



Australian Government
Australian Digital Health Agency



HIPS

Patient Administration HL7 v2.4 Profile

17 April 2020 7.3

Approved for internal use

Australian Digital Health Agency ABN 84 425 496 912, Level 25, 175 Liverpool Street, Sydney, NSW 2000
Telephone 1300 901 001 or email help@digitalhealth.gov.au
www.digitalhealth.gov.au

Acknowledgements

Council of Australian Governments

The Australian Digital Health Agency is jointly funded by the Australian Government and all state and territory governments.

HL7 International

This document includes excerpts of HL7™ International standards and other HL7 International material. HL7 International is the publisher and holder of copyright in the excerpts. The publication, reproduction and use of such excerpts is governed by the [HL7 IP Policy](#) and the HL7 International License Agreement. HL7 and CDA are trademarks of Health Level Seven International and are registered with the United States Patent and Trademark Office.

Disclaimer

The Australian Digital Health Agency (“the Agency”) makes the information and other material (“Information”) in this document available in good faith but without any representation or warranty as to its accuracy or completeness. The Agency cannot accept any responsibility for the consequences of any use of the Information. As the Information is of a general nature only, it is up to any person using or relying on the Information to ensure that it is accurate, complete and suitable for the circumstances of its use.

Document control

This document is maintained in electronic form and is uncontrolled in printed form. It is the responsibility of the user to verify that this copy is the latest revision.

Copyright © 2020 Australian Digital Health Agency

This document contains information which is protected by copyright. All Rights Reserved. No part of this work may be reproduced or used in any form or by any means – graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems – without the permission of the Australian Digital Health Agency. All copies of this document must include the copyright and other information contained on this page.

OFFICIAL

Document information

Key information

Owner National Health Chief Information Officer, Infrastructure Operations

Contact for enquiries Australian Digital Health Agency Help Centre

Phone [1300 901 001](tel:1300901001)

Email help@digitalhealth.gov.au

Table of contents

1	Introduction	6
1.1	Purpose	6
1.2	Scope.....	6
1.3	Assumptions.....	6
1.4	Special Rules.....	7
1.5	Definitions and Acronyms.....	7
1.6	Current Environment	7
2	High Level HL7 – HIPS Usage	9
2.1	Episode Lifecycle Mappings	9
2.2	Medical Record Numbers	10
2.2.1	Zero Padding of MRNs	11
2.3	A01 – Admit a Patient	11
2.3.1	MSH Mappings	12
2.3.2	PID Mappings.....	13
2.3.3	PV1 Mappings.....	16
2.3.4	PV2 Mapping	19
2.4	A03 – Discharge a Patient	20
2.5	A28 – Add Person Information	21
2.6	A31 – Update Person Information	22
3	Low Level Protocol.....	23
3.1	Communications	23
3.2	Character Encoding/Standard.....	23
3.3	Message Framing	23
4	Application Level Protocol	25
4.1	Message Events/Triggers	25
4.2	Message combinations	26
4.3	Message Definitions.....	26
4.3.1	ADT – A01 Admit.....	26
4.3.2	ADT – A02/A12 Transfer/Cancel Transfer.....	27
4.3.3	ADT – A03/A13 Discharge/Cancel Discharge.....	27
4.3.4	ADT – A05 Pre-Admit	27
4.3.5	ADT – A11 Cancel Admit	28
4.3.6	ADT – A08 Update Patient Information.....	28
4.3.7	ADT – A21/A22 Go for leave, Return from leave.....	29
4.3.8	ADT – A16/A25 Pending/Cancel patient discharge	29
4.3.9	ADT – A28/A31 Add/Update Patient information.....	29
4.3.1	ADT – A38 Cancel Pre-Admit	29
4.3.2	ADT – A34 Merge Enterprise IDs	30
4.3.3	ADT – A35 PAS Merge Person Information – Visits	30
4.3.4	ADT – A36 PAS Merge Person Information - MRNs.....	30
4.3.5	ADT – A43 Move patient information - identifier list	30

4.3.6	ADT – A45/A51 Move visit information / Move visit to another patient.....	31
4.3.7	SIU – S12/S14/S15/S17 Outpatient Booking New/Update/Cancel/Delete.....	31
4.3.8	ACK – <event trigger> Acknowledgment.....	31
4.4	Segment Definition Notes.....	31
4.5	Common Segment Definitions.....	33
4.5.1	MSH – Message Header.....	33
4.5.2	MSA – Message Acknowledgment Segment.....	34
4.5.3	EVN – Event Type.....	35
4.5.4	PID – Patient Identification Segment.....	35
4.5.5	PV1 – Patient Visit Segment.....	40
4.5.6	PV2 – Patient Visit - Additional Information Segment.....	44
4.5.7	MRG – Merge Patient Information.....	46
4.5.8	SCH – Schedule Activity Information.....	47
5	Data Type Definitions.....	49
5.1	XTN Data Type.....	49
5.2	TS Data Type.....	49
5.3	XCN Data Type.....	50
5.4	CE Data Type.....	51
5.5	PL Data type.....	51

1 Introduction

1.1 Purpose

The purpose of this document is to provide the definition for the HL7 message interface for notifying patient admission events to the Healthcare Identifier and My Health Record services.

Please note that this version of the HL7 profile for HIPS has originated from a detailed HL7 specification and may contain more information than required in forming HL7 messages for loading to HIPS.

It can be used by health facilities to understand the information passed in the HL7 messages and the portions relevant to HIPS.

This document describes the message and segment definitions that are required, expected and processed by the HIPS application.

HIPS uses the standard message format described herein. The standard message format in use is a profile of HL7 2.3.1, and as such this document covers variations from that standard.

Special attention needs to be paid to the interpretation of the A34 Merge Enterprise ID, A43 Move MRN to Enterprise ID and A36 Merge MRN messages, and the use of patient identifiers.

1.2 Scope

This profile covers all messages/message segments that have been standardised. The document currently describes messages that originate from patient administration systems, but in time can cover standardised messages from any source.

This profile does not describe any functional requirements, such as archiving or error reporting, as these are to be covered by other documentation.

1.3 Assumptions

The following assumptions have been made in the development of this profile:

- HL7 message segments will be sent in the order shown under “Message Definition” below;
- HL7 message continuation standard will not be used and therefore each message sent/received must be complete;
- Confidential information sent across the interface will be accepted “as is”;
- HL7 Sequence Numbering is not used.

1.4 Special Rules

The following rules have been made in the development of this profile:

- The AL1 (Alerts & Allergies) segment is ignored by HIPS1.
- The NTE segment is ignored by HIPS.

1.5 Definitions and Acronyms

Item	Definition
ADT	Admission, Discharge, Transfer. Class of HL7 message types. ADT is also an Application Code used in MSH.3 and MSH.5
ESB	Enterprise Service Bus – integration hub for routing and transforming messages within and between healthcare facilities.
HL7	Health Level Seven
PMI	Patient Master Index – often used to describe an informal class of HL7 ADT messages – includes updates to patient demographics and merge/unmerge message types. PMI is also an Application Code used in MSH.3 and MSH.5
MRN	Medical Record Number, identified by the code “MR” in PID-3. Ideally one MRN is allocated by the hospital for each patient, though it is common to temporarily allocate a new MRN for emergency patients until their identity is confirmed. These temporary MRNs should be merged back to the original MRN for the patient using an A36 Merge MRN message. This number stored in HospitalPatient.Mrn and is the primary identifier used to find the existing patient records in the HIPS database.
OPD	Outpatient Department – often used to describe an informal class of HL7 message types – such as appointment/booking/scheduling messages. OPD is also an Application Code used in MSH.3 and MSH.5
Enterprise Patient ID	Unique Health Identifier – this code is used in PID-3 or PID-2 to identify the Enterprise ID for the patient, which determines which PatientMaster the patient is attached to. HospitalPatient records will move from one PatientMaster to another if their Enterprise Patient ID changes. See the HIPS Patient Administration Processing Guide for more details. It is perfectly acceptable to operate HIPS using only the MRN and not to send in Enterprise IDs.

1.6 Current Environment

The message segments defined herein are the segments used in the HIPS application and cover only the essential PMI/ADT message segments. The current environment is as follows:

¹ Alerts and allergies are included in certain documents uploaded to the My Health Record system but these are communicated as part of the document upload operation, not in the ADT message.

