CareRight HL7 Interface - API Specification

Patient Data Consumer

Changes since V1.2 highlighted in orange

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2 Document Summary

2.1 Document Purpose

This document specifies the interface needed to generate and process patient demographic information from an external patient management system into CareRight.

2.2 Scope

This document defines the HL7 interface that is used to process the following messages from the external patient management system:

- A08 messages will be sent for Patient Record Creation/Updates
- A28 and A31 message types will not be sent. Only A08 message types will be sent for patient updates.
- Merging will be completed using an A40 message type.

3 CareRight Patient Matching Process

Before updating a patient record in CareRight a confidence match is performed to ensure that the correct patient record is being updated.

The supplied MR identifier is used to obtain the CareRight patient record. If a record is found for the MR identifier, then a comparison on the following values is performed:

- First Name (Legal Name)
- Last Name (Legal Name)
- Date of Birth
- Medicare Number & IRN if available
- DVA Number if available

If at least two of the above fields match in both the HL7 record and CareRight, then the record in CareRight is updated. If a match is not available an error is returned. Matches to patient name fields will be performed case insensitive.

Each time a patient record is updated or created the EVN recorded date time is stored with the patient record. If an update message (A08) is received that is OLDER than the last recorded date time the message will be accepted and raise no error, but the update will not be applied to the patient record.

If the MR identifier is not found in CareRight then a new patient record is created.

PID messages associated with a merge message (A40) will not result in an update or change to the Major Patient record and is only used for identification purposes.

4 CareRight Data Management

It will be possible to change the API controlled values for a Patient only if the user has been granted specific permission to do so. Any changes will be overwritten when the Patient Record is next received from the API source.

5 Messaging Configuration

5.1 Sending Facility

Sending facility codes may be sent in MSH-4.vThe sending facility does NOT need to match to a facility configured in CareRight.

5.2 IP & Port

The API producer will send messages to an IP Address of the CareRight API server using Port 6662.

CareRight will send system level acknowledgement messages. CareRight will send all replies as responses to the originating message using the HL7 MLLP specification.

6 Message Types

CareRight will process/send the message types listed in Table 3: Message types to be processed.

The message type in the Message Header is consistently sent with the HL7 message event and structure codes, e.g. 'ADT^A08'. CareRight should use this to determine the message type.

Table 3: Message types to be processed

Message Type Code	Message Type Description	In or Outbound to CareRight
A08	Update Patient Information	Inbound
A40	Patient Identifier Merge – Patient ID Only	Inbound
I12	Patient Referral	Inbound
Acknowledgement	Acknowledgement	Outbound

6.1 Message Processing

Messages will be based on HL7 v2.3.1. The following protocol and encoding rules will be used for this interface.

Table 4: Protocol and encoding symbols

Description	Special Character
Field Separator	'|'
Component Delimiter	'^'
Sub Component	'&'
Repetition separator	'~'
Escape Character	'\'

If a field is not being sent, then there will be no characters between the field delimiters: '| |'. If a field is being sent but there is no data to be sent in this message, i.e. it is null, then two consecutive quotation marks will be sent in the field: '|"" |'.

Each message segment will end with a carriage return.

6.2 A08 Update Patient Information

The A08 message types will be processed in this interface. The following tables describe their message structure. Sample messages will be provided.

A08 message will be used to send updates to an existing patient or create a new patient. Prior to processing the message, CareRight must attempt to match the message to an existing patient record in CareRight using the 'MR' identifier in PID-3. If a match is identified, then the CareRight patient record should be updated. If no matching patient record is identified in CareRight, then CareRight will create a new patient record using the demographic details contained in the message.

6.2.1 A08 Message Structure

Table 5: A08 segments

Segment	Name	R/O	Freq of Occurrence	To be Processed
MSH	Message Header	R	1	Yes
EVN	Event	R	1	Yes
PID	Patient Identification	R	1	Yes
PV1	Patient Visit	R	1	No

GT1	Guarantor	O	1/Guarantor	No
IN1	Insurance	O	1/Insurance	Yes
ACC	Accident Information	O	1	No
ZSR	Service Rule	O	1	Yes

6.2.2 Segment Structure

This interface will process the Message Header (MSH), Event (EVN), Patient Identification (PID) and Insurance(IN1) segments of the specified message types. The expected segment structure of the MSH, EVN, PID and IN1 segments are described. The 'Comments' column includes any pertinent information for this interface.

It is expected that these segments will be the same in all A08 and A40 messages.

