



RESOURCE AND PATIENT MANAGEMENT SYSTEM

# **Generic Interface System**

(GIS)

## **HL7 Specification**

Based on HL7 Standard Version 2.4

Version 3.01

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Information Technology Support Center  
Division of Information Resources  
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## **1.0 Purpose**

This document specifies an interface between the Indian Health Service (IHS) Resource and Patient Management System (RPMS) and a non-RPMS data system based on the Health Level Seven (HL7) protocol standard. It is intended that this interface form the basis for the exchange of health care data between the IHS RPMS package(s) and the non-RPMS information system.

## 2.0 Overview

### 2.1 Statement of Intent

The IHS is developing and plans to implement a generic interface, using the HL7 protocol standard, for use by the IHS RPMS package(s) in communicating with non-RPMS systems for the purpose of exchanging health care data. The interface will adhere to the HL7 standard to the greatest extent possible and will only use “Z” extensions where it becomes absolutely necessary (for example, to convey information specific to the IHS). This interface specification is subject to modification and/or revision to incorporate changes, improvements, and enhancements. Later versions may support additional functionality of the current HL7 protocol (currently 2.4) and new functionality released in future versions of the HL7 protocol.

### 2.2 Scope

This document describes messages that are transmitted between the RPMS and a non-RPMS information system for the purpose of exchanging health care data. These data can include, but are not necessarily limited to, patient demographics, immunizations, pharmacy prescriptions, and other types of medical information.

### 2.3 Reference Documents

This document describes a specific implementation of the mapping between HL7 segments, events, and messages, and RPMS files and fields. For a complete description of this mapping, please refer to the following documents:

- HL7 Segments to IHS Files Mapping - For each relevant HL7 segment, and the IHS-designed extensions, this document identifies the sequence numbers and lists what RPMS file and field each sequence number is mapped to. For example, this document states that the Patient Name field in the Patient Identification segment (PID:5) is mapped to the Patient file (File 9000001), Name field (Field .01).
- Message Specifications - For each event that the IHS interface package currently recognizes (e.g., Update Patient Information, Pharmacy / Treatment Dispense, etc.), as well as events that the package will recognize in the future, this document describes the message that transmits the event (e.g., ADT^A08, RDS^O01, etc.), without detailing the construction of each segment within the message.



- IHS User Defined Tables - This document lists various tables and sets of data used by the RPMS. For example, the Relationship fields in the NK1 and IN1 segments refer to the Relationship Table in this document.
- CDC Implementation Guide for Immunization Data Transactions using Version 2.3.1 of the HL7 Standard Protocol, 2.0 dated June 1999.

## 2.4 Information and Contacts

If you have any questions or comments regarding this distribution, please contact the OIT Help Desk (IHS).

**Phone:** (505) 248-4371 or (888) 830-7280 (toll free)

**Fax:** (505) 248-4363

**Web:** <http://www.ihs.gov/GeneralWeb/HelpCenter/Helpdesk/index.cfm>

**Email:** [support@ihs.gov](mailto:support@ihs.gov)

## **3.0 General Specifications**

### **3.1 Applicable Standard**

This interface will be implemented using the HL7 Standard, Version 2.4, in order to take advantage of data types, segments and messages that are not available in earlier versions of the Standard.

### **3.2 Communication Protocol**

The HL7 Standard defines only the seventh level of the Open Systems Interconnect (OSI) model. This is the application level. Levels one through six involve primarily communications protocols. The HL7 Standard provides some guidance in this area.

#### **3.2.1 Serial Port Communications (RS232) – Not Available in GIS**

Currently, the most common communication protocol for an IHS interface is interactive RS232, using the Hybrid Lower Layer Protocol (HLLP) described in the HL7 Standard. This protocol is not an official part of the Standard, but is provided as an aid to implementation of the Standard using a serial (RS232) connection. Specific implementation issues that are not covered in the Standard will be negotiated on a case-by-case basis.

#### **3.2.2 Batch File Transfer – Not available in GIS (future)**

A batch file option is available. If this option is selected, the HL7 messages are written to an operating-system-level file instead of being queued for real-time transmission. This option is available only for messages being sent from the RPMS, and is typically used during the initial interface installation to provide, say, a patient census download from the RPMS to the ancillary system.

#### **3.2.3 VA Mailman / Kermit Protocol – Not available in GIS**

A third option available under some circumstances is the VA's MailMan package. One system that uses this option is the Community Health Representative (CHR) package. Using a telephone modem or a direct connection from a PC to a serial port on the RPMS machine, a file of HL7 messages may be transmitted with the Kermit protocol. This option will file messages into the VA FileMan package, which will then take each message and forward it to the HL7 package for processing. This is a one-way data transfer; no message acknowledgments are returned to the PC.

### 3.2.4 TCP/IP Protocol

An inbound socket, as well as an outbound socket, is necessary for each site that information is being transmitted/received.

## 3.3 Application Processing Rules

The HL7 Standard Version 2.3.1, describes the basic rules for application processing by the sending and receiving systems. Information contained in the standard will not be repeated here; therefore, anyone wishing to interface with the RPMS should become familiar with the HL7 Standard.

## 3.4 Specification Description

Subsequent chapters of this specification describe the HL7 messages that are supported by RPMS. Each chapter is organized as follows:

1. *Trigger Events* - A table of supported outbound and inbound trigger events is provided. A trigger event is the real world event that initiates an exchange of messages.
2. *Message Definitions* - For each supported trigger event, the message that is sent when the trigger event occurs is defined using the HL7 abstract message syntax as follows:
  - a. Each message is defined in special notation that lists the segment IDs in the order they would appear in the message. Braces, { . . . }, indicate one or more repetitions of the enclosed group of segments. (The group may contain only a single segment.) Brackets, [ . . . ], show that the enclosed group of segments is optional. If a group of segments is optional and may repeat it should be enclosed in brackets and braces, {[ . . . ]}.
3. *Message Segments* - The segments are listed with a description of the fields which they contain. A segment is a logical grouping of data fields.

### 3.4.1 Segment Attribute Tables

The various chapters of this specification contain segment attribute tables. These tables list and describe the data fields in the segment and characteristics of their usage. In defining a segment, the following information is specified about each field:

#### 3.4.1.1 Sequence

Ordinal position of the data field within the segment. In the segment attribute tables this information is in a column labeled *Seq*.

### 3.4.1.2 Maximum Length

Maximum number of characters that RPMS will support for one occurrence of the data field. The maximum length of each field component is listed behind the component name in the text comments that follow the segment definition table. In the segment attribute tables this information is in a column labeled *Len*.

### 3.4.1.3 Data Type

Restrictions on the contents of the data field. There are a number of data types defined by HL7. These are explained in the text comments that follow the segment definition table where applicable. In the segment attribute tables this information is in a column labeled *DT*.

### 3.4.1.4 Optionality

Whether the field is required, optional, or conditional in a segment. The designations are:

R	Required Outbound
O	Optional (a blank is used to make the table easier to view)
C	Conditional on the trigger event or on some other field(s). The field definitions following the segment attribute table specify the conditions for this field.
X	Not used with this trigger event
B	Left in for backward compatability with previous versions of HL7

In the segment attribute tables this information is in a column labeled *Opt*.

### 3.4.1.5 Repetition

The maximum number of repetitions supported by the RPMS database. The designations are:

Blank	No repetition
Y	The field may repeat an indefinite or site-determined number of times
(integer)	The field may repeat up to the number of times specified in the integer

Each occurrence may contain the number of characters specified by the field's maximum length. In the segment attribute tables this information is in a column labeled *RP/#*.

### 3.4.1.6 Item Number

Integer that uniquely identifies the data field. In the segment attribute tables this information is in a column labeled *Item #*.

### 3.4.1.7 Element Name

Descriptive name for the field. In the segment attribute tables this information is in a column labeled **Element Name**.