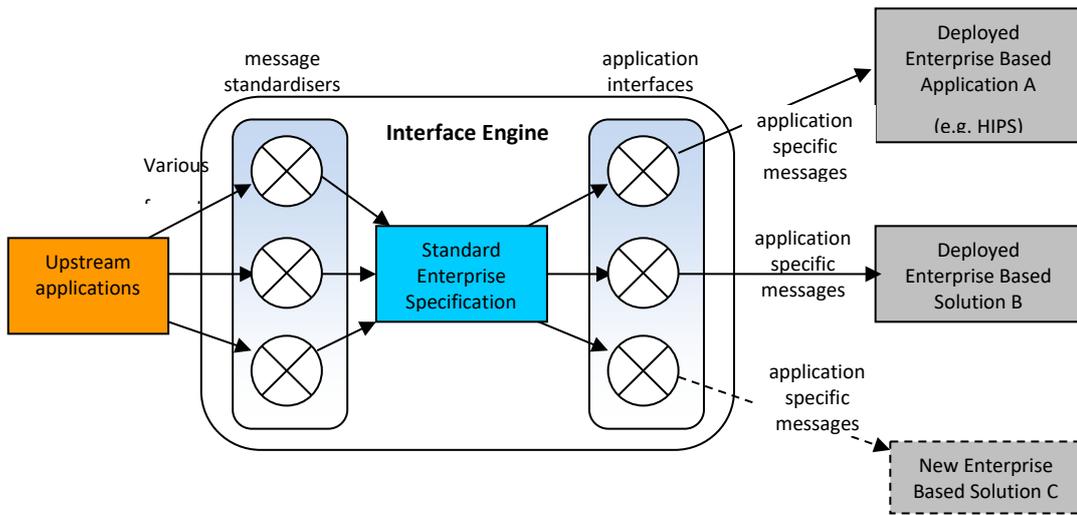


Figure 1: Standardisation transformations

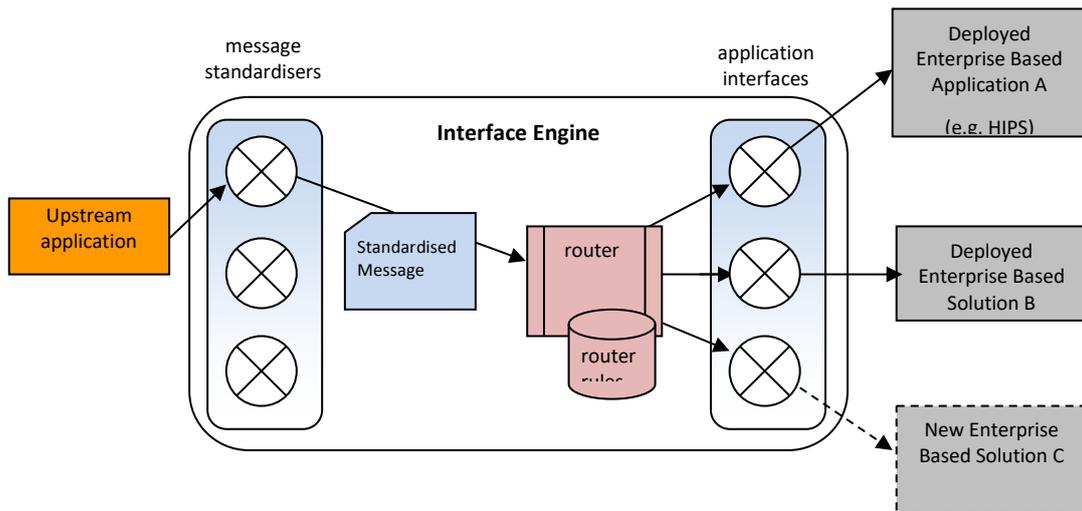


Figure 2: Message instance

2 High Level HL7 – HIPS Usage

HIPS may be used in one of the following models:

- No PAS events notified: all IHIs are obtained by a separate application. The ValidatedIhi parameter is used on all calls to HIPS services (including IsPcehrAdvertised, UploadOrSupersedeDocument and Remove), and HIPS creates stub patient and stub episode records.
- Only patient related (PMI) events are notified. On receipt, HIPS performs IHI search and validation, and checks for advertised My Health Record. The GetValidatedIhi method is used to retrieve the IHI from HIPS. No episode related events are notified. When uploading or removing a document, the ValidatedIhi parameter is used and HIPS creates stub episode records.
- Both patient (PMI) and episode (ADT) related events are notified. When uploading or removing a document, the MRN or Enterprise Patient ID (StatePatientId) parameters may be used. HIPS will not create any stub records.

Within each class, the following messages represent the minimal set of PMI and ADT events that must be notified to HIPS, to support IHI searching and uploading documents to My Health Record.

Class	EVENT Description	TYPICAL Message
PMI	When registering a new patient, to trigger an IHI search and check whether My Health Record exists.	ADT^A28
PMI	When changing the name, sex, DOB, MCN or DVA, to validate the IHI with the new details and check whether a My Health Record exists.	ADT^A31
PMI	When merging two MRNs, to ensure the right episode is matched for a later document upload or removal.	ADT^A36
ADT	When an inpatient is admitted, to record the admission date/time and check whether a My Health Record exists.	ADT^A01
ADT	When changing the admission date/time, to ensure the right episode is matched for a later document upload or removal.	ADT^A08

Other PAS events, such as transfers (A02) or discharges (A03) are not required for correct operation of HIPS Core, but are required for HIPS UI to show where patients are located, and when they have been discharged.

2.1 Episode Lifecycle Mappings

HIPS will determine the current status of an episode using a set of conditional rules. These rules are documented in the table below. The resulting ID is stored in the EpisodeLifecycleId column of the Episode table.

Note that the episode lifecycle is not critical to the normal operation of HIPS Core but is used by HIPS UI and may assist with identifying which patients are currently in hospital for targeting the reconciliation of IHI lookups or for reporting purposes.

Events	Conditions	ID	Description
Event "A01" - Admit Patient	Always	11	Admitted
Event "A03" - Discharge Patient	Always	13	Discharged
Event "A05" - Pre-Admit	Always	9	Pre-admit
Event "A11" - Cancel Admission	Always	12	Cancelled Admission
Event "A13" - Cancel Discharge	Always	11	Admitted
Event "A38" - Cancel Pre-Admit	Always	10	Cancelled Pre-admit
Other events including: Event "A02" - Transfer Patient Event "A08" - Update Episode	If the admission date is in the future.	9	Pre-admit
	If the admission date in is in the past, and there is either no discharge date or the discharge date is in the future.	11	Admitted
	If the discharge date is in the past.	13	Discharged
SIU (outpatient booking) events including: Event "S12" - New Appointment Event "S14" - Update Appointment Event "S15" - Cancel Appointment Event "S17" - Delete Appointment	EventReason = "BK"	1	Booked
	EventReason = "AS"	2	Attended Seen
	EventReason = "DE"	3	Deleted
	EventReason = "CP"	4	Cancelled By Patient
	EventReason = "CH"	5	Cancelled By Hospital
	EventReason = "CO"	6	Cancelled Other
	EventReason = "FT"	7	Failed To Attend
	EventReason = "U"	-1	Unknown
Any case that does not match a condition above		-1	Unknown

2.2 Medical Record Numbers

When processing HL7 messages, HIPS uses the Medical Record Number (MRN) as the primary identifier to find existing patient records in the database. The MRN must be represented in the PID-3 Patient Identifier List by an entry such as:

- "000123456^^^RNH^MR"

Where "000123456" is the MRN itself, "RNH" is a code for the hospital that allocated this MRN, and "MR" is a code that indicates that this is an MRN.

The maximum MRN length that HIPS can handle is 40 characters.

The hospital codes for use in PAS HL7 messages must be configured in the HIPS HospitalCode table and have a CodeSystemId of 2 which corresponds to a code system "pasFacCd".

2.2.1 Zero Padding of MRNs

Jurisdictions operate various patient administration systems that allocate MRNs of various lengths. Some PAS systems allocate MRNs of a variable length with no zeros on the left, while others automatically add zeros on the left to pad to either 6 or 8 digits.

HIPS supports numeric and non-numeric local identifiers from 1 to 40 characters in length. The expected length for a local identifier is defined via the HIPS “Mrn.Padding” configuration setting, which specifies the total number of characters expected for a standardised local identifier. The default value for the configuration setting is 9, but can be configured to any value between 1 and 40.

Do not send a local identifier more than 40 characters in length. If more than 40 characters are supplied, HIPS will find or create the patient with the identifier truncated to 40 characters.

To meet the requirements of this profile, any local patient identifier that is input via the HL7 interface will have zeros added to the beginning until it reaches the number of digits in length specified by the “Mrn.Padding” configuration setting. This applies equally to numeric and non-numeric identifiers.

If the identifier is already equal to or more than the number of characters in length specified by the “Mrn.Padding” configuration setting, then no further padding is added.

