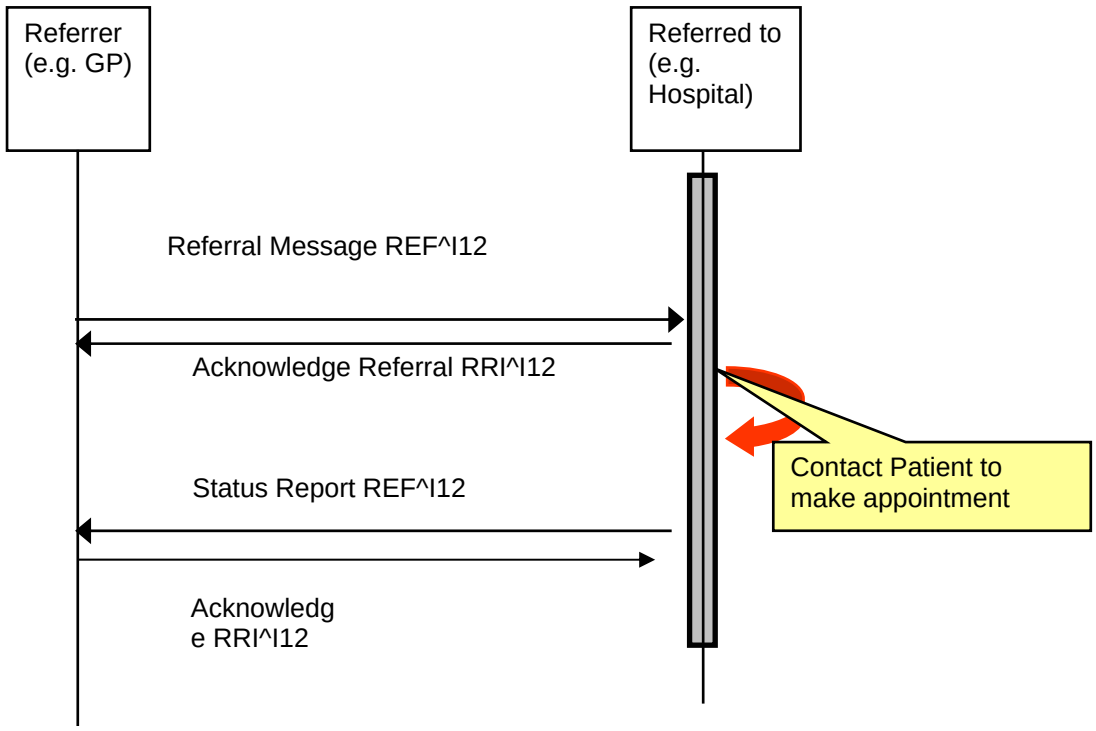

Figure 5: Did Not Attend

4.2.1 Create Referral

The sequence consists of the referrer creating and sending an REF^I12 containing the clinical data and the clinic accepting the referral. This is the same as the standard referral. Refer to Table 9:

	MSH-9	RF1-1	RF1-3	RF1-4	Containing Clinical Data
Event	REF^I12	P	GRF	AM	Yes
Response	RRI^I12	A		--	No

Table 10: Create Referral/Did Not Attend Sequence

Note: *RF1-4 is only AM if the patient is not expected back otherwise this should be RP*

4.2.2 "DNA" Message

This message is the equivalent of the discharge summary in the standard referral, but the RF1-3 is set to "DNA" to indicate the status. Note that the RF1-1 in the request message is "C" for cancelled. Refer to Table 10:

	MSH-9	RF1-1	RF1-3	RF1-4	Containing Clinical Data
Event	REF^I12	C	DNA	AM	No
Response	RRI^I12			--	No

Table 11: DNA Message Sequence

> ***Note:*** *RF1-1 is only C and RF1-4 is AM if the DNA results where the management of the patient is returned to the referrer. The values are C and FI respectively if another appointment is to be scheduled.*

4.3 Reject Referral

In this scenario the initial referral is rejected:

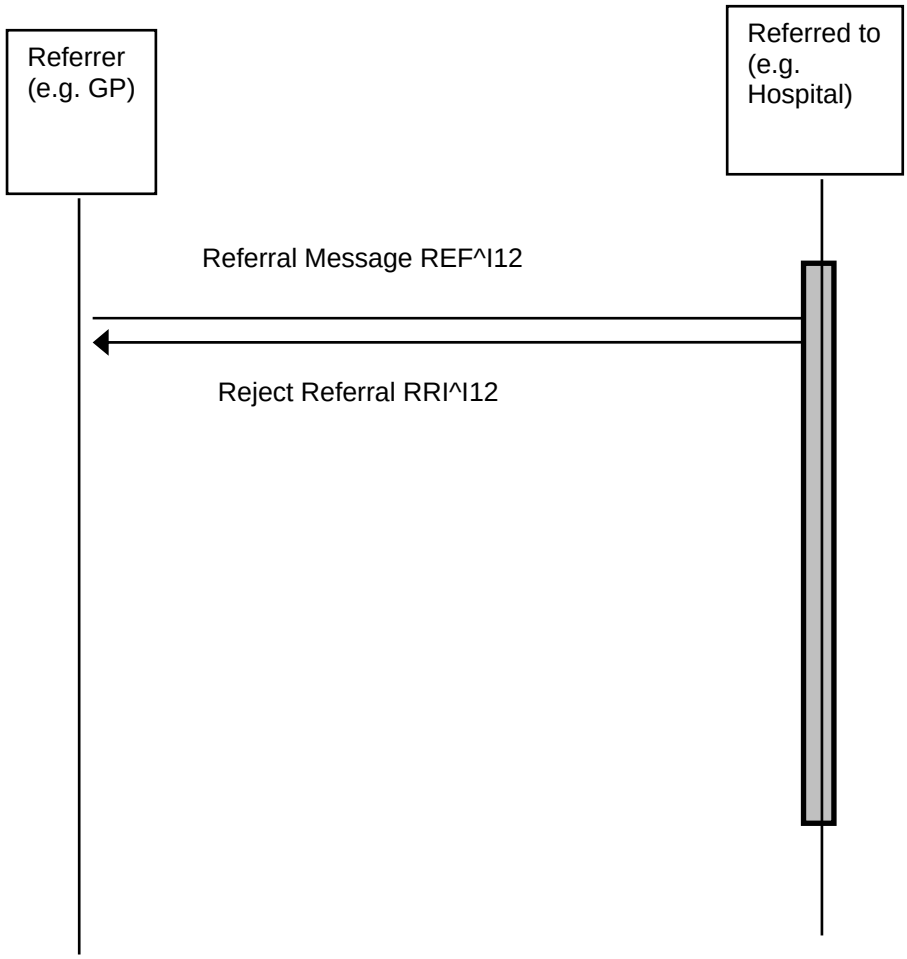

Figure 6: Reject Referral

4.3.1 Reject Referral Sequence

The sequence consists of the referrer creating and sending an REF^I12 containing the clinical data and the clinic rejecting the referral. The RF1-3 of the response has been set to “NOT” (for notification), although this is not required.

The reason for rejecting the referral would be contained in the ERR segment of the RRI message (this is assumed to be a business reason rather than a technical one, as described in the invalid message scenario, (chapter 5, below).

	MSH-9	RF1-1	RF1-3	RF1-4	Containing Clinical Data
Event	REF^I12	P	GRF	AM	Yes
Response	RRI^I12	R	NOT	AM	No