### 3.4.1.8 Supported

Whether the field is supported by RPMS. In the segment attribute tables, this information is in a column labeled *Sup*.

I	Supported Inbound
O	Supported Outbound
B	Supported Both Inbound and Outbound

## 3.5 Message Delimiters

The IHS will use the message delimiters that are recommended in the HL7 Standard, as listed below:

Segment Terminator:	<CR> (carriage return; in ASCII, a hex 0D)
Field Separator:	
Component Separator:	^
Sub-Component Separator:	&
Repetition Separator:	~
Escape Character:	\

The Field Separator is the primary delimiter for the message segments and is always the fourth character in the MSH segment. The other delimiters immediately follow the Field Separator as shown here: ^~\& (e.g., the Component Separator is first, followed by the Repetition Separator, the Escape Character, and finally the Sub-Component Separator).

While the IHS has the capability to extract and use any set of delimiting characters that may be present in a message, it is recommended that the non-RPMS information system also use the delimiters defined above, both for consistency and to enhance conformity with the Standard.

## 3.6 Data Type Descriptions

The data types and their descriptions are fully described in the HL7 Standard, Version 2.3.1, and will not be repeated here.

## 4.0 ADT Event Support

### 4.1 Trigger Events

#### 4.1.1 Supported Outbound Events

Event	Description
A01	ADT/ACK - Admit a patient
A02	ADT/ACK - Transfer a patient
A03	ADT/ACK - Discharge a patient
A04	ADT/ACK – Register a patient
A08	ADT/ACK - Update patient information
A28	ADT/ACK - Add person information
A31	ADT/ACK - Update person information

#### 4.1.2 Supported Inbound Events

Event	Description
A01	ADT/ACK - Admit a patient
A02	ADT/ACK - Transfer a patient
A03	ADT/ACK - Discharge a patient
A04	ADT/ACK - Register a patient
A08	ADT/ACK - Update patient information
A28	ADT/ACK - Add person information
A31	ADT/ACK - Update person information

## 4.2 Message Definitions

### 4.2.1 ADT – Admit (Event A01)

An A01 event is used for “Admitted” patients only. It is triggered from an admission in the ADT package. An A01 event should be used to notify of an inpatient’s arrival in the healthcare facility.

Outbound Supported Segments:

Segment	Description
MSH	Message Header
EVN	Event Type
PID	Patient Identification
[PD1]	Additional Demographics
[ZP2]	IHS Patient Information
[{ZP3}]	IHS Patient Information: Tribes

Segment	Description
[[ZP4]]	IHS Patient Information: Community
[[NK1]]	Next of Kin / Associated Parties
PV1	Patient Visit
ZV1	IHS Patient Visit Information
[[DG1]]	Diagnosis Information
[[ZDX]]	IHS Diagnosis Extension
[	
{IN1	Insurance Information
[IN2]	Insurance Additional Information
}]	

Inbound Supported Segments:

Segment	Description
MSH	Message Header
EVN	Event Type
PID	Patient Identification
[PD1]	Additional Demographics
[ZP2]	IHS Patient Information
[[ZP3]]	IHS Patient Information: Tribes
[[ZP4]]	IHS Patient Information: Community
[[NK1]]	Next of Kin / Associated Parties
PV1	Patient Visit
ZV1	IHS Patient Visit Information
[[DG1]]	Diagnosis Information
[[ZDX]]	IHS Diagnosis Extension
[[IN1	Insurance Information
[IN2]	Insurance Additional Information
}]	

#### 4.2.2 ADT – Transfer a Patient (event A02)

An A02 indicates a change in the patients assigned location.

Outbound Supported Segments:

Segment	Description
MSH	Message Header
EVN	Event Type
PID	Patient Identification
[PD1]	Additional Demographics
PV1	Patient Visit
ZV1	IHS Patient Visit Information

Inbound Supported Segments:



Segment	Description
MSH	Message Header
EVN	Event Type
PID	Patient Identification
[PD1]	Additional Demographics
PV1	Patient Visit
ZV1	IHS Patient Visit Information

#### 4.2.3 ADT - Discharge/End Visit (event A03)

An A03 event signals the end of a patient's stay in the healthcare facility. It signals that the patient's status has changed to "discharged" and that a discharge date has been recorded. The patient is no longer in the facility.

Outbound Supported Segments:

Segment	Description
MSH	Message Header
EVN	Event Type
PID	Patient Identification
[PD1]	Additional Demographics
PV1	Patient Visit
ZV1	IHS Patient Visit Information
[[DG1]]	Diagnosis Information
[[ZDX]]	IHS Diagnosis Extension
[[PR1]]	Procedures
[[ZPR]]	IHS Procedures Extension

Inbound Supported Segments:

#### 4.2.4 ADT - Register a Patient (Event A04)

An A04 event signals that the patient has arrived or checked in as a one-time, or recurring outpatient, and is not assigned to a bed. It is also used to signal the beginning of a visit to the Emergency Room. Some systems refer to these events as outpatient registrations or emergency admissions.

Outbound Supported Segments:

Segment	Description
MSH	Message Header
EVN	Event Type
PID	Patient Identification
[PD1]	Additional Demographics
[ZP2]	IHS Patient Information
[[ZP3]]	IHS Patient Information: Tribes
[[ZP4]]	IHS Patient Information: Community
[[NK1]]	Next of Kin / Associated Parties

Segment	Description
PV1	Patient Visit
ZV1	IHS Patient Visit Information
[[DG1]]	Diagnosis Information
[[ZDX]]	IHS Diagnosis Extension
[[IN1]]	Insurance Information

Inbound Supported Segments:

Segment	Description
MSH	Message Header
EVN	Event Type
PID	Patient Identification
[PD1]	Additional Demographics
[ZP2]	IHS Patient Information
[[ZP3]]	IHS Patient Information: Tribes
[[ZP4]]	IHS Patient Information: Community
[[NK1]]	Next of Kin / Associated Parties
PV1	Patient Visit
ZV1	IHS Patient Visit Information
[[DG1]]	Diagnosis Information
[[ZDX]]	IHS Diagnosis Extension
[[IN1]]	Insurance Information

#### 4.2.5 ADT - Update Patient Information (Event A08)

This trigger event is used when any patient information has changed but when no other trigger event has occurred. Visit information updates are appropriate.

Outbound Supported Segments:

Segment	Description
MSH	Message Header
EVN	Event Type
PID	Patient Identification
[PD1]	Additional Demographics
{ZP1}	IHS Patient Information: HRCN
[ZP2]	IHS Patient Information
[[ZP3]]	IHS Patient Information: Tribes
[[ZP4]]	IHS Patient Information: Community
[[NK1]]	Next of Kin / Associated Parties
PV1	Patient Visit
ZV1	IHS Patient Visit Information
OBX	Observation Result
[[DG1]]	Diagnosis Information
[[ZDX]]	IHS Diagnosis Extension
[[PR1]]	Procedures
[[ZPR]]	IHS Procedures Extension
[	

Segment	Description
{IN1	Insurance Information
[IN2]	Insurance Additional Information
}	
]	

Inbound Supported Segments:

Segment	Description
MSH	Message Header
EVN	Event Type
PID	Patient Identification
[PD1]	Additional Demographics
{ZP1}	IHS Patient Information: HRCN
[ZP2]	IHS Patient Information
[[ZP3]]	IHS Patient Information: Tribes
[[ZP4]]	IHS Patient Information: Community
[[NK1]]	Next of Kin / Associated Parties
PV1	Patient Visit
ZV1	IHS Patient Visit Information
[[DG1]]	Diagnosis Information
[[ZDX]]	IHS Diagnosis Extension
[[PR1]]	Procedures
[[ZPR]]	IHS Procedures Extension
[	
{IN1	Insurance Information
[IN2]	Insurance Additional Information
}	
]	

#### 4.2.6 ADT - Add Person Information (Event A28)

The purpose of this message is to allow sites with multiple systems and respective master patient databases to communicate activity related to a person regardless of whether that person is currently a patient on each system. This event does not replace the use of the A01 (admit/visit notification) event. It is not intended to be used for notification of real-time Patient Administration events. Visit information (PV1) will not be included because RPMS stores this information at a visit level and the information typically does not exist when a person is added to the RPMS database. This event is primarily for demographic data.