For example, with the default value of 9 for the “Mrn.Padding” configuration setting:

- “123456” (6 digits) will be padded with 3 zeros and stored as “000123456”
- “123456789” (9 digits) will not be padded
- “1234567890123456” (16 digits) will not be padded
- "ABCD" (4 letters) will be padded with 5 zeros and stored as "00000ABCD"

2.3 A01 – Admit a Patient

The following HL7 message can be used to load a patient into the HIPS system:

```
MSH|^~\&|ADT|RCH|CIS|RNH|20130612070340||ADT^A01|E2E_TEST_1|P|2.3.1|||AL|NE
|AU|ASCII|EN
EVN|A01|20130612070339.006|||E2ETESTER
PID|||RCH00026^^^RCH^MR~69501911211^^^MC||DYER^DARICE^A^^^L||19981226|2^Fe
male^NHDD||4^Neither Aboriginal or TSI^ISAAC^4^Not Aborig or TSI^MPH|954
DAVEY
AVE^^NEWMAN^WA^6753^^H|||^WPN^PH^^^0884448333|||AUSTRALIA|Y|||
NK1||TEAM^PUMA|M^Spouse (Husband,Wife,Defacto)^RCH Contact
Reason||^WPN^PH^^^0884448333|||TEAM^PUMA|^WPN^PH^^^
0884448333
PV1||I^Inpatient^APMS HCASTYPE|A6^^^0019^N^058^^^King William St
|3^Elective - Booking List^ISAAC Admission Category^4^Sameday^RCH
HCASADTY|2500000101^^^HCASNUMB^RCH||00009151^BERGON^PETER^^^PRO^^^ADT&RCH^
^^^EMI NUMBER^RCH||00009151^BERGON^PETER^^^PRO^^^ADT&RCH^^^EMI
NUMBER^RCH|058|||5^Outpatient Department^ISAAC SOR^5^Outpatient
Dep|||00009151^BERGON^PETER^^^PRO^^^ADT&RCH^^^EMI NUMBER^RCH|4^Day Only
surgical bands 1A, 1B, 2, 3 and 4 - intent^ISAAC Patient
Category^1^Acute^RCH
HCASSTYP|2500000101^^^HCASNUMB^RCH||11&Medicare&FC~1&Public&ELECTION~1&Hosp
ital&APMS HCASCLAS|||20130612035900
PV2|||^SORE LEG AFTER BIKE ACCIDENT|||A|20130612070300|||5^Outpatient
Department^^^^^ISAAC SOR|||2
IN1|||99|NO FUND
```

Only the following segments are used by HIPS, the rest are ignored:

Segment	Name	Required/Optional	Freq. of Occurrence
MSH	Message Header	R	1
PID	Patient Identification	R	1
PV1	Patient Visit	R	1
PV2	Patient Visit – Additional	O	1

2.3.1 MSH Mappings

```
MSH|^~\&|ADT|RCH|HIPS|RNH|20130612070340||ADT^A01|E2E_TEST_1|P|2.3.1|||AL|NE|AU|ASCII|EN
```

The following table describes the MSH segment from the sample message above. The fields in yellow highlight the values stored by HIPS.

Field	Description	Example Value	HIPS Database Location
1	Field Separator	MSH	
2	Encoding Characters	^~\&	
3	Sending Application	ADT	HL7MessageLog.SendingApplication
4	Sending Facility	RCH	HL7MessageLog.SendingFacility
5	Receiving Application	HIPS	
6	Receiving Facility	RNH	
7	Date/Time Of Message	20130612070340	HL7MessageLog.DateTimeOfMessage
8	Security		
9	Message Type	ADT^A01	
10	Message Control ID	E2E_TEST_1	HL7MessageLog.MessageControlId
11	Processing ID	P	
12	Version ID	2.3.1	
13	Sequence Number		
14	Continuation Pointer		
15	Accept Acknowledgment Type	AL	
16	Application Acknowledgment Type	NE	
17	Country Code	AU	
18	Character Set	ASCII	
19	Principal Language Of Message	EN	

Field	Description	Example Value	HIPS Database Location
20	Alternate Character Set Handling Scheme		

2.3.2 PID Mappings

```
PID||100012345678^^^^StatePatientID|000123456^^^MPH^MR~50001234561^^072013^
MPH^MC~SX12345^^^^DVA |
|SURNAME^FIRSTNAME^MIDDLENAME^^MRS^^L^A||19120131000000|F|
|4^Neither Aboriginal or TSI^ISAAC^4^Not Aborig or TSI^MPH
|40 TESTING CRES^^TESTVILLE
EAST^^5123||^PRN^PH^^^^81234567|^WPN^PH^^^^82345678|
|2^Married/De facto^ISAAC^2^Married/De
Facto^MPH|||5000123456^1|||3105^Malta^ABS^3105^^MPH|||
|20130721|D
```

Field	Description	Example Value	HIPS Database Locations
1	Set ID - PID		
2	Patient ID	100012345678^^^^StatePatientId	PatientMaster.StatePatientId
3	Patient Identifier List	000123456^^^MPH^MR~50001234561^^^MC~SX12345^^^^DVA	HospitalPatient.Mrn HospitalCode.Code PatientMaster.MedicareNumber PatientMaster.MedicareInr PatientMaster.DvaNumber
4	Alternate Patient ID - PID		
5	Patient Name	SURNAME^FIRSTNAME^MIDDLENAME^JR^MRS^^L^A	PatientMasterName.FamilyName PatientMasterName.GivenNames PatientMasterName.SuffixId (Suffix.Code) PatientMasterName.TitleId (Title.Code)
6	Mother's Maiden Name		
7	Date/Time Of Birth	19120131000000	PatientMaster.DateOfBirth
8	Sex	F	PatientMaster.CurrentSexId (M,F,O,U) → (1,2,3,-1) Note: Not based on Sex.Code
9	Patient Alias		
10	Race	4^Neither Aboriginal or TSI^ISAAC^4^Not Aborig or TSI^MPH	

Field	Description	Example Value	HIPS Database Locations
11	Patient Address	LEVEL 2 ^40 TESTING CRES ^TESTVILLE EAST ^SA ^5123 ^AUSTRALIA ^H	Address.AddressLine1 Address.AddressLine2 Address.PlaceName Address.AustralianStateId Address.InternationalStateCode Address.PostCode Address.CountryId Address.AddressTypeId
12	County Code		
13	Phone Number - Home	^PRN^PH^^^^81234567	Contact.ContactMethodId Contact.Detail
14	Phone Number - Business	^WPN^PH^^^^82345678	Contact.ContactMethodId Contact.Detail
15	Primary Language		
16	Marital Status	2^Married/De facto^ISAAC ^2^Married/De Facto^MPH	
17	Religion		
18	Patient Account Number		
19	SSN Number - Patient	5000123456^1	
20	Driver's License Number - Patient		
21	Mother's Identifier		
22	Ethnic Group		
23	Birth Place	3105^Malta^ABS^3105^^MPH	
24	Multiple Birth Indicator		
25	Birth Order		
26	Citizenship		
27	Veterans Military Status		
28	Nationality		
29	Patient Death Date and Time	20130721	PatientMaster.DateOfDeath
30	Patient Death Indicator	D	

2.3.2.1 Patient Identifier List Structure

2.3.1: CX extended composite ID with check digit

Component	Description	Value (1)	Value (2)	Value (3)
1	ID	000123456	50001234561	SX12345
2	check digit			
3	code identifying the check digit scheme employed			
	assigning authority	MPH	AUSHIC	AUSDVA
5	identifier type code ²	MR	MC	DVA
6	assigning facility			

2.3.2.2 Patient Name Structure

2.3.1: XPN extended person name

Component	Description	Value
1	family+last name	DYER
2	given name	DARICE
3	middle initial or name	A
4	suffix (e.g., JR or III)	
5	prefix (e.g., DR)	
6	degree (e.g., MD)	
7	name type code	
8	Name Representation code	

2.3.2.3 Patient Address Structure

2.3.1: XAD extended address

Component	Description	Value	Notes
1	street address	954 DAVEY AVE	AddressLine1
2	other designation		AddressLine2
3	city	NEWMAN	PlaceName

² MR = Medical Record Number, MC = Medicare Number and IRN, DVA = DVA File Number

2.3.1:XAD extended address

4	state or province	WA	If the country is 1101, Australia or empty and a matching state code is found in the hips.State table then the State.StateId is stored in Address.AustralianStateId. Otherwise, the value is stored in Address.InternationalStateCode.
5	zip or postal code	6753	PostCode
6	country	1101	If a matching country code or description is found in the hips.Country table then the CountryId is stored in Address.CountryId. Otherwise, the country is defaulted to 1101, Australia.
7	address type	H	If a matching address type code is found in the hips.AddressType table then the AddressTypeId is stored in Address.AddressTypeId. Otherwise, the address type is defaulted to H, Home.
8	other geographic designation		
9	county/parish code		
10	census tract		
11	address representation code		

2.3.2.4 Patient Contact Structure

2.3.1:XTN extended telecommunication number

Component	Description	Value	Notes
1	[(999)] 999-9999 [X99999][C any text]		
2	telecommunication use code	WPN	Must be (WPN PRN NET)
3	telecommunication equipment type (ID)	PH	Must be (PH FX CP)
4	Email address		
5	Country Code		
6	Area/city code		
7	Phone number	0884448333	
8	Extension		
9	any text		

2.3.3 PV1 Mappings

PV1||I^Inpatient^APMS HCASTYPE|A6^^^0019^N^058^^^King William St|3^Elective - Booking List^ISAAC Admission Category^4^Sameday^RCH

```

HCASADTY|2500000101^^^^HCASNUMB^RCH||00009151^BERGON^PETER^^^PRO^^^ADT&RCH^
^^^EMI NUMBER^RCH||00009151^BERGON^PETER^^^PRO^^^ADT&RCH^^^EMI
NUMBER^RCH|058|||5^Outpatient Department^ISAAC SOR^5^Outpatient
Dep||00009151^BERGON^PETER^^^PRO^^^ADT&RCH^^^EMI NUMBER^RCH|4^Day Only
surgical bands 1A, 1B, 2, 3 and 4 - intent^ISAAC Patient
Category^1^Acute^RCH
HCASSTYP|2500000101^^^^HCASNUMB^RCH|11&Medicare&FC~1&Public&ELECTION~1&Hosp
ital&APMS HCASCLAS|||||||||||||||||||||||20130612035900