Table 12: Reject Referral Sequence

4.4 Cancel Referral

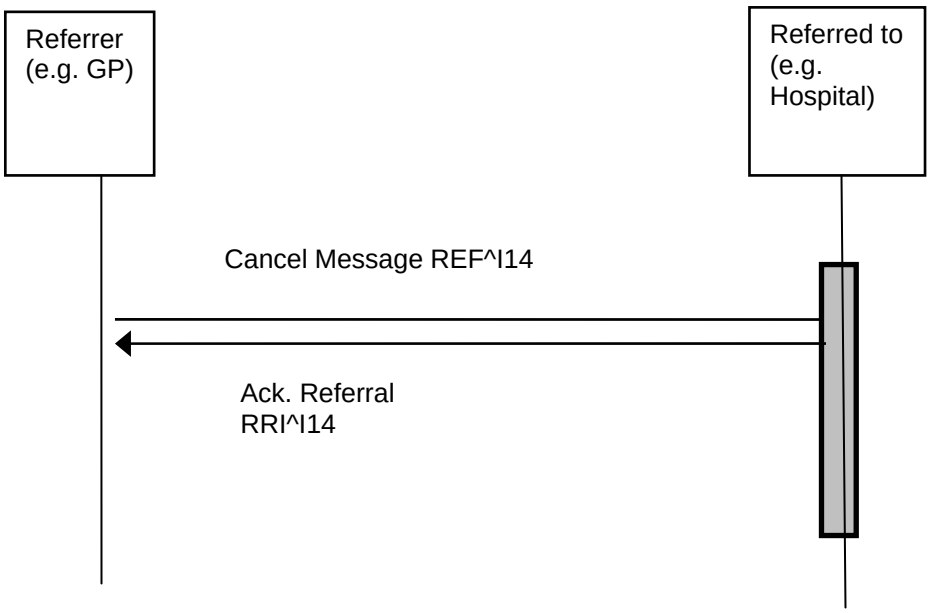

Figure 7: Cancel Referral

4.4.1 Cancel Referral Sequence

The original referrer wishes to cancel a referral they have made. The ID of the original referral (in the RF1-6 field of the first referral) is included in the RF1-11 segment of the request message.

Note that in the request message, the RF1-1 field is “A” (because this is an active referral) and the RF1-4 segment is “CAN”, as this is the action the referrer wishes to take place.

	MSH-9	RF1-1	RF1-3	RF1-4	Containing Clinical Data
Event	REF^I14	A		CAN	No
Response	RRI^I14	C	NOT	AM	No

Table 13: Cancel Referral Sequence

5 INVALID MESSAGE

In this scenario there are structural or syntactical errors in the initial referral and the referral cannot be processed.

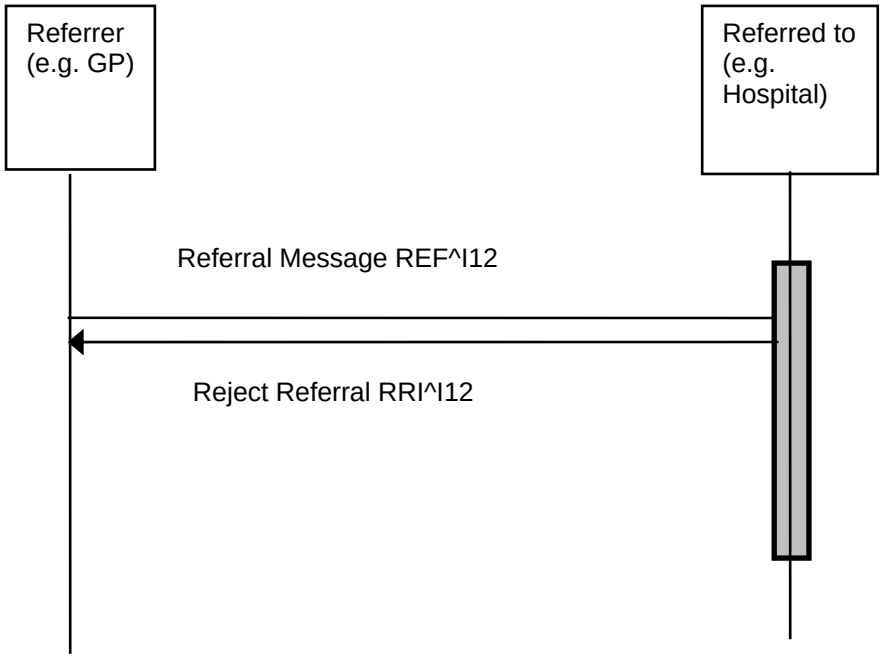

Figure 8: Invalid Message

5.1 Reject Message Sequence

The RRI^I12 message will contain only the MSH, MSA, ERR and RF1 segments. The ERR segment will contain details of the error that caused the message to be rejected.