Outbound Supported Segments:

Segment	Description
MSH	Message Header
EVN	Event Type
PID	Patient Identification
[PD1]	Additional Demographics
{ZP1}	IHS Patient Information: HRCN

Segment	Description
[ZP2]	IHS Patient Information
[{ZP3}]	IHS Patient Information: Tribes
[{ZP4}]	IHS Patient Information: Community
[{NK1}]	Next of Kin / Associated Parties
[	
{IN1	Insurance Information
[IN2]	Insurance Additional Information
}	
]	

Inbound Supported Segments:

Segment	Description
MSH	Message Header
EVN	Event Type
PID	Patient Identification
[PD1]	Additional Demographics
{ZP1}	IHS Patient Information: HRCN
[ZP2]	IHS Patient Information
[{ZP3}]	IHS Patient Information: Tribes
[{ZP4}]	IHS Patient Information: Community
[{NK1}]	Next of Kin / Associated Parties
[	
{IN1	Insurance Information
[IN2]	Insurance Additional Information
}	
]	

#### 4.2.7 ADT - Update Person Information (Event A31)

An A31 event is similar to an A08 (update patient information) event, but an A08 (update patient information) event should be used to update patient information for a visit. This event does not replace the use of the A08 events. It is not intended to be used for notification of real-time registration events. This event is primarily for demographic data.

Outbound Supported Segments:

Segment	Description
MSH	Message Header
EVN	Event Type
PID	Patient Identification
[PD1]	Additional Demographics
{ZP1}	IHS Patient Information: HRCN
[ZP2]	IHS Patient Information
[{ZP3}]	IHS Patient Information: Tribes
[{ZP4}]	IHS Patient Information: Community
[{NK1}]	Next of Kin / Associated Parties

Segment	Description
[	
{IN1	Insurance Information
[IN2]	Insurance Additional Information
}	
]	

Inbound Supported Segments:

Segment	Description
MSH	Message Header
EVN	Event Type
PID	Patient Identification
[PD1]	Additional Demographics
{ZP1}	IHS Patient Information: HRCN
[ZP2]	IHS Patient Information
[{ZP3}]	IHS Patient Information: Tribes
[{ZP4}]	IHS Patient Information: Community
[{NK1}]	Next of Kin / Associated Parties
[	
{IN1	Insurance Information
[IN2]	Insurance Additional Information
}	
]	

## 4.3 Message Segments

### 4.3.1 MSH - Message Header Segment (All Events)

#### 4.3.1.1 MSH Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	1	ST	R		00001	Field Separator	Y
2	4	ST	R		00002	Encoding Characters	Y
3	180	HD	O		00003	Sending Application	Y
4	180	HD	O		00004	Sending Facility	Y
5	180	HD	O		00005	Receiving Application	Y
6	180	HD	O		00006	Receiving Facility	Y
7	26	TS	R		00007	Date/Time Of Message	Y
8	40	ST	O		00008	Security	Y
9	13	CM	R		00009	Message Type	Y
10	20	ST	R		00010	Message Control ID	Y
11	3	PT	R		00011	Processing ID	Y
12	60	VID	R		00012	Version ID	Y
13	15	NM	O		00013	Sequence Number	Y

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
14	180	ST	O		00014	Continuation Pointer	Y
15	2	ID	O		00015	Accept Acknowledgment Type	Y
16	2	ID	O		00016	Application Acknowledgment Type	Y
17	3	ID	O		00017	Country Code	
18	16	ID	O	Y	00692	Character Set	
19	250	CE	O		00693	Principal Language Of Message	
20	20	ID	O		01317	Alternate Character Set Handling Scheme	
21	10	ID	O	Y	01598	Conformance Statement ID	

### 4.3.1.2 MSH Field Definitions

#### Field Separator (ST) 00001

This field contains the separator between the segment ID and the first real field, *MSH-2-encoding characters*. As such it serves as the separator and defines the character to be used as a separator for the rest of the message. RPMS will use |, (ASCII 124), but this value may be overridden, if necessary.

#### Encoding Characters (ST) 00002

This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. RPMS will use ^~\&, (ASCII 94, 126, 92, and 38, respectively), but these values may be overridden, if necessary.

#### Sending Application (HD) 00003

On outbound transactions, this field defines which RPMS application that originated this message. On inbound messages it will identify the sending application.

#### Sending Facility (HD) 00004

On outbound transactions, this field contains the ASUFAC code. For inbound messages it will be the sending system.

#### Receiving Application (HD) 00005

This field uniquely identifies the receiving application.

#### Receiving Facility (HD) 00006

This field identifies the receiving facility. For outbound transactions it will be blank.

**Date/time of Message (TS) 00007**

This field contains the date/time that the message was created. It may be sent with or without including the seconds.

**Message Type (CM) 00009**

Components: <message type> ^ <trigger event>

The second component is not required on response or acknowledgment messages.

**Message Control ID (ST) 00010**

**Processing ID (PT) 00011**

- D Debug
- P Production
- T Training

**Version ID (ID) 00012**

The GIS package supports version 2.2 through version 2.4

**Accept Acknowledgement Type (ID) 00012**

**Application Acknowledgement Type (ID) 00012**

**4.3.2 MSA - Message Acknowledgment Segment (All Events except O01)**

The MSA segment contains information sent while acknowledging another message.

**4.3.2.1 MSA Attributes**

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	2	ID	R		00018	Acknowledgment Code	B
2	20	ST	R		00010	Message Control ID	B
3	80	ST	O		00020	Text Message	
4	15	NM	O		00021	Expected Sequence Number	
5	1	ID	B		00022	Delayed Acknowledgment Type	
6	250	CE	O		00023	Error Condition	

### 4.3.2.2 MSA Field Definitions

#### Acknowledgment Code (ID) 00018

AA Application Accept  
AE Application Error  
AR Application Reject

#### Message Control ID (ST) 00010

This field contains the message control ID of the original message sent by the sending system. It allows the sending system to associate this response with the message for which it is intended.

### 4.3.3 EVN - Event Type Segment (All "A" Events)

#### 4.3.3.1 EVN Attributes

Seq	Len	DT	OPT	RP/#	Item #	Element Name	Sup
1	3	ID	B		00099	Event Type Code	B
2	26	TS	R		00100	Recorded Date/Time	B
3	26	TS	O		00101	Date/Time Planned Event	
4	3	IS	O		00102	Event Reason Code	
5	250	XCN	O	Y	00103	Operator ID	
6	26	TS	O		01278	Event Occurred	
7	180	HD	O		01534	Event Facility	

#### 4.3.3.2 EVN Field Definitions

##### Event Type Code (ID) 00099

*This field has been retained for backward compatibility only. We recommend using the second component (trigger event) of MSH-9-message type to transmit event type code information. This field contains the events corresponding to the trigger events described in the previous section.*