```

Component	Description	Value
1	Set ID - PV1	
2	Patient Class	I^Inpatient^APMS HCASTYPE
3	Assigned Patient Location	A6^^^0019^N^058^^^King William St
4	Admission Type	3^Elective - Booking List^ISAAC Admission Category^4^Sameday^RCH HCASADTY
5	Preadmit Number	2500000101^^^^HCASNUMB^RCH
6	Prior Patient Location	
7	Attending Doctor	00009151^BERGON^PETER^^^PRO^^^ADT&RCH^^^EMI I NUMBER^RCH
8	Referring Doctor	
9	Consulting Doctor	00009151^BERGON^PETER^^^PRO^^^ADT&RCH^^^EMI I NUMBER^RCH
10	Hospital Service	058
11	Temporary Location	
12	Preadmit Test Indicator	
13	Re-admission Indicator	
14	Admit Source	5^Outpatient Department^ISAAC SOR^5^Outpatient Dep
15	Ambulatory Status	
16	VIP Indicator	
17	Admitting Doctor	00009151^BERGON^PETER^^^PRO^^^ADT&RCH^^^EMI I NUMBER^RCH
18	Patient Type	4^Day Only surgical bands 1A, 1B, 2, 3 and 4 - intent^ISAAC Patient Category^1^Acute^RCH HCASSTYP
19	Visit Number	2500000101^^^^HCASNUMB^RCH

Component	Description	Value
20	Financial Class	11&Medicare&FC~1&Public&ELECTION~1&Hospital&AP MS HCASCLAS
21	Charge Price Indicator	
22	Courtesy Code	
23	Credit Rating	
24	Contract Code	
25	Contract Effective Date	
26	Contract Amount	
27	Contract Period	
28	Interest Code	
29	Transfer to Bad Debt Code	
30	Transfer to Bad Debt Date	
31	Bad Debt Agency Code	
32	Bad Debt Transfer Amount	
33	Bad Debt Recovery Amount	
34	Delete Account Indicator	
35	Delete Account Date	
36	Discharge Disposition	
37	Discharged to Location	
38	Diet Type	
39	Servicing Facility	
40	Bed Status	

Component	Description	Value
41	Account Status	
42	Pending Location	
43	Prior Temporary Location	
44	Admit Date/Time	20130612035900
45	Discharge Date/Time	
46	Current Patient Balance	
47	Total Charges	
48	Total Adjustments	
49	Total Payments	
50	Alternate Visit ID	
51	Visit Indicator	
52	Other Healthcare Provider	

2.3.4 PV2 Mapping

```
PV2|||^SORE LEG AFTER BIKE ACCIDENT||||A|20130612070300||||5^Outpatient
Department^^^^^^ISAAC SOR|||||||2
```

Field	Description	Values
1	Prior Pending Location	
2	Accommodation Code	
3	Admit Reason	^SORE LEG AFTER BIKE ACCIDENT
4	Transfer Reason	
5	Patient Valuables	
6	Patient Valuables Location	
7	Visit User Code	A
8	Expected Admit Date/Time	20130612070300
9	Expected Discharge Date/Time	
10	Estimated Length of Inpatient Stay	

Field	Description	Values
11	Actual Length of Inpatient Stay	
12	Visit Description	
13	Referral Source Code	5^Outpatient Department^^^^^^ISAAC SOR
14	Previous Service Date	
15	Employment Illness Related Indicator	
16	Purge Status Code	
17	Purge Status Date	
18	Special Program Code	
19	Retention Indicator	
20	Expected Number of Insurance Plans	
21	Visit Publicity Code	
22	Visit Protection Indicator	
23	Clinic Organization Name	
24	Patient Status Code	2
25	Visit Priority Code	
26	Previous Treatment Date	
27	Expected Discharge Disposition	
28	Signature on File Date	
29	First Similar Illness Date	
30	Patient Charge Adjustment Code	
31	Recurring Service Code	
32	Billing Media Code	
33	Expected Surgery Date & Time	
34	Military Partnership Code	
35	Military Non-Availability Code	
36	Newborn Baby Indicator	
37	Baby Detained Indicator	

2.4 A03 – Discharge a Patient

The following message could be used after a patient is discharged:

```
MSH|^~\&|ADT|MCH|ESB|TEST
HEALTH|20130304015453||ADT^A03|2013030401545318172354|P|2.3||AL|AL|AUS|ASC
```

```

II|ENG|

EVN|A03|20130304015453|||||

PID|""|012078^^^MRN^MR^MCH|502845234C^^^DSS^PE|HICKS^MARCY^ELAINE^^^MISS^^L
|19691117|F||0C|15 WOODCROFT
DRIVE^^^CRAIGMORE^^5114^^^R||82547891^PRN^^^82547891|0401120891^WPN^^^
^0401120891|EN^ENGLISH|1|NIL|012078-30|5084278429|||1101|1100|||""|N|

PV1||I|1B^^D24^0027^^ASU^0027^^1B
SURGICAL|""||2331^ASU^^^DR^^^L^^^DN|1476^JACOB^VINCE^^^DR^GP^^L^^R|233
1^ASU^^^DR^^^L^^^DN|ASU|||6|""||H|10667790||OHI|||1|""|FF||
||20130301223300|20130303161000|0.00|||

PV2|||.SIGMOID VOLVULUS|||20130302|||1|||

```

Only the following segments are used by HIPS. Their structures remain constant across message types:

Segment	Name	Required/Optional	Freq. of Occurrence
MSH	Message Header	R	1
PID	Patient Identification	R	1
PV1	Patient Visit	R	1
PV2	Patient Visit – Additional	O	1

Please refer to section 2.3 for the mappings of these segments.

2.5 A28 – Add Person Information

The A28 message adds patient demographic information to HIPS. Only the following segments are required:

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
PID	Patient Identification	R	1

Please refer to section 2.3 for the mappings of these segments.

Sample message:

```

MSH|^~\&|ADT|RNH|ESB|RCH|20130304022019||ADT^A28|10795388133402191769|P|2.3
.1||AL|NE|AU|ASCII|EN|
EVN|A28|20130304021917||ANECLERK2|

PID||10795388^^^RNH^MR||BLACK^PEDRO^ANDREW^^^L^A||20120707000000|M||4^Nei
ther Aboriginal or TSI^ISAAC|69 MARTIN
CCT^^WOODCROFT^SA^5162^^H||^PRN^CP^^^0425497704||0002^NOT
STATED^ABS||0001^Other/Not stated/Unknown^ABS^UNK^Other/Not
stated/Unknown^RNH|||1^Caucasian^RNH|1100^AUSTRALIA (INCLUDES EXTERNAL
TERRITORIES) (NFD)^ABS|||A|

NK1|1|BLACK^TILLEY^^^L^A|^MOTHER|69 MARTIN
CCT^^WOODCROFT^SA^5162^^H|^PRN^CP^^^0425497704|

```

2.6 A31 – Update Person Information

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
PID	Patient Identification	R	1

Please refer to section 2.3 for the mappings of these segments.

Sample Message:

```
MSH|^~\&|ADT|RNH|ESB|RCH|20130304022255||ADT^A31|08562884133402214766|P|2.3
.1|||AL|NE|AU|ASCII|EN|

EVN|A31|20130304022147|||ANECLERK7|

PID|||08562884^^^RNH^MR~51397542811^^112013^RNH^MC|ELLINGTON^JANINE^^^^L^
A||1964051600000|F|ELLINGTON^JANINE^^^^A^A|4^Neither Aboriginal or
TSI^ISAAC|10A MAVEN
AVENUE^^RICHMOND^SA^5033^^H||^PRN^CP^^^^0425737136|^WPN^PH^^^^8205524|0002^
NOT STATED^ABS|2^Married/De
facto^ISAAC|2230^Orthodox^ABS^OR^Orthodox^RNH||5139754281^1|||1^Caucasian^R
NH|3207^GREECE^ABS|||||A|

NK1|1|SOUSONAS^PETER^^^^L^A|^FIANCE|10A MAVEN
AVENUE^^RICHMOND^SA^5033^^H|^PRN^CP^^^^0403343142|
```

3 Low Level Protocol

3.1 Communications

The preferred communication method with HIPS is via SOAP web services. The details of the SOAP communication are as follows.

Summary	
Connectivity:	SOAP 1.2 on HTTP 1.1 Communications to Healthcare Identifiers & My Health Record services require TLS 1.0 Communications to internal components do not require encryption
Connection Type:	Single Message (est. by sending system)
End of Segment:	Carriage Return
Character Set:	ASCII

3.2 Character Encoding/Standard

All messages should comply with the ISO-1 (ASCII) character set.

3.3 Message Framing

The message framing convention used will be SOAP Version 1.2. The web service description (WSDL) and XML schemas (XSD) are in the *Message framing WSDL and XML schemas* folder (included in the same zip file as this document).

The “messageForm” parameter should be represented with a CDATA tag. Each HL7 segment will end with a carriage return; the final segment in the message will end with a carriage return, followed by the end of CDATA tag.