6.2.3 Message Header Segment

Table 7: MSH fields describes the fields of the Message Header Segment (MSH) that will be processed for this interface [ref 2]. The 'Comments' column includes business rules for processing the field, examples, etc.

Table 6: MSH fields

Segment and Field	Data Type	Max Length	Description	Mandatory (R/O)	Comments
MSH-0			Segment ID	R	Will be sent as 'MSH'
MSH-1	ST	1	Field Separator	R	Will be sent as '|'
MSH-2	ST	4	Encoding Characters	R	Will be sent as '^~\&'
MSH-3	HD	180	Sending Application	O	Will be sent as 'EPIC_DIGITAL'
MSH-4	HD	180	Sending Facility, e.g. 'BPH'	O	The HL7 Facility Code for the sending facility. This is not processed by CareRight.
MSH-5	HD	180	Receiving Application	O	Will be sent as 'CARERIGHT'
MSH-6	HD	180	Receiving Facility	O	Will be sent as 'CARERIGHT'
MSH-7	TS	26	Date/Time of Message	O	Format – CCYYMMDDhhmm
MSH-8	ST	40	Security	O	Not Sent
MSH-9	CM	13	Message Type 1. Message Type 2. Trigger Event	R	'ADT^Event', i.e. 'ADT^A08'
MSH-10	ST	20	Message Control ID	R	Unique ID for message
MSH-11	PT	3	Processing ID	R	Will be sent as 'P'
MSH-12	VID	60	Version ID	R	Will be sent as '2.3.1'
MSH-13	NM	15	Sequence Number	O	Not Processed
MSH-14	ST	180	Continuation Pointer	O	Not Processed
MSH-15	ID	2	Accept Acknowledgment Type	O	Sent as 'AL'
MSH-16	ID	2	Application Acknowledgment Type	O	MSH segment ends at MSH-15. MSH-16 onwards are not included
MSH-17	ID	3	Country Code	O	
MSH-18	ID	16	Character Set	O	
MSH-19	CE	60	Principal Language of Message	O	
MSH-20	ID	20	Alternate Character Set Handling Scheme	O	

MSH-21	ID	10	Conformance Statement ID	O	

6.2.4 Event Segment

Table 7: EVN Fields described the field of the Event Segment that will be checked for this interface. The 'Comments' column includes business rules for processing the field, examples, etc.

Table 7: EVN Fields

Segment and Field	Data Type	Max Length	Description	Mandatory (R/O)	Comments
EVN-0			Segment ID	R	'EVN'
EVN-1			Set ID	R	e.g. 'A08'
EVN-2	TS	26	Recorded Date/Time	R	Date time as YYYYMMDDHHMMSS
EVN-3					EVN-3 to EVN-7 not sent

6.2.5 Patient Identification Segment

Table 8: PID fields describes the fields of the Patient Identification Segment (PID) that will be processed for this interface [ref 5]. The 'Comments' column includes business rules for processing the field, examples, etc.

Table 8: PID fields

Segment and Field	Data Type	Max Length	Description	Mandatory (R/O)	Comments
PID-0			Segment ID	R	'PID'
PID-1	SI	4	Set ID	R	Sent as '1'
PID-2	CX	20	Patient ID	O	Not Sent
PID-3	CX	250	Internal Patient ID (repeating)	R	See Table 9: Business rules for processing
PID-4	CX	20	Alternate Patient ID – PID	O	Not Sent
PID-5	XPN	250	Patient Name as 'Surname^Given_Name^Middle Initial or Name^^Title^^L' e.g. '|Tabib^Eli^B^^Mr^^L|'	R	One name with a type of 'L' should be expected as this represents the Legal name for the Patient.
PID-6	XPN	250	Mother's Maiden Name	O	Not Sent
PID-7	TS	26	Date of Birth as CCYYMMDD, e.g. '|19901022|'	R	A date of birth must be included in the message for it to be processed.
PID-8	IS	1	Gender, e.g. '|F|'	R	Gender codes supported: • F = Female • M = Male • O = Indeterminate • T = Intersex • N = Other / Not Stated
PID-9	XPN	250	Patient Alias	O	Not Sent
PID-10	CE	250	Race as a description, e.g. '|Aboriginal And TorresStraitIslander|'	O	Indigenous Status
PID-11	XAD	250	Patient Address will have the following component fields:	O	Home (One) address will be sent.

