hiso Health Information Standards Organisation
PAEREWA PĀRONGO HAUORA

Referrals, Status and Discharges Business Process Standard

HISO 10011.1

To be used in conjunction with HISO 10011.2 Referrals, Status, and Discharge Messaging Standard and HISO 10011.3 Referrals, Status and Discharge implementation guide

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Committee Representation

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

Representative	Nominating Organisation
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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 were referred to in developing this Standard. They may be consulted if required in order to clarify this Standard.

AS/NZS

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

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

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

AS

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

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

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

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

Other Standards

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

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

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

ISO

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

Other Publications

SNZ HB 8169:2002 Health Network Code of Practice
Health Information Privacy Code 1994

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

1 INTRODUCTION

1.1 Background

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

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

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

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

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

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

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

1.2 Scope

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

1.2.1 *Inclusions in the Business Process*

(a) Health care provider to health care provider, e.g.:

  (i) Primary health care practitioner to a hospital specialist or another specialist or health care provider;
  (ii) Specialist or health care provider to primary health care practitioner;
  (iii) Specialist or health care provider to another specialist or health care provider;
  (iv) Primary health care provider to primary health care provider.

(b) Referral, clinical status reports and discharge status reports.

(c) Messaging.

(d) Implementation, assistance and guidance.

(e) High-level business processes related to the sending and receiving of referral, clinical status reports and discharges.

1.2.2 *Exclusions in the Business Process*

(a) Health event summaries.

(b) Funding of services.

(c) Self referrals.

1.3 Interpretation

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

The terms ‘normative’ and ‘informative’ are used in Standards to define the application of an appendix. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance and does not form part of the mandatory requirements of the Standard.

This Standard includes a list of terms related to RSD used in this document and which may have been commonly used in the past.

1.4 Privacy and Security

Privacy and security of health information in the health and disability Sector is important for the following reasons:

(a) Most health information is collected in a situation of confidence and trust, often in the context of a health professional/patient relationship. Maintaining this confidence and trust is critical.

(b) Health information is sensitive and needs to be protected.

(c) Health information may be required by the health agency and by other providers treating the individual, long after it has ceased to be needed for the original episode of care and treatment. Ensuring that health information is available only on a need-to-know basis is therefore important.

(d) The ability to exchange high quality health information in a safe and secure manner between partners in health care processes is vital for a health system focused on achieving improved health outcomes.

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).

2 PROCESSES

Referrals, Status and Discharge Referrals (RSD) enable information exchange when all or part of patient care is transferred from one health care provider to another.

2.1 Referral States

The referral lifecycle, or patient care event, including the referral itself and resulting actions, is depicted below:

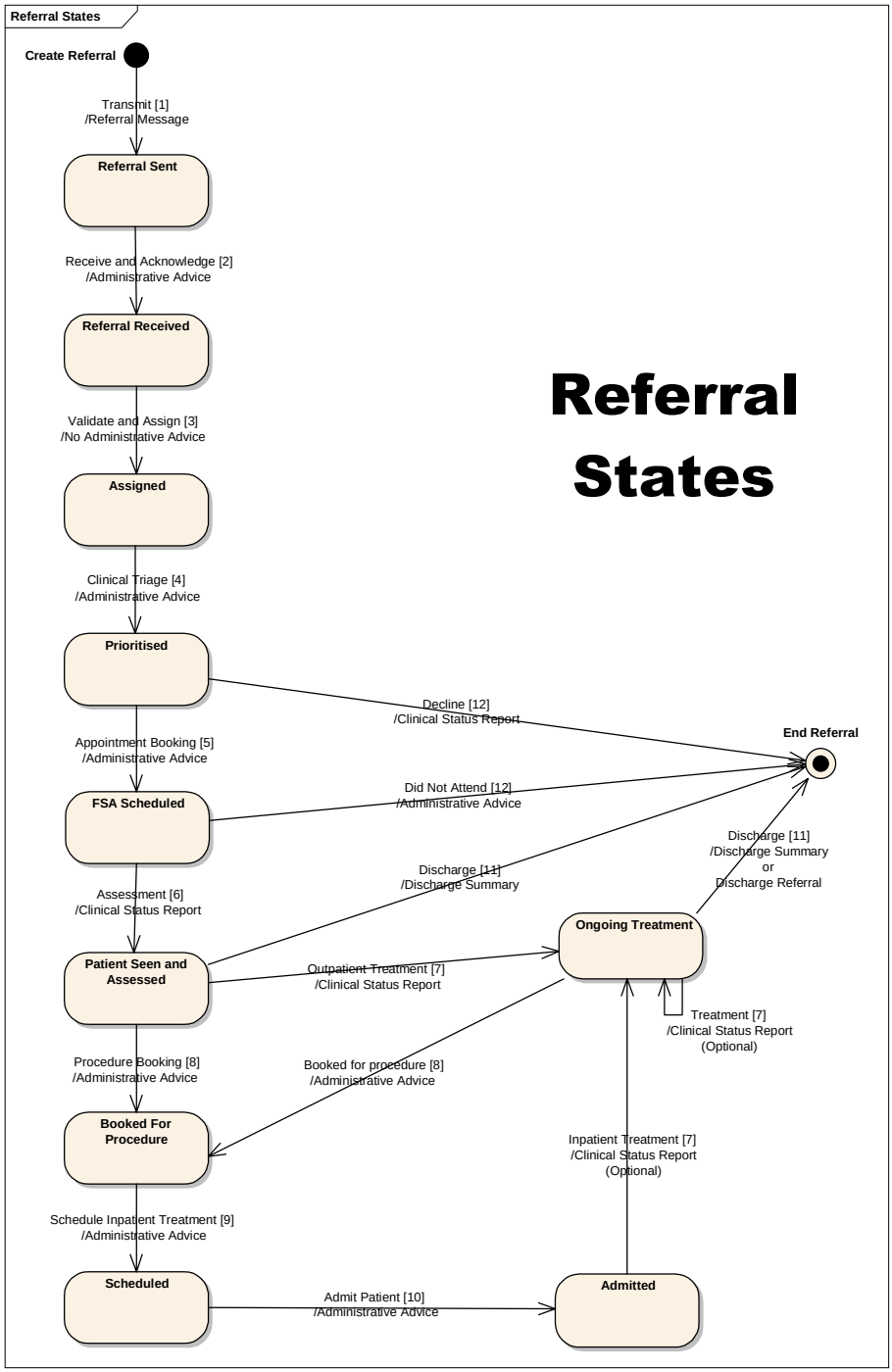

Figure 1: Referral States Diagram

Over the duration of the care event, administrative advices to the 'referring' health care provider are generated automatically following 'trigger events' within the patient or Practice Management System (PMS). The 'referred to' health care provider may compile clinical status reports to the 'referring' health care provider at any time (refer to chapter 2.3).

Discharges may occur at the time a patient is discharged from one phase of the care event, e.g. from a hospital specialist or at the end of the care event (refer to chapter 2.4).

It is possible that a patient may be referred to another service for the same problem, while still receiving ongoing treatment in the initial service. This referral could also occur within the initial service.