For example:

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:ns="http://schemas.HIPS/Services/2012/01"
xmlns:hips="http://schemas.datacontract.org/2004/07/HIPS.CommonSchemas">
  <soap:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:Action>http://schemas.HIPS/Services/2012/01/DatabaseLoaderService/NotifyPasEvent</wsa:Action>
    <wsa:To>http://localhost:52500/DatabaseLoaderService/HIPS.Service.DatabaseLoaderService</wsa:To>
  </soap:Header>
  <soap:Body>
    <ns:NotifyPasEvent>
      <ns:messageForm><![CDATA[MSH|^~\&|ADT|WCH|ESB|ESB|20130617130500||ADT^A28|1240
|P|2.3.1|||AL|NE|AU|ASCII|EN
PID||100012345678^^^^StatePatientID|000123456^^^WCH^MR~56789123451^^^^MC||ROSE
^JOAN^T^^MISS^^L^A||20130614|F|
]]>
    </ns:messageForm>
  </soap:Body>
</ns:Envelope>
```

```
        <hips:Role>AuthorisedEmployee</hips:Role>
      </ns:user>
    </ns:NotifyPasEvent>
  </soap:Body>
</soap:Envelope>
```

4 Application Level Protocol

4.1 Message Events/Triggers

The following HL7 messages represent the standard messages and segments that can be sent to HIPS. Those messages in yellow represent the minimal set of messages to support IHI searching and uploading documents to My Health Record on HIPS, if using the MRN model of HIPS operation, and not the Validated IHI model.

The A36 Merge message is only necessary if the source of MRNs can merge MRNs, moving episodes from one MRN to another.

HL7 Event	Message Type	Description	Originating system
A01	ADT^A01	Admit a patient	ADT
A02	ADT^A02	Transfer a patient	ADT
A03	ADT^A03	Discharge a patient	ADT
A05	ADT^A05	Pre-admit a patient (For theatres, maternity etc)	ADT
A08	ADT^A08	Update patient information	ADT
A11	ADT^A11	Cancel admit	ADT
A12	ADT^A12	Cancel transfer	ADT
A13	ADT^A13	Cancel discharge	ADT
A16	ADT^A16	Pending Discharge	ADT
A20	ADT^A20	Bed Status Update	ADT
A21	ADT^A21	Leave of absence – out (leaving)	ADT
A22	ADT^A22	Leave of absence – in (returning)	ADT
A25	ADT^A25	Cancel pending discharge	ADT
A28	ADT^A28	Add person information	PMI
A31	ADT^A31	Update person information	PMI
A34	ADT^A34	Merge Enterprise numbers	PMI
A35	ADT^A35	Merge visit numbers	PMI
A36	ADT^A36	Merge MRNs	PMI
A38	ADT^A38	Cancel Pre-admit	ADT
A43	ADT^A43	Move MRN to Enterprise number	PMI
A45	ADT^A45	Move visit number	PMI

A51	ADT^A51	Move visit to another Patient	ADT
S12	SIU^S12	New Appointment Booking	OPD
S14	SIU^S14	Appointment Modification	OPD
S15	SIU^S15	Appointment Cancellation	OPD
S17	SIU^S17	Appointment Deletion	OPD

4.2 Message combinations

Various PAS actions can result in multiple messages being emitted from the one business event. The PAS-related events are shown in the following table:

Description	Messages Sent
Register an inpatient	A28
Register and admit into Emergency Dept.	A28 + A01
Create an inpatient visit	A01 + A31
Discharge from Emergency Dept.	A03
Cancel discharge from Emergency Dept.	A13 + A02
Swap inpatient locations	A02 + A02
Merge Enterprise Numbers	[[A45]] + A36 + {A43} + A34

4.3 Message Definitions

Below is a list of the message segments that may be included in the HL7 message. Some of these segments have not been standardised. Consult the source system documentation to determine the segment detail.

Please note:

- Those segments with an “R/O” value of “R” are always sent.
- The segments which are optional in HL7 and will NOT be sent have been deleted from the listing.
- Any application that interfaces to this profile of HL7 2.3.1 must support the receipt of any valid HL7 segment that can be sent in the HL7 message. Receiving and ignoring segments that are not applicable to the application is the expected approach.
- Grey segments are accepted but ignored by HIPS.
- Any PD1 segments must be removed from a normal A01, A02, A03 and A05, otherwise the message will be treated as a pure demographic update.

4.3.1 ADT – A01 Admit

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1

Segment	Name	R/O	Freq. of Occurrence
EVN	Event	O ³	1
PID	Patient Identification	R	1
NK1	Next of Kin	O	Multiple
PV1	Patient Visit	O ³	1
PV2	Patient Visit – Additional	O	1
AL1	Allergies	O	Multiple
IN1	Insurance Information	O	Multiple

4.3.2 ADT – A02/A12 Transfer/Cancel Transfer

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
EVN	Event	O ³	1
PID	Patient Identification	R	1
PV1	Patient Visit	O ³	1
PV2	Patient Visit – Additional	O	1

4.3.3 ADT – A03/A13 Discharge/Cancel Discharge

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
EVN	Event	O ³	1
PID	Patient Identification	R	1
NK1	Next of Kin	O	Multiple
PV1	Patient Visit	O ³	1
PV2	Patient Visit – Additional	O	1
AL1	Allergies	O	Multiple
IN1	Insurance Information	O	Multiple

4.3.4 ADT – A05 Pre-Admit

Note: Typically used to notify of addition to Waiting List for elective surgery, maternity etc.

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1

³ Variance to HL7 v2.3.1 which states this is a Required Segment

Segment	Name	R/O	Freq. of Occurrence
EVN	Event	O ³	1
PID	Patient Identification	R	1
NK1	Next of Kin	O	Multiple
PV1	Patient visit information	O ³	1
PV2	Patient visit – Additional	O	1
AL1	Allergies	O	Multiple
IN1	Insurance Information	O	Multiple

4.3.5 ADT – A11 Cancel Admit

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
EVN	Event	O ³	1
PID	Patient Identification	R	1
NK1	Next of Kin	O	Multiple
PV1	Patient Visit	O ³	1
PV2	Patient Visit – Additional	O	1
IN1	Insurance Information	O	Multiple

4.3.6 ADT – A08 Update Patient Information

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
EVN	Event	O ³	1
PID	Patient Identification	R	1
NK1	Next of Kin	O	Multiple
PV1	Patient Visit	O ³	1
PV2	Patient Visit – Additional	O	1
AL1	Allergies	O	Multiple
DG1	Diagnosis Information	O	Multiple(1/Diagnosis)
DRG	Diagnoses Related Group Information	O	1
IN1	Insurance Information	O	Multiple

4.3.7 ADT – A21/A22 Go for leave, Return from leave

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
EVN	Event	O ³	1
PID	Patient Identification	R	1
PV1	Patient Visit	O ³	1
PV2	Patient Visit – Additional	O	1

4.3.8 ADT – A16/A25 Pending/Cancel patient discharge

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
EVN	Event	O ³	1
PID	Patient Identification	R	1
PV1	Patient Visit	O ³	1
PV2	Patient Visit – Additional	O	1

4.3.9 ADT – A28/A31 Add/Update Patient information

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
EVN	Event	O ³	1
PID	Patient Identification	R	1
NK1	Next of Kin	O	Multiple
PV1	Patient visit information	O ³	1
AL1	Allergies	O	Multiple
IN1	Insurance Information	O	Multiple

4.3.1 ADT – A38 Cancel Pre-Admit

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
EVN	Event	O ³	1
PID	Patient Identification	R	1
PV1	Patient visit information	O ³	1

4.3.2 ADT – A34 Merge Enterprise IDs

HIPS will interpret this message to move all MRNs from one Enterprise ID (MRG-4) to another (PID-2), making the old Enterprise ID inactive.

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
EVN	Event	O ³	1
PID	Patient Identification (Merge-to person)	R	1
MRG	Merge Information	R	1

4.3.3 ADT – A35 PAS Merge Person Information – Visits

HIPS will interpret this message to merge one visit with another.

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
EVN	Event	O ³	1
PID	Patient Identification (Merge-to person)	R	1
MRG	Merge Information	R	1
PV1	Patient Visit Information	R	1

4.3.4 ADT – A36 PAS Merge Person Information - MRNs

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
EVN	Event	O ³	1
PID	Patient Identification (Merge-to person)	R	1
MRG	Merge Information	R	1

4.3.5 ADT – A43 Move patient information - identifier list

This message moves a hospital MRN from one Enterprise ID to another.

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
EVN	Event	O ³	1
PID	Patient Identification (Merge-to person)	R	1

4.3.6 ADT – A45/A51 Move visit information / Move visit to another patient

HIPS will interpret both of these message types as a move of a visit from one MRN to another. The visit number may be located in either MRG-5 or PV1-19, the source MRN in either MRG-1 or MRG-4 and the target MRN in PID-3.

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
EVN	Event	O ³	1
PID	Patient Identification (Merge-to person)	R	1
MRG	Merge Information	R	1
PV1	Patient Visit Information	O ³	1

4.3.7 SIU – S12/S14/S15/S17 Outpatient Booking New/Update/Cancel/Delete

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
SCH	Schedule Activity Information	O*	1
NTE	Notes and Comments	O	1
PID	Patient Identification	R*	1
PV1	Patient Visit Information	O	1
PV2	Patient Visit – Additional	O	1

4.3.8 ACK – <event trigger> Acknowledgment

Segment	Name	R/O	Freq. of Occurrence
MSH	Message Header	R	1
MSA	Message Acknowledgment	R	1

4.4 Segment Definition Notes

The format for the standardised message segments is defined in the tables below.

Please note:

- Shaded fields are not used by HIPS.
- Literal values for specific fields are enclosed in quotes (e.g. "2.3.1").
- Those fields with an "R/O" value of "R" are mandatory.
- Those fields with an "R/O" value of "C" have conditional optionality, the circumstances in which they are mandatory being indicated in the notes.
- Those fields with an "R/O" value "R*", "O*" or "C*" are a deviation from the HL7 2.3.1 standard with respect to optionality.

- Field lengths (for each repetition) are assumed to be as per HL7 2.3.1 standard unless otherwise noted in the 'Format/Ref/Notes' column.
- Please read section 5.4 regarding the use of the CE data type and non-standardised values prior to reading the segment definitions.

4.5 Common Segment Definitions

4.5.1 MSH – Message Header

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref/Notes
1	00001	Field Separator	R		ST	" "
2	00002	Encoding Characters	R		ST	"^~\&"
3	00003	Sending Application	R*		HD	HIPS stores this in HL7MessageLog.SendingApplication
4	00004	Sending Facility	R*		HD	HIPS stores this in HL7MessageLog.SendingFacility This value is not used to determine which hospital for the episode. Rather the assigning authority of the MRN (in PID-3) is used.
5	00005	Receiving Application	O		HD	Not used by HIPS for received messages. For acknowledgements, populated with value for Sending Application from received message.
6	00006	Receiving Facility	O		HD	Not used by HIPS for received messages. For acknowledgements, populated with value for Sending Facility from received message.
7	00007	Message date/time stamp	O		TS	See section 5.2 – Date set to 14 characters HIPS stores this in HL7MessageLog.DateTimeOfMessage. Note: if an invalid date is passed this will simply be ignored and omitted from the log.
8	00008	Security	O		ST	Not Populated
9	00009	Message type	R		MSG	MessageType^Event type^messagestructure MessageType^Event type as defined in Message Type column of the table in section 4.1. Message structure is optional. HIPS will use the message type to determine the Episode Lifecycle. See 2.1 Episode Lifecycle Mappings.
10	00010	Message Control ID	R		ST	HIPS will store this in HL7MessageLog.MessageControlId.

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref/Notes
11	00011	Processing ID	R		ID	Not used by HIPS
12	00012	Version ID	R		VID	Not used by HIPS
13	00013	Sequence Number	O		NM	Not used by HIPS
14	00014	Continuation Pointer	O			Not used by HIPS
15	00015	Accept Acknowledge Type	O		ID	Not used by HIPS
16	00016	Application Acknowledge Type	O		ID	Not used by HIPS
17	00017	Country Code	O		ID	Not used by HIPS
18	00692	Character set	O		ID	Not used by HIPS
19	00693	Principal language of msg	O		CE	Not used by HIPS
20	01317	Alternate Character Set Handling Scheme	O		ID	Not used by HIPS

4.5.2 MSA – Message Acknowledgment Segment

The response from the HIPS NotifyPasEvent method is a string containing an ACK message with MSH and MSA segments.

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref/Notes
1	00018	Acknowledgment Code	R		ID	HL7 v2.3.1 Table 0008 “AA” for success or “AE” for failure
2	00019	Message Control ID	R		ST	The message control ID of the incoming HL7 message.
3	00020	Text Message	O		ST	Not used by HIPS
4	00021	Expected Sequence Number	O		NM	Not used by HIPS

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref/Notes
5	00022	Delayed ACK Type	O			Not used by HIPS
6	00023	Error condition	O		CE	<id>^<desc> HIPS error message is populated in the <desc> component

4.5.3 EVN – Event Type

HIPS database loader ignores the EVN segment, which can be left out. No validation is applied to this segment.

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref.
1	00099	Event Type	R		ID	Not used by HIPS
2	00100	Recorded Date/Time	R		TS	Not used by HIPS
3	00101	Date/Time Planned Event	O		TS	Not used by HIPS
4	00102	Event Reason Code	O		IS	Not used by HIPS
5	00103	Operator ID	O		XCN	Not used by HIPS
6	01278	Event occurred	O		TS	Not used by HIPS

4.5.4 PID – Patient Identification Segment

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref/Notes
1	00104	Set ID – Patient ID	O		SI	Not used by HIPS
2	00105	Patient ID (External ID)	O*		CX	<ID>^<CheckDigit>^<Check Digit Code>^<Assigning Authority>^<Code Type>^<Assigning Facility> HIPS looks in this field for the Enterprise ID.

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref/Notes
3	00106	Patient Identifier List (Internal Id)	R	Y	CX	<p><ID>^<CheckDigit>^<Check Digit Code>^<Assigning Authority>^<Code Type>^<Assigning Facility></p> <p>HIPS looks in this field for the patient’s MRN at the facility for which this message is relevant. HIPS also looks for the DVA card number and Medicare card number in this field.</p> <p>Values as per Enterprise Standard Table ‘PID List’.</p> <p>In order to obtain the MRN, HIPS will first look for an identifier with Code Type = “MR”, then if none found will look for an identifier with Code Type = “PI”, and finally if still none found will assume the first identifier in the list to be an MRN if it has no Code Type.</p>
4	00107	Alternate Patient ID	O		CX	Not used by HIPS
5	00108	Patient Name	O*	Y	XPN	<p>Family Name ^ First Name ^ Middle Names ^ Suffix ^ Prefix ^ Degree ^ Name Type Code ^ Name Representation Code</p> <p>The Degree, Name Type Code and Name Representation Code are ignored.</p> <p>HIPS will store a maximum 80 characters for each of Family Name and Given Names (formed by combining First Name and Middle Names components).</p> <p>HIPS stores the name from the last PID-5 repeat in PatientMasterName with NameTypeid 2 (Current Name in PAS), and other repeats and previous values with NameTypeid 3 (Previous/Other Names).</p> <p>HIPS will perform IHI searches using the name from the last PID-5 repeat, so long as it contains a family name and at least one given name.</p> <p>After an IHI has been obtained for a patient, the name that the IHI is obtained with is stored into PatientMasterIhi fields RegisteredFamilyName and RegisteredGivenNames and these names used as a fall-back if no IHI is found with a new name from the last PID-5 repeat.</p>
6	00109	Mothers Maiden Name	O		XPN	Not used by HIPS
7	00110	Patient Date of Birth	R*		TS	See section 5.2

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref/Notes																				
8	00111	Patient Gender	O		IS	Enterprise Standard Table 'Gender'. HIPS maps this to AS 5017-2006 Health Care Client Identifier Sex using the table below: <table border="1"> <thead> <tr> <th>Code</th> <th>Description</th> <th>SexId</th> <th>AS 5017-2006</th> </tr> </thead> <tbody> <tr> <td>M</td> <td>Male</td> <td>1</td> <td>Male (M)</td> </tr> <tr> <td>F</td> <td>Female</td> <td>2</td> <td>Female (F)</td> </tr> <tr> <td>O</td> <td>Other</td> <td>3</td> <td>Intersex or Indeterminate (I)</td> </tr> <tr> <td>U</td> <td>Unknown</td> <td>-1</td> <td>Not Stated/Inadequately Described (N)</td> </tr> </tbody> </table> <p>If not supplied or not recognised as a valid code, this will default to U – Unknown. HIPS stores this in PatientMaster.CurrentSexId and uses the patient sex from this field for Medicare IHI searching. Where successful, then stored in PatientMasterIhi.RegisteredSexId.</p>	Code	Description	SexId	AS 5017-2006	M	Male	1	Male (M)	F	Female	2	Female (F)	O	Other	3	Intersex or Indeterminate (I)	U	Unknown	-1	Not Stated/Inadequately Described (N)
Code	Description	SexId	AS 5017-2006																							
M	Male	1	Male (M)																							
F	Female	2	Female (F)																							
O	Other	3	Intersex or Indeterminate (I)																							
U	Unknown	-1	Not Stated/Inadequately Described (N)																							
9	00112	Patient Alias	O	Y	XP	Not used by HIPS																				
10	00113	Race	O		CE	Not used by HIPS																				

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref/Notes																						
11	00114	Patient Address	O	Y	XAD	<p>Structure is as per HL7 2.3.1 Data Structure. Typically contains: AddressLine1^Address Line2^Suburb^state^Postcode^country^type Country is optionally populated, defaulting to Australia. Stored in Address table and linked via PatientMasterAddress. Type is as per corporate address type code set:</p> <table border="1"> <thead> <tr> <th>Code</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>H</td> <td>Home</td> </tr> <tr> <td>WP</td> <td>Business</td> </tr> <tr> <td>TMP</td> <td>Temporary</td> </tr> <tr> <td>M</td> <td>Mailing</td> </tr> <tr> <td>B</td> <td>Business</td> </tr> <tr> <td>C</td> <td>Temporary</td> </tr> <tr> <td>L</td> <td>Financial</td> </tr> <tr> <td>F</td> <td>Financial</td> </tr> <tr> <td>R</td> <td>Residential</td> </tr> <tr> <td>U</td> <td>Unknown</td> </tr> </tbody> </table> <p>Note variations to HL7 2.3.1</p>	Code	Description	H	Home	WP	Business	TMP	Temporary	M	Mailing	B	Business	C	Temporary	L	Financial	F	Financial	R	Residential	U	Unknown