##### Recorded Date/time (TS) 00100

Duplicates MSH:7

### 4.3.4 PID - Patient Identification Segment (All Events)

#### 4.3.4.1 PID Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	4	SI	O		00104	Set ID - PID	



Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
2	20	CX	B		00105	Patient ID	
3	250	CX	R	Y	00106	Patient Identifier List	B
4	20	CX	B	Y	00107	Alternate Patient ID - PID	
5	250	XPN	R	Y	00108	Patient Name	B
6	250	XPN	O	Y	00109	Mother's Maiden Name	B
7	26	TS	O		00110	Date/Time of Birth	B
8	1	IS	O		00111	Administrative Sex	B
9	250	XPN	B	Y	00112	Patient Alias	B
10	250	CE	O	Y	00113	Race	
11	250	XAD	O	Y	00114	Patient Address	B
12	4	IS	B		00115	County Code	
13	250	XTN	O	Y	00116	Phone Number - Home	B
14	250	XTN	O	Y	00117	Phone Number - Business	B
15	250	CE	O		00118	Primary Language	
16	250	CE	O		00119	Marital Status	
17	250	CE	O		00120	Religion	B
18	250	CX	O		00121	Patient Account Number	
19	16	ST	B		00122	SSN Number - Patient	B
20	25	DLN	O		00123	Driver's License Number - Patient	
21	250	CX	O	Y	00124	Mother's Identifier	
22	250	CE	O	Y	00125	Ethnic Group	
23	250	ST	O		00126	Birth Place	
24	1	ID	O		00127	Multiple Birth Indicator	
25	2	NM	O		00128	Birth Order	
26	250	CE	O	Y	00129	Citizenship	
27	250	CE	O		00130	Veterans Military Status	B
28	250	CE	B		00739	Nationality	
29	26	TS	O		00740	Patient Death Date and Time	B
30	1	ID	O		00741	Patient Death Indicator	B
31	1	ID	O		01535	Identity Unknown Indicator	
32	20	IS	O	Y	01536	Identity Reliability Code	
33	26	TS	O		01537	Last Update Date/Time	
34	40	HD	O		01538	Last Update Facility	
35	250	CE	C		01539	Species Code	
36	250	CE	C		01540	Breed Code	
37	80	ST	O		01541	Strain	
38	250	CE	O	2	01542	Production Class Code	

#### 4.3.4.2 PID field definitions

##### Patient ID (Internal ID (CX) 00106

Components: <ID (ST)> ^ ^ ^ <assigning authority (HD)> ^ <identifier type code (IS)>

The IHS will use a combination of the ASUFAC facility code and the Health Record Number with leading zeros, the total length of the first component will be 12. The assigning authority will be the domain, and the identifier type code will be DNS.

**Alternate Patient ID (CX) 00106**

Components: <ID (ST)> ^ ^ ^ <assigning authority (HD)> ^ <identifier type code (IS)>

The repeating field functionality can be used to send multiple Ids. The IHS will use a combination of the ASUFAC facility code and the Health Record Number with leading zeros, the total length of the first component will be 12. The assigning authority will be the domain, and the identifier type code will be DNS. This will contain the remaining Health Record numbers assigned to the patient.

**Patient Name (XPN) 00108**

Components: <last name> ^ <first name> ^ <middle initial or name> ^ <suffix (e.g., JR or III)> ^ <prefix (e.g., DR)>

**Date/Time of Birth (TS) 00110**

This field will contain only the patient's date of birth in the format CCYYMMDD. Date of birth is crucial for performing person matching on inbound ADT events.

**Patient Sex (IS) 00111**

Patient sex is crucial for performing person matching on inbound ADT events.

**Patient Address (XAD) 00114**

Components: <street address> ^ <additional street address> ^ <city> ^ <state> ^ <zip or postal code> ^ <country> ^ ^ <county>

**Phone Number - Home (XTN) 00116**

Components: [(999)]999-9999      Area code is optional.

**Phone Number - Business (XTN) 00117**

Components: [(999)]999-9999 [X99999]      Area code and extension are optional.

**Religion (CE) 00120**

**SSN Number - Patient (ST) 00122**

Format options include:

- Social Security number without dashes - Default

- Social Security number with dashes - Sent in format 999-99-9999
- Social Security Number is crucial for performing person matching on inbound ADT events.

**Veterans Military Status (CE) 00130**

The IHS only stores a yes/no value to indicate whether the patient was a veteran. This accounts for the nonstandard datatype and field length for this field.

**Patient Death Date and Time (TS) 00740**

This field will contain only the patient’s date of death in the format CCYYMMDD.

**Patient Death Indicator (ID) 00741**

This field will contain a ‘Y’ if the patient is deceased.

**4.3.5 ZP1 – IHS Patient Information: Health Record Identifiers (Obsolete)**

**4.3.5.1 ZP1 Attributes**

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	6	NM	R			Health Record Number	B
2	80	CE	R			Health Record Facility	B
3	8	DT				Date Inactivated/Deleted	B
4	60	ST				Record Disposition	<u>B</u>
5	60	CE				Record Status	B

**4.3.5.2 ZP1 Field Definitions**

**Health Record Number (NM)**

The patient’s chart number. When combined with the following field, it provides a unique identification for a patient’s chart.

**Health Record Facility (CE)**

Components: <facility IEN> ^ <facility short name> ^ <99IHS>

The IHS facility identification for the chart number contained in the previous field. Within one RPMS system, a single patient may have multiple chart / facility combinations, so both fields are required to provide a unique chart identification.

**Date Inactivated/Deleted (DT)**

The date this particular chart / facility combination was inactivated or deleted.

### Record Disposition (ST)

Indicates how the record has been disposed of if it is no longer active (e.g., sent to archive, still on file, etc.).

### Record Status (CE)

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

If the non-RPMS system requires any of this data, the installer should refer to the GIS HL7 Segments to IHS Files Mapping document.

## 4.3.6 ZP2 – IHS Patient Information (All “A” Events)

### 4.3.6.1 ZP2 Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	8	DT	R			Date Established	B
2	8	DT	R			Date of last Reg Update	B
3	8	DT	R			Med/RR Release Date	B
4	8	DT	R			Med/RR Release Revoked Date	B
5	12	ST	R			Tribal Enrollment Number	B
6	60	CE	R			CHS Tribal Affiliation	B
7	3	ID	O			Blood Type	B
8	8	DT	R			Date of Last Update	B
9	8	DT	O			Assign Benefits Obtained Date	B
10	8	DT	O			Assign Benefits Expired Date	B
11	60	CE	O			SSN Verification Status	B
12	60	CE	O			Reason for no SSN	B
13	40	AD	O			Birth Place	B
14	6	ST	O			Birth Certificate Number	B
15	60	CE	R			Tribe of Membership	B
16	12	ST	O			Tribe Quantum	B
17	12	ST	R			Indian Blood Quantum	B
18	60	CE	R			Classification/Beneficiary	B
19	8	DT	O			Current Residence Date	B
20	2	ID	O			State of Death	B
21	6	ST	O			Death Certificate Number	B
22	60	ST	O			Current Community	B
23	60	CE	O			Tribe Membership Verified Flag	B
24	1	ID	O			Residence Verified Flag	B
25	8	DT	O			Date Eligibility Determined	B
26	60	CE	O			Eligible Minor Child	B
31	48	PN	O			Father's Name	B
32	40	AD	O			Father's Birth Place	B
33	40	AD	O			Mother's Birth Place	B

#### **4.3.6.2 ZP2 Field Definitions**

##### **Date Established (DT)**

This is the date the record was established.

##### **Date of Last Registration Update (DT)**

This is the date the patient's registration record was last updated.

##### **Med/RR Release Date (DT)**

Date after 1970 on which patient authorized release of information for Medicare/RR billing.

##### **Med/RR Release Revoked Date (DT)**

Date after 1970 on which patient denied or revoked authorization to release information for Medicare/RR billing.

##### **Tribal Enrollment Number (ST)**

Patient's tribal enrollment number

##### **Blood Type (ID)**

##### **Date of Last Update (DT)**

This is the date the patient's record was last updated.