Discharge referrals occur when the patient is discharged from one phase of the care event and referred on to another health care provider for further care (refer to chapter 2.4).

The following sections provide more detail on each of the referral steps outlined in the Referral States Diagram above. They provide commentary on the tables that cover the referral step number, a short description of the required action and message type (which indicates the primary purpose of the information contained in the message), and descriptions of the subsequent actions.

2.2 Referral Processes

A referral contains a specific request from one health care provider ('referring' health care provider) to another, for advice about or treatment of a patient. The referral will usually request an assessment and transfer of care in full or part from the 'referring' health care provider to the 'referred to' health care provider.

Here are two example situations:

(a) A referral may be generated by a patient's 'referring' health care provider, usually the General Practitioner (GP), following a consultation where the assessment indicates that the patient requires further specialist assessment and treatment. The referral will contain identifying information about the patient and the 'referring' health care provider, and a summary of the patient's health status related to the specific request for advice or treatment. The referral may also include additional information such as other health problems or alerts that may be associated with the patient.

(b) A referral is received by a secondary health care provider ('referred to' health care provider) and progresses through a referral lifecycle. The referral state changes from 'received', to 'assigned', to 'prioritised', before an appointment time is 'booked' for the First Specialist Assessment (FSA). At this point, the patient is advised of the appointment time. The 'referring' health care provider will have received administrative status reports during this referral management process to inform the referrer of receipt and status of the referral. One or more of these steps may not be required depending on the nature of the referral, e.g. the referral needs prioritisation. Refer to Table 1 and Figure 2, below.

No.	Action	Message Type	Description of Information
1	Create referral	Clinical	Referral created by 'referring' health care provider
1	Send referral	Administrative	Referral sent electronically by 'referring' health care provider
2	Referral received	Administrative	Referral received for processing and acknowledged
3	Referral returned	Administrative and optionally Clinical	Referral received but returned to 'referring' health care provider, e.g. for more information.
3	Referral assigned	Administrative	Referral validated and assigned to clinician for prioritisation

No.	Action	Message Type	Description of Information
4	Referral reviewed, accepted and prioritised	Clinical and Administrative	Priority allocated with timeframe for First Specialist Referral (FSA). A patient may not proceed past this stage if awaiting results from other services, for example laboratory or radiology tests, or a milestone event.
12	Referral declined	Clinical and Administrative	Referral declined with reason

Table 1 - Referral States and Associated Information Transfer

NOTE: *Processes 5, 6, 7, 8, 9, 10 and 11 are covered in the chapters that follow on administrative advices and discharges.*

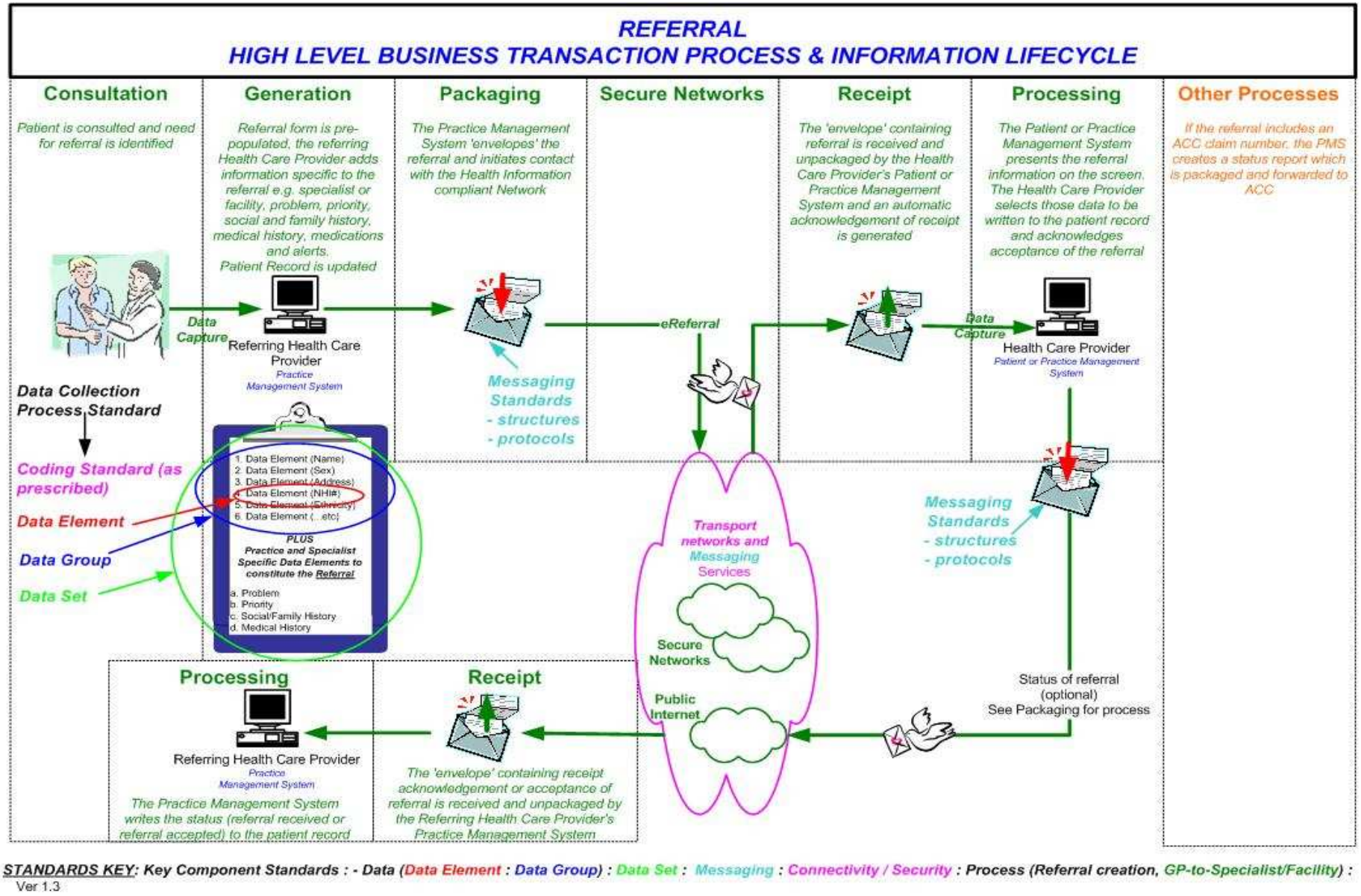

Figure 2 - Referral Lifecycle

2.3 Status Reporting Processes

A status report is a message from the 'referred to' health care provider to the 'referring' health care provider to advise of the progress of the referral and the patient for whom the referral was generated. Where the patient was referred and did not self refer, the status report will always reference the original referral using a unique identifier, which enables both the 'referring' health care provider and the 'referred to' health care provider to identify the referral and patient to which the status report pertains.

A status report may contain either clinical, or both clinical and administrative information, depending on the position of the referral in the care continuum. Health care practitioners create clinical status reports at the time of assessment and/or treatment.