			1. Address Line 1 2. Address Line 2 3. Suburb 4. State 5. Postcode 6. Country 7. Type e.g. '|53 REUBEN STREET^^STAFFORD^Queensland^4053^^H|'		If no address is sent, then the field will be sent as type 'H' and all other fields as null. The country field optional.. The state field must be the state code or description from CareRight's generic code list for states. The country value, if supplied should be a country code or description for the country list in CareRight. If no match is found then the country field will be left blank. The postcode field must be a number between 0 and 9999. If it is a different value then the postcode will be left blank.
PID-12	IS	4	Country Code	B	Not Sent
PID-13	XTN	250	Phone Number – Home, Mobile & Email, e.g. '|(07)33949246^^PH~0488412395^^CP~me@example.com^^E |'	O	Home – '^^PH' Mobile – '^^CP' Email – '^^E'
PID-14	XTN	250	Phone Number – Business	O	Not sent
PID-15	CE	250	Primary Language, e.g. '|^English|'	O	Language This is matched to the list of patient languages in careright. This can either be the 4 digit code of the language or an exact match to the description of the language. CareRight uses the statutory list of language codes and descriptions.
PID-16	CE	250	Marital Status, e.g. '|M|'	O	This is matched to the list of marital statuses in careright. This can either be the code or an exact match to the description. CareRight uses the statutory list of marital status codes and descriptions.
PID-17	CE	250	Religion, e.g. '|Catholic^Catholic^L^^^^^^Catholic|'	O	Not sent.
PID-18	CX	250	Patient Account Number	O	Not Sent
PID-19	ST	16	SSN Number – Patient. '|^12345678900|'	O	the Medicare Number followed by the IRN to form an 11-digit number. All 11 digits will be supplied. The first 10 digits are the Medicare number and the last digit is the IRN. Only the current active Medicare Number for the patient will be sent.

					If the PID-3 segment contains a MC identifier then PID-19 is ignored
PID-20	DLN	25	Driver's License Number – Patient	O	Not Sent
PID-21	CX	250	Mother's Identifier	O	Not Sent
PID-22	CE	250	Ethnic Group	O	Not Sent
PID-23	ST	250	Birth Place, e.g. '|AUSTRALIA|'	O	Country of Birth This is matched to the list of countries in careright. This can either be the code or an exact match to the description. CareRight uses the statutory list of country codes and descriptions.
PID-24	ID	1	Multiple Birth Indicator |Y|	O	Australian South Sea Islander With *Y* for *Yes*, *N* for *No*, and if it's not provided it'll be *Unknown*.
PID-25	NM	2	Birth Order	O	Not Sent
PID-26	CE	250	Citizenship	O	Not Sent
PID-27	CE	250	Veterans Military Status	O	Not Sent
PID-28	CE	250	Nationality	O	Reference Code Sets to be checked for Nationality
PID-29	TS	26	Patient Death Date/Time as ccyymmdd	O	Date of Death may be sent. Field is only populated if PID-30 is 'Deceased'.. If it is not sent, then this field will be blank.
PID-30	ID	1	Patient Death Indicator	O	If value is 'Deceased', will populate date of death if available.
PID-31	ID	1	Identity Unknown Indicator	O	Segments after PID-30. Fields PID 31-38 not included in the segment
PID-32	IS	20	Identity Reliability Code	O	
PID-33	TS	26	Last Update Date/Time	O	
PID-34	HD	40	Last Update Facility	O	
PID-35	CE	250	Species Code	O	
PID-36	CE	250	Breed Code	O	
PID-37	ST	80	Strain	O	
PID-38	CE	250	Production Class Code	O	

Table 9: Business rules for processing Internal Patient IDs

Table 9: Business rules for processing Internal Patient IDs describes the internal patient IDs which may be included in PID-3 and their related business rules for processing.

Field	Sent as	Business Rules for processing
PID-3 Internal Patient ID	Identifier Type = MR MR = Medical Record Number, e.g. ' 0000123333^^^^MR' The MR is a 10-digit number global unique identifier for that patient in source system,	Source system' unique ID – 10-digit number padded with leading zeros.