Note that there can only be a single ERR segment in the message. This means that where there are multiple errors, only one of them can be signalled in the response.

	MSH-9	RF1-1	RF1-3	RF1-4	Containing Clinical Data
Event	REF^I12	P	GRF	AM	Yes
Response	RRI^I12	R		--	No

Table 14: Reject Message Sequence

6 ADDITIONAL PROCESSES

The RSD implementation guide published by HISO does not cover some situations particularly the cases where messages have been sent in error and need correcting. Supplementary information is also provided on how to convey appointment information.

6.1 Did Not Attend Correction

In this scenario it has been incorrectly reported that the patient did not attend for an appointment: This message is the equivalent of the “DNA” but the RF1-1 in the request message is “C” for cancelled. The visit information (PV2-8) must be the same as the original DNA message. Refer to Table 10. If a DNA cancellation message has not been received but a subsequent message is received containing visit information for the same appointment time then the cancellation of the DNA can be inferred.

	MSH-9	RF1-1	RF1-3	RF1-4	Containing Clinical Data
Event	REF^I12	C	GRF	DNA	Yes
Response	RRI^I12	A		--	No

Table 10: “Did Not Attend” Cancellation Sequence

6.2 Future Appointment Information

In this scenario a referral has been accepted and an appointment has been made. This information is conveyed back to the referrer for their information in a status message but with a type of APT so it is not confused with information about a visit that has occurred. Normally this is only for information as the appointment would have been made directly with the patient.t has been incorrectly reported that the patient did not attend for an appointment: This message is the equivalent of the “DNA” but the RF1-1 in the request message is “C” for cancelled. The visit information (PV2-8) must be the same as the original DNA message. Refer to Table 10. If a DNA cancellation message has not been received but a subsequent message is received containing visit information for the same appointment time then the cancellation of the DNA can be inferred.

	MSH-9	RF1-1	RF1-3	RF1-4	Containing Clinical Data
Event	REF^I12	A	GRF	APT	Yes
Response	RRI^I12	A		--	No

Table 11: Appointment Detail Sequence

6.3 Cancel Future Appointment

In this scenario an appointment that has been made is now being cancelled.. This information is conveyed back to the referrer for their information in a status message with a type of APT so it is not confused with information about a visit that has occurred, but the RF1-1 in the message is “C” for cancelled Normally this is only for information as the appointment would have been made directly with the patient. The visit information (PV2-8) must be the same as the original appointment message. Refer to Table 11. .

	MSH-9	RF1-1	RF1-3	RF1-4	Containing Clinical Data
Event	REF^I12	C	GRF	APT	Yes
Response	RRI^I12	A		--	No

Table 11: Appointment Cancellation Sequence

6.4 Cancel Status Update

In this scenario incorrect information has been sent in a status message. This can only be cancelled if it can be identified by it being associated with an appointment as there would only be one status update for an appointment. The visit information (PV2-8) must be the same as the original status message. Refer to Table 12.

	MSH-9	RF1-1	RF1-3	RF1-4	Containing Clinical Data
Event	REF^I12	C	GRF	SRP	Yes
Response	RRI^I12	A		--	No

Table 12 Status Message Cancellation Sequence

6.5 Permited Amendment Messages

There is no provision to amend the initial referral or the subsequent discharge summary as they are too complex to identify the items that need changing. These need to be cancelled and new ones resent. However in the case of a status message that reports a visit or a DNA then it is feasible to make minor amendments such as the DNA reason. If the visit information (PV2-8) identical to the original status message then the reported information can replace that previously reported.

7 IMPORTANT INFORMATION

The following important basic information relates to the content and context of the messages used for referral messaging within the New Zealand environment. Fields, data and values are specified where possible.