Administrative advices are status reports triggered by referral processing events within the PMS. Refer to Table 2 and Figure 3, below.

No.	Action	Message Type	Description of Information
5	Appointment booking	Clinical and Administrative	FSA booked and patient advised of details.
6	FSA completed	Clinical and Administrative	Attendance and outcome of FSA.
7	Outpatient or inpatient treatment	Administrative and Clinical	Attendance of patient at outpatient or inpatient clinic.
8	Booking of procedure	Administrative	Booking of procedure.
9	Scheduling of procedure	Administrative	Scheduling of procedure.
10	Hospital admission	Administrative	Admit patient as inpatient.

Table 2 - Status Reports and Associated Information Transfer

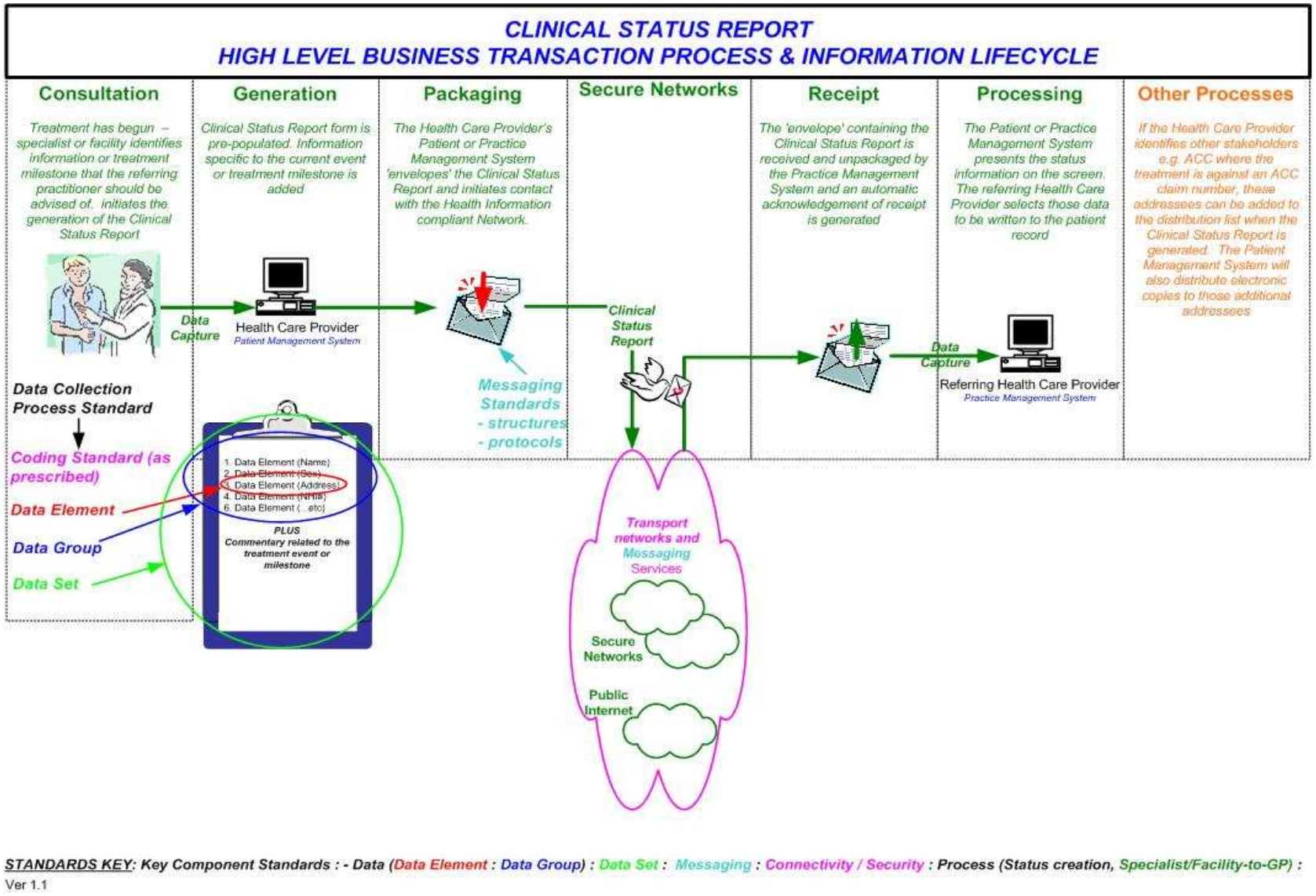

Figure 3 - Clinical Status Report Lifecycle

2.4 Discharge Processes

There are two primary discharge processes:

(a) Discharge;

(b) Discharge referral.

2.4.1 *Discharge*

A discharge occurs when the patient is discharged from the 'referred to' health care provider back into the care of the 'referring' health care provider, with no expectation by the 'referred to' Health care provider of direct involvement in ongoing care.

Patients are discharged from the 'referred to' health care provider when their clinical condition is assessed as appropriate for ongoing management by the 'referring' health care provider. At this stage, the 'referred to' health care provider creates a discharge summary for the 'referring' health care provider. The discharge summary includes a summary of assessments and treatment carried out during the health event, and advice for the ongoing management of the patient. This event signals the end of the patient care episode that was commenced by the patient referral.

2.4.2 *Discharge Referral*

A referral of a patient occurring in the context of a discharge, comprising a referral with an attached discharge summary, is known as a discharge referral. The patient is discharged by the 'referred to' health care provider, and referred on to another health care provider instead of being discharged back into the care of the 'referring' health care provider.

The referral will contain patient identifying and 'referring' health care provider information, and a summary of the patient's health status related to the specific request for advice or treatment. It also contains a discharge summary that provides an account of the patient's treatment and progress, as managed by the 'referring' specialist health care provider.

> ***NOTE**: Within a facility, or between facilities of an organisation, the same process applies as if these were external parties, i.e. when a patient is discharged from one service within the facility and referred for further treatment to another, e.g. outpatient clinic*[1].

A copy of this information shall also be sent to the patient's GP and 'referring' health care provider if this was not the patient's GP. Refer to Table 3 and Figure 4, below.

No.	Action	Message Type	Description of Information
11	Discharge	Clinical and Administrative	Discharge back to 'referring' health care provider from 'referred to' health care provider.
11	Discharge Referral	Clinical and Administrative	(a) Notification of discharge from specialist treatment; (b) Request for advice or transfer of care; (c) Summary of treatment received; (d) Future plan for ongoing care

[1] A Discharge referral within the hospital environment occurs when a patient is discharged from one service, period of care, or location within the hospital, and referred for further treatment as either an inpatient or outpatient within the same or different service or facility. This referral may be made following a period of inpatient or outpatient care and treatment. The referral will contain the information referred to in chapter 2.4 above, specifically in relation to what has been managed by the 'referred to' specialist health care provider (now 'referring' health care provider) during the inpatient admission or outpatient consultations. The referral will request the assessment and handover of care in full from the other 'referring' specialist health care provider to the next 'referred to' specialist health care provider, or in part where the intention of the next 'referred to' specialist health care provider is to continue to care for the patient in part on an outpatient basis. In essence, this is the same as the discharge referral above, however, the purpose of establishing the hospital context is to ensure that the discharge referral Standard is applied to internal business process within a hospital and not just between the hospital and those parties external to the hospital.