	i.e. 'User ID'. The Medical Record Number (MR) does not change over time.	
PID-3 Internal Patient ID	Identifier Type = AUSDVA AUSDVA = Australian Department of Veterans Affairs e.g. 'QXT1654316^^^^AUSDVA'	Only the current active DVA Number for the patient will be in these fields. The DVA Number Expiry date is not sent in the message. Historical or expired DVA numbers will not be stored in HD. Since HD validates Medicare, Concession and Repat, if a DVA Number is recorded for the patient from a previous message and is not included in the current message, then the DVA number will need to be set to null.
PID-3 Internal Patient ID	Identifier Type = RCT RCT = Repat Card Type The RCT is the DVA card colour e.g. 'Orange^^^^RCT'	Only the current active DVA card colour for the patient will be in these field Historical or expired DVA card colours will not be stored in HD. Since HD validates Medicare, Concession and Repat, if a DVA card colour is recorded for the patient from a previous message and is not included in the current message, then the DVA card colour will need to be set to null. The colour codes are: • Gold • White • Orange • None
PID-3 Internal Patient ID	Identifier Type = CON CON = Concession or Pension number, e.g. '7897546206^^^^CON^^^20181010'	Only the current active Pension Number for the patient will be in this field The Pension Number Expiry date will be included in the message. Historical or expired Pension numbers will not be stored in HD. Since HD validates Medicare, Concession and Repat, if a Pension Number is recorded for the patient from a previous message and is not included in the current message, then the Pension Number will need to be set to null. A Healthcare Card is considered a concession/pension number it shall be sent as 'CON' and managed as described above.
PID-3 Internal Patient ID	Identifier Type = GOVSSN GOVSSN = Safety Net e.g. '456787892954^^^^GOVSSN'	Only the current active Safety Net Number for the patient will be in this field. The Safety Net Number Expiry Date will not be sent in the message. Historical or expired Safety Net numbers will not be stored in HD. Since HD validates Medicare, Concession and Repat, if a Safety Net Number is recorded for the patient from a previous message and is not included in the current message, then the Safety Net Number will need to be set to null.
PID-3 Internal Patient ID	Identifier Type = MC MC = Medicare number, e.g. ''22345678901^^^^MC^^^202107'	Only the current active Medicare Number for the patient will be in this field

		The Medicare Number followed by the IRN to form an 11-digit number. All 11 digits will be supplied. The first 10 digits are the Medicare number and the last digit is the IRN. The Medicare Card Expiry date can be included in the message. IF this segment is not included then the value of PID-19 will be used to determine the patient's medicare number
PID-3 Internal Patient ID	Identifier Type = X X = Custom identifier in CareRight, e.g. if you have a custom identifier configured with the code "TCID" the following segment would populate that 'A0067^^^^TCID^^^'	If a PID-3 identifier name matches a custom identifier field in CareRight then this value will be used to populate that identifier field

6.2.6 Insurance Segment

Segment and Field	Data Type	Max Length	Description	Mandatory (R/O)	Comments
IN1-0			Segment ID	R	'IN1'
IN1-1	SI	4	Set ID - IN1	R	
IN1-2	CE	60	Insurance Plan ID	R	Health Fund cover level.
IN1-3	CX	59	Insurance Company ID e.g. '|BUP|'	R	Medicare Assigned Fund Code as returned by the Eclipse get participants request API.
IN1-4	XON	130	Insurance Company Name	O	Not sent
IN1-5	XAD	106	Insurance Company Address	O	Not sent
IN1-6	XPN	48	Insurance Co. Contact Person	O	Not sent
IN1-7	XTN	40	Insurance Co Phone Number	O	Not sent
IN1-8	ST	12	Group Number	O	Not sent
IN1-9	XON	130	Group Name	O	Not sent
IN1-10	CX	12	Insured's Group Emp ID	O	Not sent
IN1-11	XON	130	Insured's Group Emp Name	O	Not sent
IN1-12	DT	8	Plan Effective Date in the format CCYYMMDD	O	Health Fund Cover Commenced
IN1-13	DT	8	Plan Expiration Date in the format CCYYMMDD	O	health Fund End Date
IN1-14	CM	55	Authorization Information	O	Not sent
IN1-15	IS	3	Plan Type	O	Not sent
IN1-16	XPN	48	Name Of Insured	O	Not sent
IN1-17	IS	2	Insured's Relationship To Patient	O	Not sent
IN1-18	TS	26	Insured's Date Of Birth	O	Not sent
IN1-19	XAD	106	Insured's Address	O	Not sent
IN1-20	IS	2	Assignment Of Benefits	O	Not sent
IN1-21	IS	2	Coordination Of Benefits	O	Not sent
IN1-22	ST	2	Coord Of Ben. Priority	O	Not sent
IN1-23	ID	2	Notice Of Admission Flag	O	Not sent
IN1-24	DT	8	Notice Of Admission Date	O	Not sent
IN1-25	ID	2	Report Of Eligibility Flag	O	Not sent
IN1-26	DT	8	Report Of Eligibility Date	O	Not sent