##### **Assign Benefits Obtained Date (DT)**

##### **Assign Benefits Expired Date (DT)**

##### **SSN Verification Status (CE)**

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

##### **Reason For No SSN (CE)**

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

##### **Birth Place (AD)**

Components: <birth city> ^ <birth state>

##### **Birth Certificate Number (ST)**

##### **Tribe Of Membership (CE)**

Components: <tribe code> ^ <tribe name> ^ <99IHS>

##### **Tribe Quantum (ST)**

**Indian Blood Quantum (ST)**

**Classification and Beneficiary (CE)**

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

**Current Residence Date (DT)**

**State of Death (ID)**

**Death Certificate Number (ST)**

**Current Community (ST)**

**Tribe Membership Verified Flag (CE)**

Components: <IHS Internal Value> ^ <IHS External Value> ^ <99IHS>

**Residence Verified Flag (CE)**

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

**Date Eligibility Determined (DT)**

**Eligible Minor Child (CE)**

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

**Father’s Name (PNM)**

**Father’s Birth Place (AD)**

Components: <birth city> ^ <birth state>

**Mother’s Birth Place (AD)**

Components: <birth city> ^ <birth state>

If the non-RPMS system requires any of this data, the installer should refer to the GIS HL7 Segments to IHS Files Mapping document.

**4.3.7 ZP3 – IHS Patient Information: Other Tribes (All “A” Events)**

**4.3.7.1 ZP3 Attributes**

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	40	CE	R			Other Tribe	B
2	12	ST	R			Other Tribe Quantum	B

#### 4.3.7.2 ZP3 Field Definitions

##### Other Tribe (CE)

Components: <tribe Code> ^ <tribe name> ^ <99IHS>

##### Other Tribe Quantum (ST)

If the non-RPMS system requires any of this data, the installer should refer to the GIS HL7 Segments to IHS Files Mapping document.

#### 4.3.8 ZP4 – IHS Patient Information: Previous Community (All “A” Events)

##### 4.3.8.1 ZP4 Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	60	CE	R			Previous Community	B
2	8	DT	O			Date Moved	B
3	8	DT	R			Date Added to File	B

##### 4.3.8.2 ZP4 Field Definitions

##### Previous Community (CE)

Components: <community IEN> ^ <community name> ^ <99IHS>

##### Date Moved (DT)

The date this particular chart / facility combination was inactivated or deleted.

##### Date Added to File (DT)

The date this particular chart / facility combination was inactivated or deleted.

If the non-RPMS system requires any of this data, the installer should refer to the GIS HL7 Segments to IHS Files Mapping document.

#### 4.3.9 PD1 - Patient Additional Demographics (All “A” events and R01)

##### 4.3.9.1 PD1 Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	2	IS	O	Y	00755	Living Dependency	
2	2	IS	O		00742	Living Arrangement	
3	250	XON	O	Y	00756	Patient Primary Facility	
4	250	XCN	B	Y	00757	Patient Primary Care Provider Name & ID No.	B

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
5	2	IS	O		00745	Student Indicator	
6	2	IS	O		00753	Handicap	
7	2	IS	O		00759	Living Will Code	
8	2	IS	O		00760	Organ Donor Code	
9	1	ID	O		00761	Separate Bill	
10	250	CX	O	Y	00762	Duplicate Patient	
11	250	CE	O		00743	Publicity Code	
12	1	ID	O		00744	Protection Indicator	
13	8	DT	O		01566	Protection Indicator Effective Date	
14	250	XON	O	Y	01567	Place of Worship	
15	250	CE	O	Y	01548	Advance Directive Code	
16	1	IS	O		01569	Immunization Registry Status	
17	8	DT	O		01570	Immunization Registry Status Effective Date	
18	8	DT	O		01571	Publicity Code Effective Date	
19	5	IS	O		01572	Military Branch	
20	2	IS	O		00486	Military Rank/Grade	
21	3	IS	O		00487	Military Status	

#### 4.3.9.2 PD1 Field Definitions

##### Primary Care Provider (XCN) 00757

Components: <DEA number> ^ <last name> ^ <first name> ^ <middle initial>

This field contains the primary care physician information.

#### 4.3.10 NK1 - Next Of Kin / Associated Parties Segment (All Events except O01, R01)

##### 4.3.10.1 NK1 Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	4	SI	R		00190	Set ID - NK1	B
2	250	XPN	O	Y	00191	Name	B
3	250	CE	O		00192	Relationship	B
4	250	XAD	O	Y	00193	Address	B
5	250	XTN	O	Y	00194	Phone Number	B
6	250	XTN	O	Y	00195	Business Phone Number	
7	250	CE	O		00196	Contact Role	B
8	8	DT	O		00197	Start Date	
9	8	DT	O		00198	End Date	



Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
10	60	ST	O		00199	Next of Kin / Associated Parties Job Title	
11	20	JCC	O		00200	Next of Kin / Associated Parties Job Code/Class	
12	250	CX	O		00201	Next of Kin / Associated Parties Employee Number	
13	250	XON	O	Y	00202	Organization Name - NK1	B
14	250	CE	O		00119	Marital Status	
15	1	IS	O		00111	Administrative Sex	
16	26	TS	O		00110	Date/Time of Birth	
17	2	IS	O	Y	00755	Living Dependency	
18	2	IS	O	Y	00145	Ambulatory Status	
19	250	CE	O	Y	00129	Citizenship	
20	250	CE	O		00118	Primary Language	
21	2	IS	O		00742	Living Arrangement	
22	250	CE	O		00743	Publicity Code	
23	1	ID	O		00744	Protection Indicator	
24	2	IS	O		00745	Student Indicator	
25	250	CE	O		00120	Religion	
26	250	XPN	O	Y	00109	Mother's Maiden Name	
27	250	CE	O		00739	Nationality	
28	250	CE	O	Y	00125	Ethnic Group	
29	250	CE	O	Y	00747	Contact Reason	
30	250	XPN	O	Y	00748	Contact Person's Name	
31	250	XTN	O	Y	00749	Contact Person's Telephone Number	
32	250	XAD	O	Y	00750	Contact Person's Address	
33	250	CX	O	Y	00751	Next of Kin/Associated Party's Identifiers	
34	2	IS	O		00752	Job Status	B
35	250	CE	O	Y	00113	Race	
36	2	IS	O		00753	Handicap	
37	16	ST	O		00754	Contact Person Social Security Number	

#### 4.3.10.2 NK1 Field Definitions

##### Set ID - Next of Kin / Associated Parties (SI) 00190

For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

##### Name (XPN) 00191

Components: <last name>^<first name>^<middle initial>

### Relationship (CE) 00192

If Contact Role is NOK, this is the relationship of the Next of Kin

If Contact Role is EC, this is the relationship of the Emergency Contact

### Address (XAD) 00193

Components:

<street address> ^ <additional street> ^ <city> ^ <state> ^ <zip or postal code> ^  
<country> ^ ^ <county>

### Phone Number (XTN) 00194

Components: [(999)]999-9999      Area code is optional.