No.	Action	Message Type	Description of Information
			from current 'referred to' health care provider, and/or; (e) Recommendation for future interventions and transfer of part of care back to the 'referring' health care provider.

Table 3 - Discharges and Associated Information Transfer

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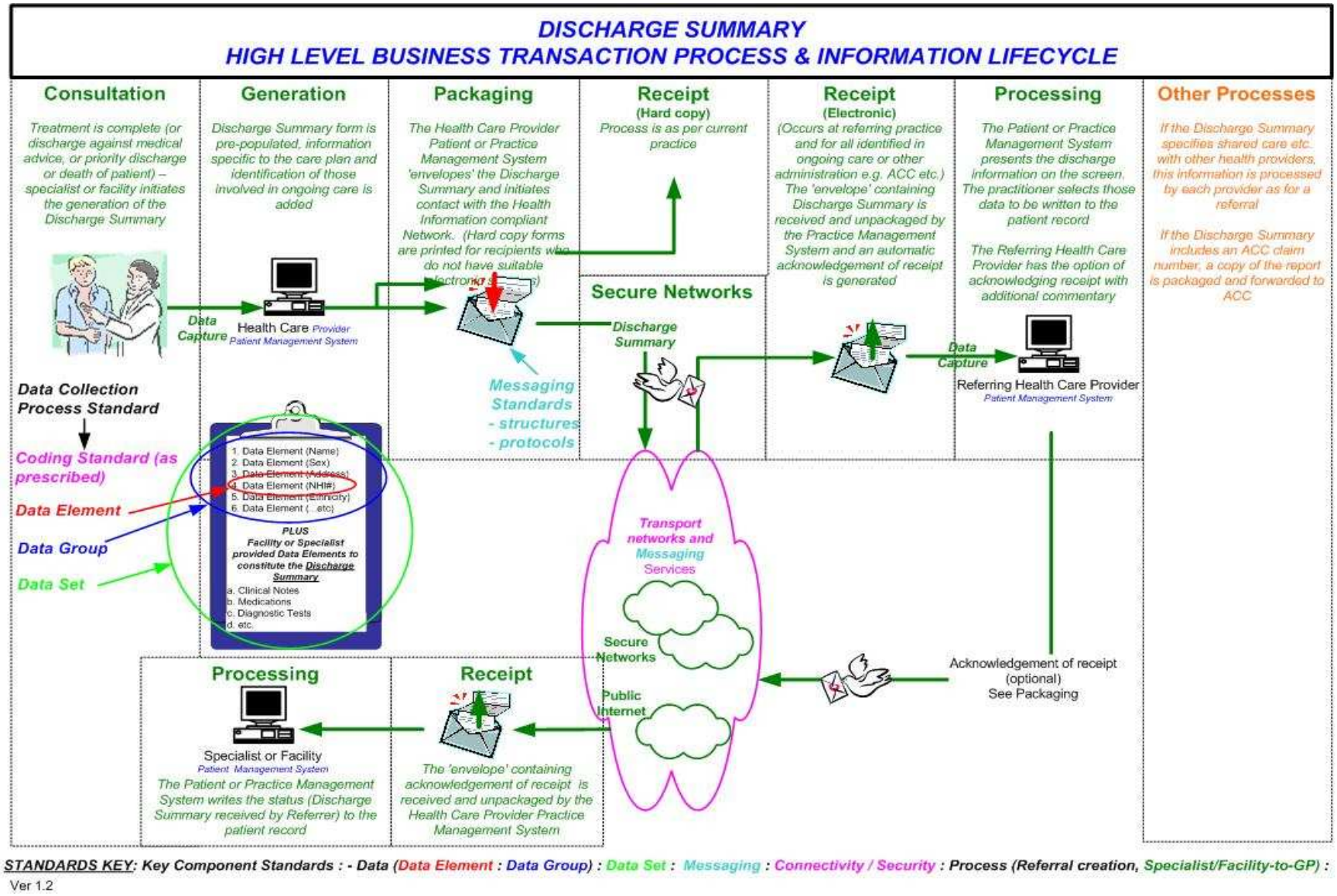

Figure 4 - Discharge Summary Lifecycle

3 BUSINESS RULES AND IMPLEMENTATION GUIDELINES

Referral documents, clinical status reports, administrative advices and discharge summaries enable the exchange of information between health care providers based in the community or hospitals when they transfer all or part of patient care from one health care provider to another.

The following Table outlines the core set of business rules and requirements which define the behaviours expected of systems and users that support RSDs. Implementers of supporting technology solutions should consider the implementation guidelines contained in the tables below.

3.1 Message Generation (Sending Application)

When a referral document, clinical status report, administrative advice or discharge summary is generated, the creator needs to know that the information provided satisfies the mandatory and accuracy requirements and if not why not. There is also a need to know basic status information, such as the message is ready to send, or to be able to safely make subsequent changes to the message.

General	Business Requirement	Business Rule	Implementation Guideline
Information quality.	To ensure that the information provided is accurate and satisfies mandatory requirements, i.e. mandatory fields are populated with valid values. Coded fields contain valid values. For some date values, partial dates may be used, e.g. for injury date where the exact date is unknown.	Basic validation: (a) Discharge date or referral date shall not be before date of birth (DOB); (b) Discharge date or referral date shall not be after today but may equal today; (c) Discharge date must be after referral date. National Health Index (NHI) is entered in valid format. All dates may be partial dates, but these need to be explicitly declared as partial (current date shall be in full). Message is not sent by sender if any mandatory field is null or data is invalid. Error message appears on the screen and	System checks that mandatory fields are populated with valid data. Build in capability to enforce data quality, but this should not hinder continuation of the process. Use check digit to ensure NHI is in valid format. Need minimum of year values, but day and month may be absent if the true values are not known. A message shall not be sent where the minimum/mandatory requirements have not been met, or where there are messaging errors. For coded fields, only valid values shall be reported.