IN1-27	IS	2	Release Information Code	O	Not sent
IN1-28	ST	15	Pre-Admit Cert (PAC)	O	Not sent
IN1-29	TS	26	Verification Date/Time	O	Not sent
IN1-30	XCN	60	Verification By	O	Not sent
IN1-31	IS	2	Type Of Agreement Code	O	Not sent
IN1-32	IS	2	Billing Status	O	Not sent
IN1-33	NM	4	Lifetime Reserve Days	O	Not sent
IN1-34	NM	4	Delay Before L.R. Day	O	Not sent
IN1-35	IS	8	Company Plan Code	O	Not sent
IN1-36	ST	15	Policy Number	O	Health Fund membership number.
IN1-37	CP	12	Policy Deductible	O	Not sent
IN1-38	CP	12	Policy Limit - Amount	B	Not sent
IN1-39	NM	4	Policy Limit - Days	O	Not sent
IN1-40	CP	12	Room Rate - Semi-Private	B	Not sent
IN1-41	CP	12	Room Rate - Private	B	Not sent
IN1-42	CE	60	Insured's Employment Status ^Retired^^^^|	O	Value will be one of the following: 0 Not applicable 1 Child not at School 2 Student 3 Employed 4 Unemployed 5 Home Duties 6 Retired 7 Pensioner 8 Other 9 Unknown D Declined to respond
IN1-43	IS	1	Insured's Sex	O	Not sent
IN1-44	XAD	106	Insured's Employer Address	O	Not sent
IN1-45	ST	2	Verification Status	O	Not sent
IN1-46	IS	8	Prior Insurance Plan ID	O	Not sent
IN1-47	IS	3	Coverage Type	O	Not sent
IN1-48	IS	2	Handicap	O	Not sent
IN1-49	CX	12	Insured's ID Number	O	Not sent

Processing insurance details.

If there is no ZSR segment then the system assumes the message contains all insurance information. For each IN1 segment a patient health fund record will be updated (if matching on IN1-3 and IN1-12) or created. Any health fund records that do not match will be deleted.

6.2.7 Service Rule Segment

Table 7: ZSR Fields described the field of the Service Rule Segment that will be checked for this interface. The 'Comments' column includes business rules for processing the field, examples, etc.

Table 7: ZSR Fields

Segment and Field	Data Type	Max Length	Description	Mandatory (R/O)	Comments
ZSR-0			Segment ID	R	'ZSR'

ZSR-1			Service Code	R	This should contain a single value that matches a service code configured in CR. e.g. 'RO' If the code does not match a code enabled in CareRight the message will be rejected.

6.3 A40 Patient Identifier Merge Message

The A40 message type will be processed in this interface. The following tables described their message structure and processing. Sample messages have been provided [ref 3].

The MSH EVN, and PID segments will be processed as described in 4.1.2.2.2 Segment Structure of MSH and PID with the following differences:

- The patient described in the PID segment is the major patient
- The patient described in the MRG segment is the minor patient

For the purposes of this document, the major is the patient MRN or record to be retained. The minor is the patient MRN or record to be inactivated.

Patient Merge will be rejected by CareRight if any of the following is true:

- The Minor Patient is currently admitted to any location.
- The Minor Patient is already merged to a different Major Patient.

6.3.1 Merge Segment

Table 10: A40 segments describes the message structure of an A40. The MSH, EVN and PID segments will be processed as described in Section 4.1.2.1.2 Segment Structure

Table 10: A40 segments

Segment	Name	R/O	Freq of Occurrence	To be Processed
MSH	Message Header	R	1	Yes
EVN	Event	R	1	Yes
PID	Patient Identification	R	1	Yes
MRG	Source Patient/Client	R	1	Yes

Table 11: MRG fields describes the fields of the Merge Segment (MRG) that will be processed for this interface. The 'Comments' column includes business rules for processing the field, examples, etc.

Table 11: MRG fields

Segment and Field	Data Type	Max Length	Description	Mandatory (R/O)	Comments
MRG-0			Segment Id	R	Will be sent as 'MRG'
MRG-1	CX	250	Prior Patient Identifier List	R	The equivalent of the PID-3 field but to reference the minor Patient. This

					will contain a MR type identifier. See Table 9: Business rules for processing Internal Patient IDs
MRG-2	CX	250	Prior Alternate Patient ID	O	Fields from MRG-2 onwards are not sent
MRG-3	CX	250	Prior Patient Account Number	O	
MRG-4	CX	250	Prior Patient ID	O	
MRG-5	CX	250	Prior Visit ID	O	
MRG-6	CX	250	Prior Alternate ID	O	
MRG-7	XPN	250	Prior Patient Name as 'Surname^Given_Name^Middle Initial or Name^^Title^^L' e.g. '|Tabib^Eli^B^^Mr^^L|'	R	One name with a type of 'L' should be expected as this represents the Legal name for the Patient.