### Contact Role (CE) 00196

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

### Organization Name (XON) 00202

If Relationship is SELF this is the employer name

If Relationship is SPOUSE this is the spouse's employer name

### Job Status Code (IS)

## 4.3.11 PV1 - Patient Visit Segment (All Events except A28, A31)

### 4.3.11.1 PV1 Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	4	SI	O		00131	Set ID - PV1	B
2	1	IS	R		00132	Patient Class	
3	80	PL	O		00133	Assigned Patient Location	B
4	2	IS	O		00134	Admission Type	B
5	250	CX	O		00135	Preadmit Number	
6	80	PL	O		00136	Prior Patient Location	
7	250	XCN	O	Y	00137	Attending Doctor	B
8	250	XCN	O	Y	00138	Referring Doctor	
9	250	XCN	B	Y	00139	Consulting Doctor	B
10	3	IS	O		00140	Hospital Service	B
11	80	PL	O		00141	Temporary Location	
12	2	IS	O		00142	Preadmit Test Indicator	
13	2	IS	O		00143	Re-admission Indicator	
14	6	IS	O		00144	Admit Source	

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
15	2	IS	O	Y	00145	Ambulatory Status	
16	2	IS	O		00146	VIP Indicator	
17	250	XCN	O	Y	00147	Admitting Doctor	
18	2	IS	O		00148	Patient Type	
19	250	CX	O		00149	Visit Number	
20	50	FC	O	Y	00150	Financial Class	B
21	2	IS	O		00151	Charge Price Indicator	
22	2	IS	O		00152	Courtesy Code	
23	2	IS	O		00153	Credit Rating	
24	2	IS	O	Y	00154	Contract Code	
25	8	DT	O	Y	00155	Contract Effective Date	
26	12	NM	O	Y	00156	Contract Amount	
27	3	NM	O	Y	00157	Contract Period	
28	2	IS	O		00158	Interest Code	
29	1	IS	O		00159	Transfer to Bad Debt Code	
30	8	DT	O		00160	Transfer to Bad Debt Date	
31	10	IS	O		00161	Bad Debt Agency Code	
32	12	NM	O		00162	Bad Debt Transfer Amount	
33	12	NM	O		00163	Bad Debt Recovery Amount	
34	1	IS	O		00164	Delete Account Indicator	
35	8	DT	O		00165	Delete Account Date	
36	3	IS	O		00166	Discharge Disposition	B
37	25	CM	O		00167	Discharged to Location	B
38	250	CE	O		00168	Diet Type	
39	2	IS	O		00169	Servicing Facility	
40	1	IS	B		00170	Bed Status	
41	2	IS	O		00171	Account Status	
42	80	PL	O		00172	Pending Location	
43	80	PL	O		00173	Prior Temporary Location	
44	26	TS	O		00174	Admit Date/Time	B
45	26	TS	O	Y	00175	Discharge Date/Time	B
46	12	NM	O		00176	Current Patient Balance	
47	12	NM	O		00177	Total Charges	
48	12	NM	O		00178	Total Adjustments	
49	12	NM	O		00179	Total Payments	
50	250	CX	O		00180	Alternate Visit ID	
51	1	IS	O		01226	Visit Indicator	
52	250	XCN	B	Y	01274	Other Healthcare Provider	

#### **4.3.11.2 PV1 Field Definitions**

##### **Set ID - PV1 (SI) 00131**

IHS supports only one occurrence of this segment.

##### **Assigned Patient Location (PL) 00133**

This will be the Location of Encounter^Clinic for Outpatient, Location of Encounter^Ward for Inpatient

##### **Admission Type (IS) 00134**

This field indicates how the patient came to be admitted to the hospital. (examples: direct admission, transfer from another facility, etc.)

It will contain the IHS code for admission type.

##### **Attending Doctor (XCN) 00137**

Components: <DEA number> ^ <last name> ^ <first name> ^ <middle initial>

This field will contain the primary provider. In the IHS, the primary provider may or may not be a physician.

##### **Consulting Doctor (XCN) 00139**

Components: <DEA number> ^ <last name> ^ <first name> ^ <middle initial>

This field will contain all non-primary providers. These may or may not be physicians.

##### **Hospital Service (IS) 00140**

This field will contain the IHS Service Category internal value. (example: A for ambulatory)

##### **Financial Class (FC) 00150**

Components: <IHS visit type code> ^ <IHS visit type name> ^ <99IHS>

This field contains the IHS visit type.

##### **Discharge Disposition (IS) 00166**

This will contain the IHS code for discharge type.

##### **Discharged to Location (CM) 00168**

##### **Admit Date/Time (TS) 00174**

For an outpatient this is the visit date and time. For an inpatient this is the admission date and time.

### Discharge Date/Time (TS) 00175

This is the discharge date and time for an inpatient.

## 4.3.12 ZV1 – IHS Patient Visit Information (All Events except A28, A31)

### 4.3.12.1 ZV1 Attributes

Seq	Len	DT	Op t	RP/ #	Item #	Element Name	Sup
1	8	DT	R			Date Visit Created	B
2	60	CE	O			Third Party Billed	B
3	65	PL	O			Clinic	B
4	8	DT	O			Date Last Modified	B
5	60	CE	O			Walk In / Appointment	B
6	60	CE	O			Level of Service	B
7	60	CE	O			Eligibility	B
8	12	NM	O			Amount Billed	B
9	50	ST	O			Outside Location	B
10	60	CE	R			Admitting Service	B
11	60	CE	R			Discharge Service	B
12	2	NM	O			Number of Consults	B
13	1	ID	O			Medicare Release	B
14	1	ID	O			Assignment of Benefits	B
15	50	EI	R			Authorization # and Facility	B
16	60	CE	R			Pay Status	B
17	12	NM	R			Total Charges	B
18	60	CE	O			Stillborn	B
19	2	NM	R			Number of Visits	B
20	15	ST	O			Hospital Voucher Number	B
21	30	ST	R			Vendor	B
22	4	NM	R			Activity Time	B
23	3	NM	O			Travel Minutes	B

### 4.3.12.2 ZV1 Field Definitions

#### Date Visit Created (DT)

#### Third Party Billed (CE)

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

#### Clinic (PL)

Left in for backward compatibility.

**Date Last Modified (DT)**

**Walk In / Appointment (CE)**

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

**Level of Service (CE)**

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

**Eligibility (CE)**

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

**Amount Billed (NM)**

**Outside Location (ST)**

**Admitting Service (CE)**

Components: <IHS admitting service code> ^ <IHS admitting service name> ^ <99IHS>

**Discharge Service (CE)**

Components: <IHS discharge service code> ^ <IHS discharge service name> ^ <99IHS>

**Number of Consults (NM)**

**Medicare Release (ID)**

**Assignment of Benefits (ID)**

**Authorization Number and Authorizing Facility (EI)**

**Pay Status (CE)**

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

**Total Charges (NM)**

**Stillborn (CE)**

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

**Number of Visits (NM)**

**Hospital Voucher Number (ST)**

**Vendor (ST)**

**Activity Time (NM)**

**Travel Minutes (NM)**

If the non-RPMS system requires any of this data, the installer should refer to the GIS HL7 Segments to IHS Files Mapping document.

#### 4.3.13 DG1 - Diagnosis Segment (All "A" Events except A28, A31)

The DG1 segment may contain admitting or discharge patient diagnosis information. One DG1 segment will be sent for each diagnosis. Free text diagnosis may also be sent.

DG1 segments are supported inbound via ADT messages.

##### 4.3.13.1 DG1 Attributes

Seq	Len	DT	Opt	RP/#	Item#	Element Name	Sup
1	4	SI	R		00375	Set ID – DG1	B
2	2	ID	R		00376	Diagnosis Coding Method	
3	60	CE			00377	Diagnosis Code	B
4	40	ST	B		00378	Diagnosis Description	
5	26	TS			00379	Diagnosis Date/Time	
6	2	IS	R		00380	Diagnosis Type	B
7	60	CE	B		00381	Major Diagnostic Category	
8	60	CE	B		00382	Diagnostic Related Group	
9	1	ID	B		00383	DRG Approval Indicator	
10	2	IS	B		00384	DRG Grouper Review Code	
11	60	CE	B		00385	Outlier Type	
12	3	NM	B		00386	Outlier Days	
13	12	CP	B		00387	Outlier Cost	
14	4	ST	B		00388	Grouper Version and Type	
15	2	ID	O		00389	Diagnosis Priority	
16	60	XCN		Y	00390	Diagnosing Clinician	
17	3	IS			00766	Diagnosis Classification	B
18	1	ID			00767	Confidential Indicator	
19	26	TS			00768	Attestation Date/Time	

##### 4.3.13.2 DG1 Field Definitions

###### Set ID - DG1 (SI) 00375

For the first occurrence of the segment the sequence number shall be 1, for the second occurrence it shall be 2, etc.