General	Business Requirement	Business Rule	Implementation Guideline
		sender has to enter information required or amend errors before progressing.	
Accident injury reference information.	Ensure that any referral report, clinical status report, administrative advice or discharge summary that relates to an event which is to be covered by ACC, has the ACC claim number associated with it. ACC does not want copies of any of the reports at any stage. ACC only needs to know that an ACC claimant has been referred and the status of the referral as it progresses through the lifecycle.	If the ACC claim number field is not null then the following information is required by ACC: (a) Referral: ID of the patient, referrer and 'referred to' specialist or facility and current diagnosis; (b) During treatment: ID of patient and treatment provider ('referred to' specialist or facility), current status and where appropriate dates, e.g. appointment date and time, date assessed etc; (c) On discharge: ID of patient and treatment provider, discharge status.	On successful submission of the referral, clinical status report, administrative advice or discharge summary, the message to ACC should be generated and sent.
Timeliness.	The discharge summary needs to be generated within a set timeframe after the patient has been discharged. Administrative advice and clinical status reports, where generated, should be sent within 24 hours. Messages should be able to be tracked for timeliness and to permit the creator to determine when the message was generated and sent.	Discharge summary to be generated within 24 hours of the patient being discharged. Referral needs to be prioritised. Reminder should be generated if no response received.	Referral document, clinical status report and discharge summary messages should be generated and be ready for sending as soon as the referral, status or discharge process has been completed by the user. Administrative advices should be generated and ready for sending immediately following a trigger event. All of the above should be time stamped with the time the message was generated. Tracking information should be logged and made available to the user if required.
Unique identification.	Uniquely identify each referral and for this referral ID to be present across all related	The original referral ID must be present in a referral document and in all related clinical	The systems within an organisation should be able to link an internal

General	Business Requirement	Business Rule	Implementation Guideline
	clinical status reports, administrative advices and discharge summaries. The reasons are: (a) For system monitoring; (b) To ensure referral/discharge is not duplicated; (c) Quality Assurance (QA) of process. Track the progress of treatment against the original referral, through to any subsequent referral generated from it.	status reports or administrative advices, and the discharge summary. Internal reference numbers ideally should not be visible in these documents. If they are, the original referral ID must not be substituted. The referral ID must be uniquely identifiable within New Zealand. Where a patient is referred on, the new referral ID must be able to be linked to the original referral ID.	reference number to the original referral ID. The systems must also ensure that the original referral ID is retained in all subsequent clinical status reports, administrative advices, and discharge summaries. The unique referral ID will be based on the specification in the Messaging Standard. The unique message ID will be allocated to all messages and based on the specification in the Messaging Standard.
Security and identification.	Who generated a message or subsequently modified it.	Each clinical status report, administrative advice and discharge summary shall be traceable to the person who generated it.	Log who generated, or subsequently modified the message to provide an audit trail.
Status of a referral document, clinical status report, administrative advice or discharge summary message.	There are several stages a message goes through when being sent. These are: (a) Message has been generated; basic validation failed; not able to be sent (waiting to be completed); (b) Message has been generated; basic validation passed; message has been submitted and is ready for sending (waiting to be sent - visible to the user); (c) High priority/urgent indicator.	The status of the message is visible to the sender.	

3.2 Message Transport (Validation, Encryption, Tracking and Error Reporting)

When a referral document, clinical status report, administrative advice or discharge summary is sent, the sender needs to know that the message has been received by the target person or facility, and that the information provided satisfies the receiver's basic assessment and acceptance requirements and if not, why not.

General	Business Requirement	Business Rule	Implementation Guideline
Status of a referral document, clinical status report, administrative advice or discharge summary message.	When the message is generated, the creator and/or sender is able to track its transmission status.	The status of the message, including date and time, should be available.	There are three states to be monitored: (a) Generated; (b) Sent; (c) Receipt acknowledged.
Timelines.	There are no undue delays due to technology.	The sending system notifies the creator/sender if a message is unable to be sent.	Message transport delays should be no longer than 24 hours.

3.3 Message Processing (Receiving Application)

When a referral document, clinical status report, administrative advice or discharge summary is sent, the sender needs to know that the information provided satisfies the receiver's basic assessment and acceptance requirements and if not, why not. There is also a need to safely make subsequent changes to the message and to track its status.

General	Business Requirement	Business Rule	Implementation Guideline
Status of a referral document, clinical status report, administrative advice or discharge summary message.	There are several stages a message goes through when it is being received. These are: (a) Message has been received; basic validation failed; not able to be accepted for processing (declined); (b) Message has been generated; basic validation passed; message has been received and is waiting for further processing (accepted).	The status of the message should be available.	
Initial incoming message processing	Messages that are received for processing should be initially acknowledged. Messages should be trackable for timeliness,	An administrative advice acknowledging receipt for processing should be created immediately and sent within 24 hours of receipt.	Log tracking information and make available to the user.

General	Business Requirement	Business Rule	Implementation Guideline
	and to allow a receiver to determine when the message was generated.		
Receiver wants more information or sender wants to send additional or corrected information (referral has not been accepted).	A sender shall be notified that there is a need for more or corrected information to be provided for a referral.	Sufficient information needs to be provided to the sender to explain why the information provided is incorrect or insufficient. The entire referral, with changes identifiable, is resubmitted under the original referral ID along with a new version number. Messages should be date/time stamped with the date and time the message was generated.	Reasons for a 'decline' will make sense to the sender, i.e. not just error codes. User should be able to enter information about a decline. Log tracking information and make available to the user.
Acceptance/decline.	A sender needs notification that a referral has been either accepted or declined.	A message notifying acceptance or decline should be sent within 10 days of acknowledgement. Sufficient information needs to be provided to the sender to explain why the message has been declined. A referral that has not been accepted will be retained by the receiver.	Reasons for a 'decline' will make sense to the sender, i.e. not just error codes. User should be able to enter information about a decline.
The sender sends additional or corrected information (referral has been accepted).	Provide additional information in relation to a referral that has been accepted. A clinical status report is sent from the sender.	The clinical status report that includes the new or correct information will be stored separately, and shall be linked to the original referral, but it needs to be treated as a new referral.	Log who is making changes and what changes have been made to provide an audit trail.
Selected acceptance of data.	Where a sender sends information it is the decision of the receiver to accept that information into their system.		
Ability to receive and process	Additional comments or text that has been included in or associated with a message shall	Information may be appended to a referral, clinical status report or discharge summary	Log who is making changes and what changes have been made to provide an

General	Business Requirement	Business Rule	Implementation Guideline
additional information.	be received and processed.	after it has been generated and sent at the control of the receiver. Must link to the original message.	audit trail.
Maintaining context.	To avoid issues of mis-interpretation of the data when it is exchanged between systems, the context for the data shall be sent.	Context does not change from one system to the other.	
Ability to include attachment.	Ability to include with the message, as an attachment, a full rendition of the artefact such as a .pdf file, Images (X-Ray, Dicom, ECG, EEG, MRI/CT) and scanned documents such as .jpeg and .gif.		
Triggers for creating a generated administrative advice, where clinical information may be included.	When a referral has been accepted by the receiver, the following changes will trigger a system-generated administrative advice message to be sent back to all associated clinicians: (a) Assessed; (b) Booked/appointment made; (c) Update requested by GP or associated clinician; (d) Change in patient status.	The message should be generated and sent immediately. There should be no delays due to technology. The administrative advice should be sent to all associated clinicians, unless optionally controlled by the 'referred to' or 'referring' clinician. Keep a record of when messages were created, changed and saved and who is responsible.	Log who is making changes and what changes have been made to provide an audit trail.