6.3.2 Identifier Merges

Prior to processing the message, CareRight needs to attempt to match the patients identified in the PID and MRG segments to existing active patient records in CareRight. The 'MR' identifier in PID-3 will be used to match the major patient. The 'MR' identifier in the MRG-1 will be used to match the minor patient.

Table 12: Identifier Merge Scenarios describes the possible matching scenarios and the resultant message processing.

Table 12: Identifier Merge Scenarios

Major Record Found in:	Minor Record Found in:	Processing Rule
CareRight	CareRight	The minor MRN(s) will inactivated. The minor patient record will be inactivated. The minor ICC MRN(s) will be added to the major patient record as an inactive MRN(s). The major patient record demographics will be updated as per the PID segment.
CareRight	No match found	The minor ICC MRN will be added to the major patient record as an inactive MRN. The major patient record demographics will be updated as per the PID segment.
No match found	CareRight	The major ICC MRN will be added to minor record as active MRN. The minor ICC MRN will be set to inactive. The demographics of the minor patient record in CareRight will be updated as appropriate based the content of the PID segment.
No match found	No match found	The message will not be processed.

The following is a sample A40 merge message:

MSH\|^~\&\|EPIC_DIGITAL\|0001\|CARERIGHT\| CARERIGHT
\|20170629064757\| \|ADT^A40\|20170629064757055eba\|P\|2.3.1\| \| \|AL

EVN\|A40\|20170629064757

PID|1|||0000123456^^^^MR~QXT123456^^^^AUSDVA~Gold^^^^RCT~45678954^^^^GOVSSN~7897546206^^^^CON^^^20181010|||Ufnick^Moshe^Van^^Mr^^D|||19821015|M|||Aboriginal And TorresStraitIslander|55 TESTY STREET^^TESTYVILLE^Western Australia^6100^^H~200 MELBOURNE STREET^^TESTYVILLE^Western Australia^6100^^P|||(07)33949261^^PH~0488412395^^CP|^^E^moshe123@gmail.com|^English (Australia)|M|||12345678901|||None|England|||||Israelis|20171010

MRG|0000008888^^^^MR^YERO~0000002222^^^^P^GRAN~0000003333^^^^P^0001

6.4 I12 Patient Referral Message

The I12 message type will be processed in this interface. The following tables described their message structure and processing. Sample messages have been provided.

The MSH and PID segments will be processed as described in 7.2.2 Segment Structure .

All referrals for a patient past and present must be sent in the one I12 message. Any referral missing is considered a deleted referral and will be deactivated in CareRight (Referrals cannot be deleted), the only exception is when the ZSR segment is present and the service rule processing is applied.

If a referral message contains an identifier in RF1-6 then this will be used to match to a referral in CareRight using the "external_referral_identifier" recorded in CareRight. If RF1-6 is blank then referrals are matched to existing referrals in CareRight for updating based on the following fields being the same:

- Same Professional Contact
- Same RF1-9 (Letter Date)

Segments RF1 and PRD's are repeating segments. Each RF1 must be followed by a PRD which contains the referring provider details for the RF1 and an optional PRD for the referred to provider. If the referred to provider is supplied then the referral can only be used to bill for that provider. If the referred to provider is not supplied the referral can be used to bill for any provider.

To resolve the "Referring Provider" in CareRight a search of the existing Professional Contacts in performed and if a match is found on an existing professional contact (same name, address, provider number) it will be linked to the referral. If no match is found a new professional contact is created in CareRight and linked to the referral. Professional Contacts will be assigned the category matched by the speciality in RF1-5. Each Speciality will be matched to the exact named category in CareRight. This is a user maintained list and will be setup to match the list in the specification as part of configuration.

Only Medical Referrals from a Medical Provider will be processed by CareRight as other types of referrals are not maintained as records in CareRight. If RFI-3 is not set to 'Med' then the record will be ignored, no error will be returned.