**Diagnosis Code (CE) 00377**

Components: <ICD9 code> ^ <ICD9 diagnosis> ^ <I9>

The diagnosis code sent will be a valid ICD9 diagnosis code.

**Diagnosis Type (IS) 00380**

This field contains a code that identifies the type of diagnosis being sent.

Values	Description
AD	Admitting
DH	Death
NB	Newborn
PV	Purpose of Visit

**Diagnosis Classification (IS) 00389**

This field contains a code that identifies whether this was a primary or secondary diagnosis.

Values	Description
P	Primary
S	Secondary

**4.3.14 ZDX – IHS Diagnosis Extension (All “A” Events except A28, A31)**

**4.3.14.1 ZDX Attributes**

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	80	ST	R			Provider Narrative	B
2	1	NM	O			Stage	B
3	60	CE	O			Modifier	B
4	60	CE	O			Cause of DX	B
5	60	CE	O			First / Revisit	B
6	80	CE	O			Cause of Injury	B

**4.3.14.2 ZDX Field Definitions**

**Provider Narrative (ST)**

**Stage (NM)**

**Modifier (CE)**

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>



**Cause of DX (CE)**

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

**First / Revisit (CE)**

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

**Cause of Injury (CE)**

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

**4.3.15 PR1 - Procedures Segment (Events A03, A08)**

The PR1 segment contains information relative to various types of procedures that can be performed on a patient. This segment is supported via ADT messages.

**4.3.15.1 PR1 Attributes**

Seq	Len	DT	Opt	RP/#	Item#	Element Name	Sup
1	4	SI	R		00391	Set ID - PR1	B
2	2	IS	R		00392	Procedure Coding Method	
3	80	CE	R		00393	Procedure Code	B
4	40	ST	B		00394	Procedure Description	
5	26	TS	R		00395	Procedure Date/Time	B
6	2	IS			00396	Procedure Functional Type	
7	4	NM			00397	Procedure Minutes	
8	120	XCN	B	Y	00398	Anesthesiologist	B
9	2	IS			00399	Anesthesia Code	
10	4	NM			00400	Anesthesia Minutes	B
11	120	XCN	B	Y	00401	Surgeon	B
12	230	XCN	B	Y	00402	Procedure Practitioner	B
13	60	CE			00403	Consent Code	
14	2	NM			00404	Procedure Priority	B
15	80	CE			00772	Associated Diagnosis Code	B
16	80	CE		Y	001316	Procedure Code Modifier	

**4.3.15.2 PR1 Field Definitions****Set ID - PR1 (SI) 00391**

This field contains the number that identifies this transaction. For the first occurrence of the segment the sequence number shall be 1, for the second occurrence it shall be 2, etc.

**Procedure Code (CE) 00393**

This field will indicate whether this is Dental, Procedure or Evaluation and Management.

**Procedure Date/Time (TS) 00395****Anesthesiologist (XCN) 00398**

Components: <DEA number> ^ <last name> ^ <first name> ^ <middle initial>

**Anesthesia Minutes (NM) 00400****Surgeon (XCN) 00401**

Components: <DEA number> ^ <last name> ^ <first name> ^ <middle initial>

This field contains the surgeon who performed the procedure.

**Procedure Practitioner (XCN) 00402**

Components: <DEA number> ^ <last name> ^ <first name> ^ <middle initial>

**Procedure Priority (NM) 00404****Associated Diagnosis Code (CE) 00772**

Components: <ICD9 code> ^ <ICD9 diagnosis> ^ <I9>

The diagnosis code sent will be a valid ICD9 diagnosis code.

**4.3.16 ZPR – IHS Procedure Extension (Events A03, A08)****4.3.16.1 ZPR Attributes**

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	2	NM	R			Number of Units	B
2	60	CE	O			Operative Site	B
3	5	ST	O			Tooth Surface	B
4	80	ST	R			Provider Narrative	B
5	1	ID	O			Infection	B
6	1	ID	O			Anesthesia Administered	B
7	60	CE	O			ASA-PS Class	B
8	60	CE	O			Procedure	B

#### 4.3.16.2 ZPR Field Definitions

##### Number of Units (NM)

Used for dental procedures only.

##### Operative Site (CE)

Components: <dental operative site mnemonic> ^ <dental operative site anatomic name> ^ <99IHS>

##### Tooth Surface (ST)

Used for dental procedures only.

##### Provider Narrative (ST)

##### Infection (ID)

Y for Yes

N for No

##### Anesthesia Administered (ID)

Y for Yes

N for No

##### ASA-PS Class (CE)

Components: ^ <ASA-PS name> ^ <99IHS>

##### Procedure (CE)

Components: <CPT code> ^ <CPT short name> ^ <C4>

#### 4.3.17 IN1 - Insurance segment (All events except O01, R01)

##### 4.3.17.1 IN1 Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	4	SI	R		00426	Set ID - IN1	B
2	60	CE	R		00368	Insurance Plan ID	
3	59	CX	R	Y	00428	Insurance Company ID	
4	130	XON		Y	00429	Insurance Company Name	B
5	106	XAD		Y	00430	Insurance Company Address	
6	48	XPN		Y	00431	Insurance Co. Contact Person	
7	40	XTN		Y	00432	Insurance Co. Phone Number	
8	12	ST			00433	Group Number	B
9	130	XON		Y	00434	Group Name	B
10	12	CX		Y	00435	Insured's Group Emp ID	

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
11	130	XON		Y	00436	Insured's Group Emp Name	
12	8	DT			00437	Plan Effective Date	B
13	8	DT			00438	Plan Expiration Date	B
14	55	CM			00439	Authorization Information	
15	3	IS			00440	Plan Type	
16	48	XPN		Y	00441	Name Of Insured	B
17	80	CE			00442	Insured's Relationship To Patient	B
18	26	TS			00443	Insured's Date Of Birth	B
19	106	XAD		Y	00444	Insured's Address	B
20	2	IS			00445	Assignment Of Benefits	
21	2	IS			00446	Coordination Of Benefits	
22	2	ST			00447	Coord Of Ben. Priority	
23	2	ID			00448	Notice Of Admission Flag	
24	8	DT			00449	Notice Of Admission Date	
25	2	ID			00450	Report Of Eligibility Flag	
26	8	DT			00451	Report Of Eligibility Date	
27	2	IS			00452	Release Information Code	
28	15	ST			00453	Pre-Admit Cert (PAC)	
29	26	TS			00454	Verification Date/Time	
30	60	XCN			00455	Verification By	
31	2	IS			00456	Type Of Agreement Code	
32	2	IS			00457	Billing Status	
33	4	NM			00458	Lifetime Reserve Days	
34	4	NM			00459	Delay Before L.R. Day	
35	8	IS			00460	Company Plan Code	
36	15	ST			00461	Policy Number	
37	12	CP			00462	Policy Deductible	
38	12	CP			00463	Policy Limit - Amount	
39	4	NM			00464	Policy Limit - Days	
40	12	CP			00465	Room Rate - Semi-Private	
41	12	CP			00466	Room Rate - Private	
42	60	CE			00467	Insured's Employment Status	
43	1	IS			00468	Insured's Sex	B
44	106	XAD		Y	00469	Insured's Employer Address	
45	2	ST			00470	Verification Status	
46	8	IS			00471	Prior Insurance Plan ID	
47	3	IS			01227	Coverage Type	B
48	2	IS			00753	Handicap	
49	12	CX		Y	01230	Insured's ID Number	B

#### 4.3.17.2 IN1 Field Definitions

##### **Set ID - IN1 (SI) 00426**

For the first occurrence the sequence number shall be 1, for the second occurrence it shall be 2, etc.

##### **Insurance Company Name (XON) 00429**

For Medicare this will be "MEDICARE"  
For Medicaid this will be "MEDICAID"  
Otherwise it will be the name of the insurance company.