Appendix A Glossary of Terms

(Normative)

Term	Definition
Administrative Message	This is a type of Status Message and relates to the sharing of non-clinical/administrative status information about a Patient Referral. It may be manually initiated by a clinician or administration staff.
Administrative Advice	A message that is automatically initiated by a trigger event to which administration staff may enter additional text before submitting it for transmission. Typically the events that initiate the message are changes in status, e.g. from Referral Received to Referral Assigned.
APC	Annual Practising Certificate.
ASTM	American Society for Testing and Materials.
Care Event	In the context of RSD, this is the health care event which precipitates or triggers a specific Referral of a Patient by a 'referring' Health Care Provider.
Collaborative Care	Sharing the care of a Patient in a shared collaborative manner.
Clinician	See 'Referred To Health Care Provider' and 'Referring Health Care Provider'. In the context of RSD a Clinician is an individual, not a Facility. E.g. a Clinician can be a Specialist, General Practitioner, radiologist or nurse practitioner.
Clinical Message	This is a type of Administrative Advice and relates to the sharing of clinical status information about a Referral. It may be manually initiated by a clinician or administration staff.
Clinical Status Report	A collection of information about events during care, reported by a Health Care Provider, which references a Referral. ***NOTE**: A Clinical Status Report does not represent or enable the transfer of care, nor is it necessarily intended for any particular provider or organisation.*
Clinic Letter	A dictated and typed letter from a Hospital Specialist or Health Care Provider to a referring Clinician containing clinical information about a Patient following an assessment.
Comorbidity	A concomitant but unrelated pathologic or disease process; usually used in epidemiology to indicate the coexistence of two or more disease processes (Stedman 1990).
CPN	The common person number is issued from the Health Practitioner Index
CT	Computed Tomography or CT Scan.
Data Elements	An atomic piece of data, e.g. "first name", "last name", etc.
Data Group	Group of data elements of related data, e.g. "Patient identification", "demographic data".
Data Set	Collection of data groups, used for specific purposes, e.g. "Referral data set", "Discharge data set".
Discharge	The relinquishing of Patient care in whole or in part by a Health Care Provider or organisation. There are two common types of Discharge: (a) Administrative; (b) Clinical Discharge.
Discharge Referral	A Referral occurring in the context of Discharge and comprising a Referral with an attached Discharge Summary.
Discharge Summary	A collection of information, reported by a provider or organisation, about events at the point of Discharge.
DNA	Did Not Attend.
ECG	Electrocardiogram.
EEG	Electroencephalogram.

Term	Definition
Facility	A single physical location from which health goods and/or services are provided[1]. A Health Care Provider organisation may consist of multiple Facilities.
FSA	First Specialist Assessment.
.gif	Graphics Interchange Format.
GP	General Practitioner.
HL7	Health Level 7 – a common Standard used in health care.
HPI	Health Practitioner Index.
Health Care Provider	A person, facility or organisation that provides Patient health care services, including services to promote health, to protect health, to prevent disease or ill-health, treatment services, nursing services, rehabilitative services or diagnostic services.
Health Event Summary	A summary of an 'event' or events related to an individual's contact with a section of the health system.
Hospital Specialist	See 'Referred To Health Care Provider' and 'Referring Health Care Provider'. In the context of RSD, a Hospital Specialist is an individual administering specialist treatment or advice within a hospital environment. A Hospital Specialist cannot be a Facility.
.jpeg	Joint Photographic Experts Group.
LOINC	Logical Observation Identifiers Names and Codes.
MRI	Magnetic Resonance Imaging.
NZMC	The New Zealand Medical Council.
NZNC	The New Zealand Nursing Council.
NZPOCS	New Zealand Pathology Observation Codes.
.pdf	Portable document format.
Referral	Referral may take several forms, most notably: (a) Request for management of a problem or provision of a service, e.g. a request for an investigation, intervention or treatment. (b) Notification of a problem with the expectation or assignment of its management, e.g. a Discharge Summary in a setting which imposes care responsibility on the recipient. The common factor in all Referrals is a communication whose intent is the transfer of care, in part or in whole.
Referred To Health Care Provider	The Health Care Provider to whom a Patient has been referred for advice or treatment by a Referring Health Care Provider. The Referred to Health Care Provider may be an individual or Facility.
Referring Health Care Provider	The Health Care Provider who is referring the Patient for advice or treatment. The 'Referring' Health Care Provider generally has primary care responsibilities for a Patient (typically this is a GP), but it may be a 'Referred To' Health Care Provider (see Referring Specialist).
Referring Specialist	A 'Referred To' Health Care Provider who is referring a Patient for advice or treatment but not back into the care of the Referring Health Care Provider. In the context of RSD, a Referring Specialist is an individual administering specialist treatment or advice within a hospital environment. A Referring Specialist cannot be a Facility.
RSD	Referrals, Status Reports and Discharge Summaries.
Sector	Health and Disability Sector.

[1] Extracted from the HPI Data Set

Term	Definition
Specialist	See ‘Referred To Health Care Provider’ and ‘Referring Health Care Provider’ above. In the context of RSD, a Specialist is an individual administering specialist treatment or advice. A Specialist cannot be a Facility.
Status Report	A message from the ‘referred to’ health care provider to the ‘referring’ health care provider to advise of the progress of the referral and the patient for whom the referral was generated
System Message	A message for machine consumption that is automatically initiated by a trigger event, e.g. electronic receipt of a Referral which is then transmitted to the originator of the event, i.e. without intervention by any user.
Trigger event	An activity that takes place in a software application, based on some predefined condition such as an admission, ward transfer, or placement of an order etc. that results in the compilation and transmission of a data message.

Appendix B Related Terms

(Informative)

The table below provides a reference between the terms that are related to the Referrals, Clinical Status Reports, and Discharge Summaries Standard and those which may have been commonly used in the past.

Action	Message Type - RSD standard	Previous Common Terminology
Create Referral	Clinical	Referral
Send Referral	Administrative	Referral
Referral received	Administrative	Administrative Advice
Referral returned	Administrative and optionally Clinical	Administrative Advice
Referral assigned	Administrative	Administrative Advice
Referral reviewed, accepted and prioritised	Administrative	Administrative Advice
Referral reviewed and declined	Administrative and Clinical	Administrative Advice

Table B 1 - Referral

Action	Message Type – RSD standard	Previous Common Terminology
First Specialist appointment	Administrative and Clinical	Clinic letter
Subsequent Specialist appointments	Administrative and Clinical	Clinic letter
Booked on booking list for arranged admission to hospital and/or procedure	Administrative and optionally Clinical	Clinic letter Administrative Advice
Scheduled admission to hospital	Administrative	Administrative Advice
Hospital admission	Administrative	Administrative Advice

Table B 2 - Status Report

Action	Message Type – RSD standard	Previous Common Terminology
Discharge	Administrative and Clinical	Discharge Summary or Clinic letter
Discharge Referral	Administrative and Clinical	Discharge Summary or Clinic letter and Referral or Consultation Request

Table B 3 – Discharges

Appendix C Scenarios

(Informative)

Scenario C 1 - Referral – GP to Specialist

Referral ID: RSD Z:0000000555555
27/10/2005

Usual GP: Dr A Smith, MidCentral Med, Tauranga
NZMC No: 12345; HPI: 11AAAA

Referring Doctor: Dr D Woods, Ph: 88889999, EDI: Tauranga Medical
NZMC No 12346, HPI: 11AAAB

Patient Name: Mr. George Hamilton
NHI: AAA1234
DOB: 12/2/1941
Gender: Male
Address: 20 Cameron Road, Tauranga
Ethnicity: European/Pakeha NZ

Referral to: Renal TGA HPI: FTH123
Tauranga Hospital

Reason for referral: This 64 year man has a deteriorating eGFR and is diabetic. His diabetes is under good control and his BP is stable. His medical history is as detailed below.