(a) Messages are received and sent from facilities, which are defined as Health Practitioner Index (HPI) codes;
(b) A health care provider facility has an address:
(c) People work in health care provider facilities;
(d) Health care provider organisations operate health care provider facilities;
(e) Messages should be delivered to health care provider facilities and addressed to people or service areas;

7.1 Message Control ID

The Message control ID in the MSH-10 segment is defined to be a unique ID for all messages (unique to the sender). When the recipient replies to the message, they place the control ID in the MSA-2 segment of the reply, allowing the sender to match the reply with the original request.

However, this implies that if there were five messages that referred to a single referral, then the control ID would be different each time (to allow the matching of messages). How then is a referral ID created?

The answer is that the control ID in the first message (the one that creates the referral) becomes the referral ID for that referral. A unique recipient ID could be created in a variety of ways, e.g.:

(a) A combination of the MSH-10 ID, the sender identity and the sender's facility ID, perhaps using HPI codes;
(b) Alternatively, a simple sequential numbering system could be used.

When either party wishes to send a new message that refers to that referral, then the referral ID of the referral is placed in the RF1-11 field, and a new, unique message control ID created for the message. The recipient system will use that ID in the MSA-2 field of their reply (so the reply can be matched), but will not use it any further.

In whatever way the referral IDs are managed, it is the responsibility of the referral application to manage the mapping between the referral ID that the sender created (in the control ID of the first message), and the internal referral IDs used by the system.

7.2 Privacy

The implementation of privacy and security protection measures is an important factor for electronic referral, status, and discharge solutions.

The implementation of privacy and security protection measures shall be based on the Health Information Privacy Code 1994 and SNZ HB 8169:2002 Health Network Code of Practice (or any policy that builds on or replaces this).

7.3 Referral to Organisation

These Standards can be used for referrals to an organisation rather than to an individual or to a service within a facility. In this situation, it is the responsibility of the receiving application to process the referral appropriately.

7.4 User Interface

The specifications in this suite of Standards do not cover the user interface, as this is the responsibility of each individual implementation. However, there was some very useful feedback received during the public comment phase, as follows:

(a) Data accuracy can be improved by the use of validation mechanisms and other alerts when creating the referral.

(b) Pre-population of data from the Patient Management System (PMS), especially demographics and past medical history, will be encouraged.

(c) Where a referral is directed to an individual, mechanisms need to be in place to manage situations where the individual is unavailable.

(d) For message recipients generally, mechanisms need to be in place to handle messages received when the recipient is absent.

7.5 Sender Functionality

The design of the system that creates the referral is the responsibility of the PMS developer. However, some general comments can be made:

(a) The system should keep a log of all messages sent, and have the ability to re-send a message.

(b) The system should track all requests and invoke some business process (e.g. re-send or alert a user) if no response is received after an appropriate period of time.

(c) Even where a response has been received, the system could continue to track the Referral. For example, a Referral might have been accepted and therefore the messaging requirements met. It could be advantageous for the system to continue to monitor the process, e.g. to when an appointment for the Referral is made. The user could be alerted if time delays in making appointments are excessive.

7.6 Medication

Medications come under one of five categories, as shown in the Table below. Also refer to chapter 4.6 in the Messaging Standard.

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

Table 15: NZ Specific "IN" Code for Medical History Information

Historical medications are those medications that the patient used to take, that are considered relevant.

Inpatient medications are the medications for that particular episode, and have subsequently been discontinued before discharge.

Discharge medications are prescribed for self-administration after discharge.

7.7 Patient Identifiers

Where possible, the National Health Index (NHI) should be the output in PID-3. If unavailable, a local patient identifier may be used. Refer to chapter 5.13.2 in the Messaging Standard.

Note that PID-2 is no longer supported.

7.8 Practitioner

All references to doctor/provider have been updated in the Referral Messaging Standard to use the term “practitioner”.

Where possible, the Health Practitioner Index (HPI) number should be the output in all practitioner fields. If this information is not available, the New Zealand Medical Council number should be used.