Table 13: I12 segments

Segment	Name	R/O	Freq of Occurrence	To be Processed
MSH	Message Header	R	1	Yes
PID	Patient Identification	R	1	Yes
RF1	Referral Information	R	*	Yes

PRD	Provider Data (Referring Provider)	R	*	Yes
PRD	Provider Data (Referred to Provider)	O	*	Yes
ZSR	Service Rule	O	1	Yes

Table 14: RF1 fields

Segment and Field	Data Type	Max Length	Description	Mandatory (R/O)	Comments
RF1-1	CE	1	Referral Status	R	The status of the referral. CareRight only accepts referral statuses of 'A' Accepted.
RF1-2			Referral Priority	O	Not Sent
RF1-3	CE	3	Referral Type	R	The type of referral. CareRight Supports 'Med' Medical Referrals only.
RF1-4			Referral Disposition		Not Sent
RF1-5			Referral Category	O	Specialisation. This is matched to the professional categories names in CareRight. This must be an exact match. This is only used if a new professional contact needs to be created. If the system is able to match to an existing professional contact then this field is ignored.
RF1-6			Originating Referral Identifier	O	If supplied used to match the CareRights "external_referral_identifier" field to determine the referral in CR to update. If not matching referral found a new referral is created
RF1-7	TS	26	Effective Date as CCYYMMDD, e.g. '|20171012|'	R	The activation date of the referral. This is usually the date of first service.
RF1-8	TS	26	Expiration Date as CCYYMMDD, e.g. '|20181018|'	O	The Expiration date of the referral or blank for indefinite referrals. (Most referrals are 3 or 12 month referrals)
RF1-9	TS	26	Process Date as CCYYMMDD, e.g. '|20171002|'	R	The date on the referral letter/correspondence from the referring doctor

Table 15: PRD fields

Segment and Field	Data Type	Max Length	Description	Mandatory (R/O)	Comments
PRD-1	CE	2	Provider Role	R	Designate the role this provider has in the associated message. CareRight supports. 'RP' Referring Provider

					& 'RT' Referred to Provider.
PRD-2	XPN	250	Provider Name as 'Surname^Given_Name^Middle Initial or Name^^Title^^L' e.g. '|Tabib^Eli^B^^Dr^^L|'	R	One name with a type of 'L' should be expected as this represents the Legal name for the Provider.
PRD-3	ZAD	250	Provider Address will have the following component fields: 1. Address Line 1 2. Address Line 2 3. Suburb 4. State 5. Postcode 6. Country (not sent) 7. Type e.g. '|54 REUBEN STREET^^STAFFORD^Queensland^4053^^O|'	O	Office (One) address will be sent. Type will be 'O'. Address details are required if the Provider Role is 'RP' Referring Provider.
PRD-4			Provider Location		Not Sent
PRD-5			Provider Communication Information		Not Sent
PRD-6			Preferred Method of Contact		Not Sent
PRD-7	PLN	250	Provider Identifiers will have the following component fields: 1. Identifier Number 2. Identifier Type e.g. '12345678X^MCR'		Only identifier type 'MCR' will be supported. MCR = Medicare Provider Number

6.4.1 Service Rule Segment

Table 7: ZSR Fields described the field of the Service Rule Segment that will be checked for this interface. The 'Comments' column includes business rules for processing the field, examples, etc.

Table 7: ZSR Fields

Segment and Field	Data Type	Max Length	Description	Mandatory (R/O)	Comments
ZSR-0			Segment ID	R	'ZSR'
ZSR-1			Service Code	R	This should contain a single value that matches a service code configured in CR. e.g. 'RO'

					If the code does not match a code enabled in CareRight the message will be rejected.

6.5 Applying service rules in CareRight

The ZSR segment is optional. If a system is going to use the ZSR it is recommended that it is used on all ADT^AO8 & REF^I12 message to prevent unexpected results processing referrals and health fund details.

Health Funds

When an ADT^AO8 message contains a ZSR the rules for managing health fund details is changed as follows.

Review all existing health fund records and those that do not match (IN1-3) fund identifier in the ADT will have the service code in ZSR removed if it currently has one. Those that match will have the ZSR applied (as well as the membership details updated).

If there are no matches then funds will be added to the CareRight with the service code applied.

Finally all existing fund records that have NO services applied will be deleted.

Referrals

When a REF^I12 message contains a ZSR the rules for managing referral details is changed as follows.

Review all existing referral records and those that do not match (using existing matching rules) will have the service code in ZSR removed if it currently has one. If a matching referral with NO service matches then it will be updated to have the ZSR-1 service code applied. If a matching referral exists but already has a different service code assigned then that referral is NOT changed and a new referral will be created with the ZSR-1 service code applied.

If there are no matches then the referral will be added to the CareRight with the service code applied.

Finally all existing referral records that have NO services applied will be set as disabled.

6.6 Acknowledgments

CareRight will send Acknowledgement Messages to indicate the message has been successfully processed or not.