As per your referring guidelines, your assessment will be appreciated.

History:
Long term Medication:
19/Oct 2005 microfine Box SIGS: microfine needleds; QTY 100
19 Oct 2005 medisense Optium Test Strip SIGS: use as directed QID; QTY : 120
19 Oct 2005 Losec Cap 20 mg {P} SIGS: 1 Cap, Once Daily PRN; QTY: 30
19/Oct 2005 Co-Trimoxazole 480 mg Tab SIGS: 2 BD for infection; QTY 7 days
19/Oct 2005 Accupril Tab 20 mg {P} SIGS 2 tab, Once Daily; QTY 180
19/Oct 2005 Candesartan 4 mg Tab and 16 mg Tab SIG: one 4 and one 16 mg daily; QTY 4mg tab 180; 16 mg tab 180; subsidy No: HOSP/12345/Nov2006
12 Sep 2005 Penmix 50 Inj Human With neutral Insulin 100 U ml 3 ml {P} SIGS 20 U daily; QTY 2 vials

Previous Med:
12 April 2004 Diclax Sr Tab Long Acting 75 mg [P] Daily, stopped 12 May 2005

Diagnosis
Abdominal Aneurysm (G71.00)2004; Repaired 2005
Hypertensive disease (G2.00)
NIDDM (C109.11)

Relevant Test:
Microabumin (Casual): 3 mg/L
Alb/Cr ratio: 2 (<2.5)

Dr D Woods
NZMC No 12346, HPI: 11AAAB

Scenario C 2 - Clinical Status Report - reply from Specialist - requesting more info/tests

Original Referral ID: RSD Z: 0000000555555
Our Reference ID: RSD S: 11122233344455

29/10/2005

Dr D Woods
Tauranga Medical, Cameron Road, Tauranga
NZMC No 12346, HPI: 11AAAB

cc: Dr A Smith, MidCentral Med, Tauranga
NZMC No: 12345; HPI: 11AAAA

Re: Patient Name: Mr. George Hamilton
NHI: AAA1234
DOB: 12/2/1941
Gender: Male
Address: 20 Cameron Road, Tauranga
Ethnicity: NZ European/Pakeha

Dear Dr Woods

Thank you for your referring letter dated 27 Oct 2005. I note that Mr. Hamilton saw you on the 27 Oct 2005 and you found an abnormal test, showing eGFR 55 ml/min. You are right that he may benefit from seeing us as according to the referring guidelines. However, we are not able to prioritise his referral because of lack of essential information. I understand his GP is Dr Smith and I have copied this letter to Dr Smith. I am asking Dr Smith to forward us more information before we can prioritise the referral.
The essential information is: MSU and longitudinal information on eGFR.

He is also on Losec which can cause renal failure and I will ask Dr Smith to discontinue this.

Yours Sincerely

DR KMW
NZMC No 12347, HPI: 11AAAC

P/S: Dear Dr Smith
Please see the above note to Dr Woods. I would appreciate your help for providing us the relevant information, stopping the Losec and please do the following additional tests: ultrasound, kidney, immunoglobulin, immunophoresis, Hepatitis B, HCV and HIV.

Regards
DR KMW

Scenario C 3 - Clinical Status Report - Reply from usual GP to Specialist

Original Referral ID: RSD Z: 0000000555555
Our Referral ID: RSD: N: 111111111111111
Your Reference ID: RSD S: 11122233344455

01/11/2005

Dr KMW
Renal Physician
Wairoa Hospital
Hamilton
NZMC No 12347, HPI: 11AAAC

Re: Patient Name: Mr. George Hamilton
NHI: AAA1234
DOB: 12/2/1941
Gender: Male
Address: 20 Cameron Road, Tauranga
Ethnicity: NZ European/Pakeha

Dear Dr KMW

Thank you for your letter. Mr. Hamilton's eGFR tests are as follows:

Jan 2005 100 ml/min
March 2005 80 ml/min
Oct 2005 55ml/min

MSU: WCC0 RBC >1000 ++ protein ++++Hb culture negative.

I have stopped the Losec and requested all the other tests.

Regards

Dr Smith
NZMC No: 12345, HPI: 11AAAA

Scenario C 4 - Administrative Advice - Laboratory Test Results

Original Referral ID: RSD Z: 0000000555555
Specialist Referral No ID: RSD S: 11122233344455
Your Reference ID RSD: N: 111111111111111
Our Reference No: RSD X1234 ??

05/11/2005

Dr A Smith
MidCentralMed
Tauranga
NZMC No: 12345; HPI: 11AAAA

cc: Dr KMW (NZMC No 12347, HPI: 11AAAC)

Re: Patient Name: Mr. George Hamilton
NHI: AAA1234
DOB: 12/2/1941
Gender: Male
Address: 20 Cameron Road, Tauranga
Ethnicity: NZ European/Pakeha

Dear Dr Smith

Lab test requested 01/11/05 has been completed and results are available.

Regards
Tauranga Labs
HPI: FTL123 ??

Scenario C 5 - Clinical Status Report - Specialist to GP

Original Referral ID: RSD Z: 0000000555555
Your Referral ID: RSD: N: 111111111111111
Our Reference ID: RSD S: 11122233344455

8/11/2005

Dr A Smith
MidCentralMed
Tauranga
NZMC No: 12345; HPI: 11AAAA

Re: Patient Name: Mr. George Hamilton
NHI: AAA1234
DOB: 12/2/1941
Gender: Male
Address: 20 Cameron Road, Tauranga
Ethnicity: NZ European/Pakeha

Dear Dr Smith

Mr. Hamilton has RPGN and will be seen at clinic urgently, usually within 2 weeks.

Regards
Dr KMW
NZMC No 12347, HPI: 11AAAC

Scenario C 6 - Administrative Advice - Specialist to GP

Original Referral ID: RSD Z: 0000000555555
Your Referral ID: RSD: N: 111111111111111
Our Reference ID: RSD S: 11122233344455

11/11/2005

Dr A Smith
MidCentralMed
Tauranga
NZMC No: 12345; HPI: 11AAAA

Re: Patient Name: Mr. George Hamilton
NHI: AAA1234
DOB: 12/2/1941
Gender: Male
Address: 20 Cameron Road, Tauranga
Ethnicity: NZ European/Pakeha

Dear Dr Smith

Mr. Hamilton was seen at the clinic on the 10/11/2005. He was very unwell and was admitted to the ward on the same day. We will keep you informed.