The following components in the XCN data type are available for use:

Sub Component	Type	Notes
<ID number>^		HPI number
<Family name>^		Practitioner name
<Middle name>^		Practitioner name
<Suffix>^		
<Prefix>^		
<Degree>^		
<Source Table>^		
<Assigning Authority>^		The assigning authority is the system, application, or body that actually generates the ID number

Table 16: Practitioner Sub Component

For example:
`PV1||I|ED|||SMI^Smith^John^^^^^^HPI|..`

7.9 Facility

The correct place for the facility is PV1-3.4 with a code set of ‘HF’ <HPI Facility code> in Table 25: HL7 User Defined Table 0396 - Coding Systems in 10011.2 RSD Messaging Standard and ‘L’ from Table 36 HL7 Table 0301 Universal ID Type for local codes.

7.10 NTE Comments

Comments can be included in output in NTE segments after the PID, OBR or OBX segment. A comment can provide additional information regarding the patient or result.

NTE comment/s will be appended to any preceding OBX result segment. In the Messaging Standard, chapter 5.10 describes Observations (OBX) and chapter 5.8 describes Notes and Comments (NTE).

7.11 Updating

The attention of the application developer is drawn to the possibility that some values in the Tables in this suite of Standards may be altered in the future. Ensure that Tables can be checked and updated if necessary. It is important, for instance, that the version ID field value (MSH-12) is correct.

Appendix A – Variances to HL7 Standard version 2.4

(Informative)

Variances to HL7 Standard Version 2.4 - An Application Protocol for Electronic Data Exchange in Healthcare Environments are listed below. The chapter and table numbers and segments refer to the Messaging Standard.

Chapter # containing Variance	Table # containing Variance	Variance (Segment) Details	Difference
5.1.6.25	Table 46	XAD	The extended Street Address type in the first component is not used in New Zealand
5.1.6.28	Table 52	XPN	This definition uses an ST type for Family Name.
5.2.2	-	DG1-3	This field is required in this implementation
5.6.4	-	MSH-4	HL7 does not require this field
5.6.6	-	MSH-6	HL7 does not require this field
5.6.7	-	MSH-7	HL7 does not require this field
5.7.2	-	NK1-2	HL7 does not require this field
5.7.3	Table 79	NK1-3	This is optional in HL7
5.8.1	-	NTE-1	This implementation requires the use of Set IDs for NTE segments
5.9.2		OBR-2	The length of this field has been extended to 50
5.9.3		OBR-3	The length of this field has been extended to 50
5.9.14	-	OBR-16	This field is required in this implementation
5.9.26	Table 89	OBR-30	The value “CART” is described as a cart or gurney in HL7
5.10.5	-	OBX-5	The size of this field has been increased to 5MB
5.10.11	Table 96	OBX-11	The usage of a value of ‘O’ to send a prototype of an OBX segment is not allowed in this implementation
5.11.1	Table 98	ORC-1	This field is extended to ORC-1 is extended to include the code ‘IN’ for specific information requirements for Medications, Alerts, Family History and Accident details.

5.11.2		ORC-2	The length of this field has been extended to 50
5.11.3		ORC-3	The length of this field has been extended to 50
5.13.7	Table 110	PID-10	New Zealand usage allows only 3 repeats of this field. This field is called “Race” in HL7 v2.4.
5.15.1	Table 120	PRD-1	HL7 uses values from HL7 User Defined Table 0286 in this field
5.16.15	Table 126	PV1-15	HL7 uses the term ‘transient handicapped condition’
5.18.7	Table 146	RF1-10	This field may repeat as many times as necessary to communicate all referred reasons. The values “T”, “E” and “F” have been added to the standard HL7 table for local usage
5.20.5		RXA-5	For this implementation this field is optional
5.20.6		RXA-6	For this implementation this field is optional
5.23.1	Table 158	RXR-1	Code “U” has been added to the table to indicate unknown route
Appendix B	Table B 7	HL7 Table 0070 - Specimen Source Code	VLT Vault is not used in HL7