6.6.1 Acknowledgement Message Structure

Table 13: ACK Message Segments

Segment	Name	R/O	Freq of Occurrence
MSH	Message Header	R	1
MSA	Message Acknowledgement	R	1
ERR	Error Segment	O	1

6.7 Acknowledgement Segment Structure

6.7.1 Message Header Segment of Acknowledgement Message

Table 14 describes the fields of the Message Header Segment (MSH) of Acknowledgement messages that will be sent by CareRight for this interface. The 'Comments' column includes business rules for processing the field, examples, etc.

Table 14: MSH field for ACK

Segment and Field	Data Type	Max Length	Description	Mandatory (R/O)	Comments
MSH-0			Segment Id	R	Will be sent as 'MSH'
MSH-1	ST	1	Field Separator	R	Will be sent as '|'
MSH-2	ST	4	Encoding Characters	R	Will be sent as '^~\&'
MSH-3	HD	180	Sending Application	O	Will be sent as 'CARERIGHT'
MSH-4	HD	180	Sending Facility	O	Will be sent as 'CARERIGHT'
MSH-5	HD	180	Receiving Application	O	Will be sent as 'EPIC_DIGITAL'
MSH-6	HD	180	Receiving Facility	O	Will be sent as the sending facility of the initiating message, i.e. MSH-4
MSH-7	26	TS	Date/time of Message as CCYYMMDDhhmm	R	Date and time of the acknowledgment message
MSH-8	40	ST	Security	O	Not sent
MSH-9	CM	7	Message Type 1. Message Type 2. Trigger Event	R	'ACK^Event^Structure' (where Event will be the same as the message being acknowledged), i.e. • ADT^A08 • ADT^A40 e.g. 'ACK^A08'
MSH-10	ST	20	Message Control ID	R	Unique ID for message
MSH-11	PT	3	Processing ID	R	Will be sent as 'P'
MSH-12	VID	60	Version ID	R	Will be sent as '2.3.1'
MSH-13					MSH-13 onwards not sent

6.7.1.1 Message Acknowledgement Segment

Table 15 describes the fields of the Message Acknowledgment Segment (MSA) of Acknowledgement messages that will be sent by CareRight for this interface. The 'Comments' column includes business rules for processing the field, examples, etc.

Table 15: MSA fields

Segment and Field	Data Type	Max Length	Description	Mandatory (R/O)	Comments
MSA-0			Segment ID	R	Will be sent as 'MSA'
MSA -1	ID	2	Acknowledgement Code	R	Will send one of the following: AA = Application Accept AE = Application Error AR = Application Reject

MSA -2	ST	20	Message Control ID	R	Control ID of the initiating message
MSA -3			Text message		Not sent
MSA -4			Expected sequence number		Not sent
MSA -5			Delayed Acknowledgement Type		Not sent
MSA -6	CE	100	Error Condition		Not sent

6.7.1.2 Error Segment

Table 16: ERR field

Table 17 describes the fields of the Error Segment (ERR) of Acknowledgement messages that will be sent by CareRight for this interface. This segment will only be sent if MSA-1 is either 'AE' or 'AR'. The 'Comments' column includes business rules for processing the field, examples, etc.

Segment and Field	Data Type	Max Length	Description	Mandatory (R/O)	Comments
ERR-0			Segment Id	R	Will be sent as 'ERR'
ERR -1	CM	80	Error Code and Location	R	Segment and field, and the error(s) encountered. See Table 17: Error Codes for the possible codes. This is a mandatory HL7 field when this segment is used. This field will include at least one error, and may include multiple errors. The number of reported errors is dependent on how far message processing progressed prior to 'erroring out'. If a message is modified as result of an error and re-sent, it possible for the message to error again once processing has passed the previous point of erroring out.

Table 17: Error Codes

Error Code	Error Code Description	Comments
0	Message accepted	Message successfully processed
100	Segment sequence error	The message segments were not in the proper order, or required segments are missing
101	Requested field missing	A required field is missing from a segment
102	Data type error	The field contained data of the wrong data type
200	Unsupported message type	The message type is not supported
201	Unsupported event code	The event code is not supported
203	Unsupported version ID	The Version ID is not supported
204	Unknown key identifier	A field references a record that does not exist.

205	Duplicate key identifier	A field references a record associated with a different record.
206	Application record locked	The transaction could not be performed at the application storage level
207	Application internal error	A catchall for internal errors not explicitly covered by other codes

Notes:

If a field uses a reference list then the supplied value must exist on the reference list or the request will be rejected with an error code 102.

If a Patient cannot be successfully matched for an A08 request an error code 205 is returned.