Regards

Dr KMW
NZMC No 12347, HPI: 11AAAC

Scenario C 7 - Referral - Specialist to Specialist

Original Referral ID: RSD Z: 0000000555555
Our Reference ID: RSD S: 11122233344455
GP Referral ID: RSD: N: 111111111111111

20/11/2005

Dr Low NZMC No 12349, HPI: 11AAAE
Liver Transplant Surgeon
Auckland Hospital
Auckland

cc: Dr A Smith, Mid CentralMed, Tauranga (NZMC No: 12345; HPI: 11AAAA)

Re: Patient Name: Mr. George Hamilton
NHI: AAA1234
DOB: 12/2/1941
Gender: Male
Address: 20 Cameron Road, Tauranga
Ethnicity: NZ European/Pakeha

Problems:
1. Hepatitis B associated Fulminant Liver Failure
2. Rapid Progressive Renal Failure secondary to 1
3. Hypertension.
4. Previous AAA repair 2005.
5. NIDDM

Medication

Cardizem CD 240mg one mane.
Aspirin 150mg mane.
Perindopril 2mg mane.
Simvastatin 10mg nocte.
Rocaltrol 0.25mcg mane.
Losec 20mg mane.
Quinine Sulphate 300mg tablets, one nocte prn.
Xanax 0.25mg once nocte pr

Thank you for accepting this Patient for further care. He has severe liver failure and may need liver transplant

Regards

Dr. AAA (NZMC No 12348 HPI 11AAAD
Registrar for Dr. KMW
NZMC No 12347, HPI: 11AAAC

Scenario C 8 - Discharge Referral - to another service

Original Referral ID: RSD Z: 0000000555555
Your Reference ID: RSD S: 11122233344455
GP Referral ID: RSD: N: 111111111111111
Our Reference ID: RSD A12341234

26/11/2005

Dr KMW
Wairoa Hospital
Hamilton
NZMC No 12347, HPI: 11AAAC

cc: Dr Frank
Hepatologist
Wairoa Hospital
Hamilton
NZMC No 12341 HPI 11AAAF

Cc: Dr A Smith
MidCentral Med, Tauranga
NZMC No: 12345; HPI: 11AAAA

Re: Patient Name: Mr. George Hamilton
NHI: AAA1234
DOB: 12/2/1941
Gender: Male
Address: 20 Cameron Road, Tauranga
Ethnicity: NZ European/Pakeha

Problems:

1. Hepatitis B associated Fulminant Liver Failure
2. Liver Transplant 20/11/2005
3. Rapid Progressive Renal Failure secondary to 1
4. Hypertension.
5. Previous AAA repair 2005.
6. NIDDM

Medications:

Neoral 50mg and 25mg capsules, 75mg bd. (Sub No: HOSP123432Nov2007)
Azathioprine 50mg tablets, 1.5 mane (reduced, was taking two mane).
Cardizem CD 240mg one mane.
Aspirin 150mg mane.
Perindopril 2mg mane.
Simvastatin 10mg nocte.
Rocaltrol 0.25mcg mane.
Losec 20mg mane.
Quinine Sulphate 300mg tablets, one nocte prn.
Xanax 0.25mg once nocte prn.
Tricortone cream topical prn

Dear Dr KMW
Mr Hamilton has the above treatment. Thank you for accepting back his care. We had referred him to Dr Frank, Hepatologist, Wairoa Hospital, Hamilton. Dr Frank will follow up on his future liver problem. We had discharged him from our service.

Dr Low
Liver Transplant Surgeon, Auckland Hospital.
NZMC No 12349, HPI: 11AAAE

Scenario C 9 - Discharge Referral – same service

Original Referral ID: RSD Z: 0000000555555
Your Referral ID: RSD: N: 111111111111111
Our Reference ID: RSD S: 11122233344455

23/12/2005

Dr A Smith
MidCentralMed
Tauranga
NZMC No: 12345; HPI: 11AAAA

cc Dr Frank, Hepatologist, Wairoa Hospital, Hamilton.
NZMC No 12341 HPI 11AAAF

Re: Patient Name: Mr. George Hamilton
NHI: AAA1234
DOB: 12/2/1941
Gender: Male
Address: 20 Cameron Road, Tauranga
Ethnicity: NZ European/Pakeha

Problems:

1. Hepatitis B associated Fulminant Liver Failure
2. Liver Transplant 20/11/2005
3. Rapid Progressive Renal Failure secondary to 1
4. Hypertension.
5. Previous AAA repair 2005.
6. NIDDM

Medications:
Neoral 50mg and 25mg capsules, 75mg bd. (Sub No: HOSP123432Nov2007)
Azathioprine 50mg tablets, 1.5 mane (reduced, was taking two mane).
Cardizem CD 240mg one mane.
Aspirin 150mg mane.
Perindopril 2mg mane.
Simvastatin 10mg nocte.
Rocaltrol 0.25mcg mane.
Losec 20mg mane.
Quinine Sulphate 300mg tablets, one nocte prn.
Xanax 0.25mg once nocte prn.
Tricortone cream topical prn.

Mr Hamilton was admitted to the ward from the clinic on the 10/11/2005. He was found to have liver failure secondary to HBV. The renal failure is secondary to the HBV infection. He was referred to Auckland Hospital because of the liver failure and had a liver transplant. His kidney function has improved and will be seen at Renal Clinic regularly.

He has been referred to the hepatologist locally by the Auckland Transplant Surgeon.

Regards

Dr AAA
Registrar for DR KMW
NZMC No 12347, HPI: 11AAAC

Scenario C 10 - Discharge - back to GP

Original Referral ID: RSD Z: 0000000555555
Your Referral ID: RSD: N: 111111111111111
Our Reference ID: RSD S: 11122233344455

28/12/2005

Dr A Smith
MidCentralMed
Tauranga
NZMC No: 12345; HPI: 11AAAA

CC: Dr Frank
Hepatologist
Wairoa Hospital
Hamilton
NZMC No 12341 HPI 11AAAF

Re: Patient Name: Mr. George Hamilton
NHI: AAA1234
DOB: 12/2/1941
Gender: Male
Address: 20 Cameron Road, Tauranga
Ethnicity: NZ European/Pakeha

Problems:

1. Hepatitis B associated Fulminant Liver Failure
2. Liver Transplant 20/11/2005
3. Rapid Progressive Renal Failure secondary to 1
4. Hypertension.
5. Previous AAA repair 2005.
6. NIDDM

Medications:
Neoral 50mg and 25mg capsules, 75mg bd. (Sub No: HOSP123432Nov2007)
Azathioprine 50mg tablets, 1.5 mane (reduced, was taking two mane).
Cardizem CD 240mg one mane.
Aspirin 150mg mane.
Perindopril 2mg mane.
Simvastatin 10mg nocte.

Mr. Hamilton was seen at Renal Clinic. His kidney has recovered to normal. We have discharged him from the Renal Clinic.

Dr Frank will continue supervising his liver problem.

Dr KMW
NZMC No 12347, HPI: 11AAAC

Appendix D 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.

Chapter # containing Variance	Table # containing Variance	Variance (Segment) Details	Difference
			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 Cod	VLT Vault is not used in HL7