Code	Description																											
H	Home																											
WP	Business																											
TMP	Temporary																											
M	Mailing																											
B	Business																											
C	Temporary																											
L	Financial																											
F	Financial																											
R	Residential																											
U	Unknown																											
12	00115	County Code	O			Not used by HIPS																						
13	00116	Phone Number (Home)	O	Y	XTN	<p>See section 5.1 Stored in Contact table and linked via PatientMasterContact.</p>																						
14	00117	Phone Number (Business)	O	Y	XTN	<p>See section 5.1 Stored in Contact table and linked via PatientMasterContact.</p>																						

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref/Notes
15	00118	Primary Language	O		CE	Not used by HIPS
16	00119	Marital Status	O		CE	Not used by HIPS
17	00120	Religion	O		CE	Not used by HIPS
18	00121	Patient Account No.	O		CX	Not used by HIPS
19	00122	SSN No. – Patient	O		CE	Not used by HIPS HIPS will look in PID-3 for Medicare number instead.
20	00123	Drivers Lic. No – Patient	O			Not used by HIPS
21	00124	Mother’s Identifier	O		CX	Not used by HIPS
22	00125	Ethnic Group	O		CE	Not used by HIPS
23	00126	Birth Place	O		CE	Not used by HIPS
24	00127	Multiple Birth Indicator	O		ID	Not used by HIPS
25	00128	Birth Order	O		NM	Not used by HIPS
26	00129	Citizenship	O			Not used by HIPS
27	00130	Veteran’s Military Status	O		CE	Not used by HIPS
28	00739	Nationality	O			Not used by HIPS
29	00740	Patient Death Date/time	O		TS	See section 5.2 Stored in PatientMaster.DateOfDeath. If the date/time entered here is invalid, PatientMaster.DeathIndicator set to 2 (InvalidDate).
30	00741	Patient Death Indicator	O		ID	Not used by HIPS

4.5.5 PV1 – Patient Visit Segment

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref./Notes																										
1	00131	Set Id – Patient Visit	O		SI	Not used by HIPS																										
2	00132	Patient Class	O*		CE	<p>HIPS stores EpisodeTypeId in hips.Episode table. Codes may be configured in hips.EpisodeType table. Codes configured in HIPS reference data are:</p> <table border="1"> <thead> <tr> <th>Code</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>U</td> <td>Unknown</td> </tr> <tr> <td>I</td> <td>Inpatient</td> </tr> <tr> <td>E</td> <td>Emergency</td> </tr> <tr> <td>S</td> <td>Same Day Patient</td> </tr> <tr> <td>C</td> <td>Comm-Resident</td> </tr> <tr> <td>B</td> <td>Observation</td> </tr> <tr> <td>R</td> <td>OPD Recurring</td> </tr> <tr> <td>O</td> <td>Outpatient</td> </tr> <tr> <td>N</td> <td>Phone Note</td> </tr> <tr> <td>P</td> <td>Pre-admit</td> </tr> <tr> <td>W</td> <td>Waiting List-IP</td> </tr> <tr> <td>XXXX</td> <td>Non-standard Patient Class</td> </tr> </tbody> </table> <p>Note: Deviation from HL7 Standard from IS data type to CE data type. If not supplied, defaults to U – Unknown.</p>	Code	Description	U	Unknown	I	Inpatient	E	Emergency	S	Same Day Patient	C	Comm-Resident	B	Observation	R	OPD Recurring	O	Outpatient	N	Phone Note	P	Pre-admit	W	Waiting List-IP	XXXX	Non-standard Patient Class
Code	Description																															
U	Unknown																															
I	Inpatient																															
E	Emergency																															
S	Same Day Patient																															
C	Comm-Resident																															
B	Observation																															
R	OPD Recurring																															
O	Outpatient																															
N	Phone Note																															
P	Pre-admit																															
W	Waiting List-IP																															
XXXX	Non-standard Patient Class																															
3	00133	Assigned Patient Location	O		PL	<p>Ward^Room^Bed^Facility^LocationStatus^PersonLocationType^Building^Floor^LocationDescription.</p> <p>HIPS stores Ward, Room and Bed in hips.Episode table.</p>																										

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref./Notes
4	00134	Admission Type	O		CE	Not used by HIPS
5	00135	Pre-admit number	O		CX	Not used by HIPS
6	00136	Prior Patient Location	O		PL	Not used by HIPS
7	00137	Attending Doctor	O	Y	XCN	See section 5.3 HIPS looks up the doctor by ID (XCN component 1) in HospitalHealthProviderIndividual.PasProviderIdentifier. If found, details may be updated in HealthProviderIndividual. If not found, doctor will be added to HealthProviderIndividual and to HospitalHealthProviderIndividual. HIPS stores the HealthProviderIndividualId into Episode.ResponsibleProviderId.
8	00138	Referring Doctor	O	Y	XCN	Not used by HIPS
9	00139	Consulting Doctor	O	Y	XCN	Not used by HIPS
10	00140	Hospital Service	O		IS	Not used by HIPS
11	00141	Temporary Location	O			Not used by HIPS
12	00142	Pre-Admit Test Indicator	O			Not used by HIPS
13	00143	Re-Admission Indicator	O		IS	Not used by HIPS
14	00144	Admit Source	O		CE	Not used by HIPS
15	00145	Ambulatory Status	O		IS	Not used by HIPS
16	00146	VIP Indicators	O			Not used by HIPS
17	00147	Admitting Doctor	O	Y	XCN	See section 5.3 If there is no Attending Doctor then the Admitting Doctor is stored as per logic described for Attending Doctor.

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref./Notes
18	00148	Patient Type	O		CE	Not used by HIPS
19	00149	Visit Number	R*		CX	Stored in Episode.SourceSystemEpisodeId Note: HIPS uses the Visit Number to identify the episode, for updating an existing episode record. If not supplied, HIPS will create/update the corresponding patient record, but will not create an episode and will record a message in the error log.
20	00150	Financial Class	O	Y	FC	Not used by HIPS
21	00151	Charge Price Indicator	O			Not used by HIPS
22	00152	Courtesy Code	O			Not used by HIPS
23	00153	Credit Rating	O			Not used by HIPS
24	00154	Contract Code	O			Not used by HIPS
25	00155	Contract Effective Date	O			Not used by HIPS
26	00156	Contract Amount	O			Not used by HIPS
27	00157	Contract Period	O			Not used by HIPS
28	00158	Interest Code	O			Not used by HIPS
29	00159	Transfer to Bad Debt code	O			Not used by HIPS
30	00160	Transfer to Bad Debt date	O			Not used by HIPS
31	00161	Bad Debt Agency Code	O			Not used by HIPS
32	00162	Bad Debt Transfer Amount	O			Not used by HIPS
33	00163	Bad Debt Recovery Amount	O			Not used by HIPS
34	00164	Delete Account Indicator	O			Not used by HIPS

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref./Notes
35	00165	Delete Account Date	O			Not used by HIPS
36	00166	Discharge Disposition	O		CE	Not used by HIPS
37	00167	Discharged to Location	O		DLD	Not used by HIPS
38	00168	Diet Type	O		CE	Not used by HIPS
39	00169	Servicing Facility	O		IS	Not used by HIPS
40	00170	Bed Status	O			Not used by HIPS
41	00171	Account Status	O		IS	Not used by HIPS
42	00172	Pending Location	O			Not used by HIPS
43	00173	Prior Temporary Location	O			Not used by HIPS
44	00174	Admit Date/Time	O		TS	See section 5.2 Stored as Episode.AdmissionDate
45	00175	Discharge Date/Time	O		TS	See section 5.2 Stored as Episode.DischargeDate
46	00176	Current Patient Balance	O		NM	Not used by HIPS
47	00177	Total Charges	O			Not used by HIPS
48	00178	Total Adjustments	O			Not used by HIPS
49	00179	Total Payments	O			Not used by HIPS
50	00180	Alternate Visit ID	O		CX	Not used by HIPS
51	01226	Visit indicator	O		IS	Not used by HIPS
52	01224	Other healthcare provider	O			Not used by HIPS

4.5.6 PV2 – Patient Visit - Additional Information Segment

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref.
1	00181	Prior Pending Location	C		PL	Not used by HIPS
2	00182	Accommodation Code	O		CE	Not used by HIPS
3	00183	Admit Reason	O		CE	Code^description. Note: Most systems only supply a free-text value carried in the description sub-component. This field also carries the booking comments for Outpatient Bookings. (S12, S14, S15, S17) HIPS stores description in Episode.AdmissionReason.
4	00184	Transfer Reason	O		CE	Not used by HIPS
5	00185	Patient Valuables	O	Y	ST	Not used by HIPS
6	00186	Patient Valuables Location	O		ST	Not used by HIPS
7	00187	Visit User Code	O		IS	Not used by HIPS
8	00188	Expected Admit Date	O		TS	Not used by HIPS. Expected admit date must go in PV1-44 Admit Date.
9	00189	Expected Discharge Date	O		TS	Not used by HIPS
10	00711	Estimate length of inpatient stay	O		NM	Not used by HIPS
11	00712	Actual length of inpatient stay	O		NM	Not used by HIPS
12	00713	Visit description	O		ST	Not used by HIPS
13	00714	Referral source code	O	Y	XCN	Not used by HIPS
14	00715	Previous service date	O		DT	Not used by HIPS
15	00716	Employment illness related indicator	O		ID	Not used by HIPS
16	00717	Purge status code	O		IS	Not used by HIPS

17	00718	Purge status date	O		DT	Not used by HIPS
18	00719	Special program code	O		IS	Not used by HIPS
19	00720	Retention indicator	O		ID	Not used by HIPS
20	00721	Expected number of insurance plans	O		NM	Not used by HIPS
21	00722	Visit publicity code	O		IS	Not used by HIPS
22	00723	Visit protection indicator	O		ID	Not used by HIPS
23	00724	Clinic Organisation name	O	Y	XON	Not used by HIPS
24	00725	Patient status code	O		IS	Not used by HIPS
25	00726	Visit priority code	O		IS	Not used by HIPS
26	00727	Previous treatment date	O		DT	Not used by HIPS
27	00728	Expected discharge disposition	O		IS	Not used by HIPS
28	00729	Signature on file date	O		DT	Not used by HIPS
29	00730	First similar illness date	O		DT	Not used by HIPS
30	00731	Patient charge adjustment code	O		CE	Not used by HIPS
31	00732	Recurring service code	O		IS	Not used by HIPS
32	00733	Billing media code	O		ID	Not used by HIPS
33	00734	Expected surgery date & time	O		TS	Not used by HIPS
34	00735	Military partnership code	O		ID	Not used by HIPS
35	00736	Military non-availability code	O		ID	Not used by HIPS
36	00737	New born baby indicator	O		ID	Not used by HIPS

37	00738	Baby detained indicator	O		ID	Not used by HIPS
----	-------	-------------------------	---	--	----	------------------

4.5.7 MRG – Merge Patient Information

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref.
1	00211	Prior Patient ID - Internal	R	Y	CX	<ID>^<CheckDigit>^<Check Digit Code>^<Assigning Authority>^<Code Type>^<Assigning Facility> A36 Merge MRN messages have the merge from MRN here. Only one MRN per message – do not use repeats. A45 move visit from this MRN
2	00212	Prior Alternate Patient ID	O	N	CX	Not used by HIPS
3	00213	Prior Patient Account Number	O	N	CX	Not used by HIPS
4	00214	Prior Patient ID – External	C*	N	CX	<ID>^<CheckDigit>^<Check Digit Code>^<Assigning Authority>^<Code Type>^<Assigning Facility> A51 Move Visit has the ‘old MRN’ here, i.e. the MRN that the admission is being removed from. The visit number is in PV1-19. A34 Merge Enterprise ID has the merge from Enterprise ID here.
5	00215	Prior Visit Number	C*	N	CX	A45 move visit to MRN has the visit number here. A35 Merge Visit has the merge-from Visit number in this field.
6	00216	Prior Alternate Visit ID	O	N	CX	Not used by HIPS
7	00217	Prior Patient Name	O	N	XPN	Not used by HIPS

4.5.8 SCH – Schedule Activity Information

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref.
1	00860	Placer Appointment ID	O*	N	EI	Not used by HIPS
2	00861	Filler Appointment ID	O*	N	EI	Not used by HIPS
3	00862	Occurrence Number	O*	N	NM	Not used by HIPS
4	00218	Placer Group Number	O	N	EI	Not used by HIPS
5	00864	Schedule ID	O	N	CE	Not used by HIPS
6	00883	Event Reason	O*	N	CE	Used by HIPS to update the episode lifecycle. See section 2.1
7	00866	Appointment Reason	O		CE	Not used by HIPS
8	00867	Appointment Type	O		CE	Not used by HIPS
9	00868	Appointment Duration	O		NM	Not used by HIPS
10	00869	Appointment Duration Units	O		CE	Not used by HIPS
11	00884	Appointment Timing Quantity	O*	Y	TQ	Not used by HIPS
12	00874	Placer Contact Person	O	Y	XCN	Not used by HIPS
13	00875	Placer Contact Phone Number	O		XTN	Not used by HIPS
14	00876	Placer Contact Address	O	Y	XAD	Not used by HIPS
15	00877	Placer Contact Location	O		PL	Not used by HIPS
16	00885	Filler Contact Person	O*	Y	XCN	Not used by HIPS
17	00886	Filler Contact Phone Number	O		XTN	Not used by HIPS
18	00887	Filler Contact Address	O	Y	XAD	Not used by HIPS

Seq#	Item#	Name	R/O	RP/#	DT	Format/Ref.
19	00888	Filler Contact Location	O		PL	Not used by HIPS
20	00878	Entered by Person	O*	Y	XCN	Not used by HIPS
21	00879	Entered by Phone Number	O	Y	XTN	Not used by HIPS
22	00880	Entered by Location	O		PL	Not used by HIPS
23	00881	Parent Placer Appointment ID	O		EI	Not used by HIPS
24	00882	Parent Filler Appointment ID	O*		EI	Not used by HIPS
25	00889	Filler Status Code	O		CE	Not used by HIPS

5 Data Type Definitions

This section details the specific implementation details for certain data types in use. Whenever the data type is referenced, the format here is followed. This section provides a more comprehensive view of the data types.

5.1 XTN Data Type

The XTN data type utilises the extended format as described in the following table. The following table describes the values in use when populated.

Field	Component Name	Data Sub Type	Format
1	Number	ST*	if supplied, should be same as component 7.
2	Use Code	ID	HL7 table 0201
3	Equipment Type	ID	HL7 table 0202
4	Email address	ST	
5	Country Code	ST*	International dialling country code
6	Area Code	ST*	area (STD) code
7	Phone Number	ST*	contains local portion of phone number, or full mobile (04xxxxxxx) .
8	Extension	ST*	
9	Additional text	ST	

* Variance to HL7 v2.3.1 which uses NM for these component types. Some systems may allow qualifiers to be supplied. e.g. 82231111(SIL) to denote number belongs to patient's sister-in-law.

Examples:

- email address: ^NET^Internet^zz@litlepond.net.au
- mobile number: **0414124124^PRN^CP^^^61^0414124124**
- home phone: **83321234^PRN^PH^^^08^83321234**

5.2 TS Data Type

The TS data type contains two components, as described in the following table. The precision component is optional.

Field	Component Name	Data Sub Type	Format
1	Time	ST	YYYY[MM[DD[hhmm[SS[.S[S[S[S]]]]]]][+/-ZZZZ]

Field	Component Name	Data Sub Type	Format
2	Precision	ST	“YYYY[MM[DD[hhmm[SS[.S[S[S[S]]]]]]][+/-ZZZZ]” down to the level of precision. Eg: “YYYYMM” would indicate a precision down to the month.

5.3 XCN Data Type

The XCN data type utilises the format defined in the following table. The following table describes the values in use when present.

Field	Component Name	Data Sub Type	Format
1	ID Number	ST	
2	Last Name	ST	
3	Given Name	ST	
4	Middle initial or name	ST	
5	Suffix	ST	
6	Prefix	ST	
7	Degree	IS	HL7 2.3.1 Table 360
8	Source Table	IS	This field has not been standardised
9	Assigning Authority	IS	This field has not been standardised
10	Name Type Code	ID	HL7 2.3.1 Table 200
11	Identifier Check Digit	ST	
12	Check Digit Scheme	ID	This field has not been standardised
13	Identifier Type Code		See Identifier Type Codes table below
14	Assigning Facility		See Identifier Type Codes table below

The following table defines the standardised values for the Identifier Type code and the Assigning Facility. Non-standardised values, including values where the Assigning Facility is the site code, will be passed in this field, but have not been standardised.

Identifier Type Code	Assigning Facility	Description
PROVIDER	Sending Facility – As per Standard Enterprise Table ‘Facility Codes’	HIC Provider ID. Note: Assigning Facility shall be sent as the sending facility (rather than HIC) such that receiving systems can determine which site sent a given provider number.
PRESCRIBER	HIC	HIC Prescriber ID

Identifier Type Code	Assigning Facility	Description
INTERNAL	Sending Facility – As per Standard Enterprise Table ‘Facility Codes’	The identifier used internally within the sending facility’s system.

5.4 CE Data Type

The CE data type is as per the HL7 2.3.1 specification. For elements that have been standardised the ‘alternate’ portion of the CE will generally contain the original source information. Non-standardised values from source systems are expected to be passed in CE fields, particularly in repeating fields and therefore validating the coding system is essential to utilising the standardised values.

The ‘alternative’ portion of the CE datatype where supplied is for internal reference only and as a general rule should be ignored by receiving systems. Where the alternative value is present it will contain the value prior to transformation to the Enterprise Standard value. This is of use to internal support personnel to debug missing or incorrect transformations.

If a lookup value could not be located by the Enterprise Standard Transformation, the ID component shall contain the code XXXX. Receiving systems should ignore fields containing code XXXX and not reject the message. Processes within the Enterprise Integration Engine shall create alerts to notify support that a message has been processed but a lookup value could not be identified.

5.5 PL Data type

The Person Location datatype is used in the patient visit segment PV1 to carry important information about the physical location of the patient - either the prior location or the assigned location. HIPS stores only the first three components as Ward, Room and Bed in the Episode table.

Field	Component Name	Data Sub Type	Format
1	Point of Care	IS	Ward Code
2	Room	IS	Room Number or Code
3	Bed	IS	Bed Number or Code
4	Facility	HD	Not used by HIPS
5	Location status	IS	Not used by HIPS
6	Person location type	IS	Not used by HIPS
7	Building	IS	Not used by HIPS
8	Floor	IS	Not used by HIPS
9	Location Description	ST	Not used by HIPS