##### **Group Number (ST) 00433**

For Medicare this will be "MEDICARE"  
For Medicaid this will be "MEDICAID"  
Otherwise it will be the name of the insurance company.

##### **Plan Effective Date (DT) 00437**

For Medicaid and Medicare this will be the eligibility date.  
For private insurance this will be the effective date.

##### **Plan Expiration Date (DT) 00438**

For Medicaid and Medicare this will be the eligibility date.  
For private insurance this will be the effective date.

##### **Name of Insured (XPN) 00441**

Components: <last name> ^ <first name> ^ <middle initial or name> ^ <suffix  
(e.g., JR or III)> ^ <prefix (e.g., DR)>

For Medicare this will be "MEDICARE"  
For Medicaid this will be "MEDICAID"  
Otherwise it will be the name of the insurance company.

##### **Insured's Relation to Patient (CE) 00442**

Components: <Abbreviation> ^ <Description> ^ <99IHS>

##### **Insured's Date/Time of Birth (TS) 00443**

This field will contain only the insured's date of birth in the format CCYYMMDD

##### **Insured's Address (XAD) 00444**

Components: <street address> ^ <additional street address> ^ <city> ^ <state> ^  
<zip or postal code> ^ <country> ^ ^ <county>

For private insurance this will hold the policy holders address.

**Insured's Sex (IS) 00468**

For Medicaid this will be the sex of insured.

For private insurance this will be the policy holders sex.

**Coverage Type (IS) 00470****Insured's ID Number (CX) 001230**

For Medicare this will be the Medicare number.

For Medicaid this will be the Medicaid number.

For private insurance this will be the policy number.

### 4.3.18 IN2 - Insurance Additional Information Segment (All Events except O01, R01)

#### 4.3.18.1 IN2 Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	59	CX		Y	00472	Insured's Employee ID	
2	11	ST			00473	Insured's Social Security Number	
3	130	XCN		Y	00474	Insured's Employer Name and ID	B
4	1	IS			00475	Employer Information Data	
5	1	IS		Y	00476	Mail Claim Party	
6	15	ST			00477	Medicare Health Ins Card Number	B
7	48	XPN		Y	00478	Medicaid Case Name	
8	15	ST			00479	Medicaid Case Number	B
9	48	XPN		Y	00480	Champus Sponsor Name	
10	20	ST			00481	Champus ID Number	
11	80	CE			00482	Dependent Of Champus Recipient	
12	25	ST			00483	Champus Organization	
13	25	ST			00484	Champus Station	
14	14	IS			00485	Champus Service	
15	2	IS			00486	Champus Rank/Grade	
16	3	IS			00487	Champus Status	
17	8	DT			00488	Champus Retire Date	
18	1	ID			00489	Champus Non-Avail Cert On File	
19	1	ID			00490	Baby Coverage	
20	1	ID			00491	Combine Baby Bill	
21	1	ST			00492	Blood Deductible	

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
22	48	XPN		Y	00493	Special Coverage Approval Name	
23	30	ST			00494	Special Coverage Approval Title	
24	8	IS		Y	00495	Non-Covered Insurance Code	
25	59	CX		Y	00496	Payor ID	
26	59	CX		Y	00497	Payor Subscriber ID	
27	1	IS			00498	Eligibility Source	
28	25	CM		Y	00499	Room Coverage Type/Amount	
29	25	CM		Y	00500	Policy Type/Amount	
30	25	CM			00501	Daily Deductible	
31	2	IS			00755	Living Dependency	
32	2	IS			00145	Ambulatory Status	
33	80	CE			00129	Citizenship	
34	60	CE			00118	Primary Language	
35	2	IS			00742	Living Arrangement	
36	80	CE			00743	Publicity Indicator	
37	1	ID			00744	Protection Indicator	
38	2	IS			00745	Student Indicator	
39	80	IS			00120	Religion	
40	48	XPN		Y	00746	Mother's Maiden Name	
41	80	CE			00739	Nationality	
42	80	CE		Y	00125	Ethnic Group	
43	80	CE		Y	00119	Marital Status	
44	8	DT			00787	Insured's Employment Start Date	
45	8	DT			00783	Insured's Employment Stop Date	
46	20	ST			00785	Job Title	
47	20	JCC			00786	Job Code/Class	
48	2	IS			00752	Job Status	
49	48	XPN		Y	00789	Employer Contact Person Name	
50	40	XTN		Y	00790	Employer Contact Person Phone #	
51	2	IS			00791	Employer Contact Reason	
52	48	XPN		Y	00792	Insured's Contact Person's Name	
53	40	XTN		Y	00793	Insured's Contact Person Phone #	
54	2	IS		Y	00794	Insured's Contact Person Reason	
55	8	DT			00795	Relationship To Patient Start Date	
56	8	DT		Y	00796	Relationship To Patient Stop Date	
57	2	IS			00797	Insurance Co. Contact Reason	
58	40	XTN			00798	Insurance Co Contact Phone #	

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
59	2	IS			00799	Policy Scope	
60	2	IS			00800	Policy Source	
61	60	CX			00801	Patient Member Number	
62	80	CE			00802	Guarantor's Rel To Insured	
63	40	XTN		Y	00803	Insured's Phone Number - Home	
64	40	XTN		Y	00804	Insured's Employer Phone #	
65	60	CE			00805	Military Handicapped Program	
66	1	ID			00806	Suspend Flag	
67	1	ID			00807	Copay Limit Flag	
68	1	ID			00808	Stoploss Limit Flag	
69	130	XON			00809	Insured Organization Name & ID	
70	130	XON			00810	Insured Emp Org Name And ID	
71	80	CE		Y	00113	Race	
72	60	CE			00811	HCFA Patient Rel to Insured	

#### 4.3.18.2 IN2 Field Definitions

##### **Insured's Employer Name and ID (XCN) 00474**

Components: ^ <employer name>

This field is used for private insurance only.

##### **Medicare Health Insurance Care Number (ST) 00477**



## 4.4 Example Transactions

### 4.4.1 Admit Patient – Event A01

```
MSH|^~\&|RPMS_GCPR|CIMARRON||CIMARRON|20000620101249||ADT^A01|IHS-
168|P|2.3.1||AL|AL|
EVN|A01|20000620101249||
PID|1||202810999999^DULCE HEALTH
CENTER.IHS.GOV^DNS||DAMU^CARMEN^W.^^^|19421022|F||PO BOX 88^LAKE
VALLEY^NM^87528|||||249778528
PD1|||
ZP2|19900829|19900921|||^99IHS|19980128|||^99IHS|^99IHS|FROGMORE^SOUT
H CAROLINA||000^NON-INDIAN
BENEFICIARY^99IHS|NONE|NONE|08^OTHER^99IHS|19421022||LUMBERTON|^99IHS||
^99IHS|||
ZP4|^LUMBERTON^99IHS|19421022|19900829
NK1|1|^99IHS||NOK^NEXT OF KIN^99IHS
NK1|2|^99IHS||EC^EMERGENCY CONTACT^99IHS
NK1|3|01^SELF^99IHS||01^SELF^99IHS|||
NK1|4|02^SPOUSE^99IHS||02^SPOUSE^99IHS|||
PV1|1|SANTA FE HO^||^MULLIGAN,WALLACE
J||HOS|||||IHS|||||||19940901120000
ZV1|19940913|10^99IHS|SANTA FE
HO|19940913|^99IHS|^99IHS|^99IHS|||||
```

### 4.4.2 Transfer Patient – Event A02

```
MSH|^~\&|RPMS_GCPR|CIMARRON||CIMARRON|20000620101250||ADT^A02|IHS-
169|P|2.3.1||AL|AL|
EVN|A02|20000620101250||
PID|1||202810999999^DULCE HEALTH
CENTER.IHS.GOV^DNS||DAMU^CARMEN^W.^^^|19421022|F||PO BOX 88^LAKE
VALLEY^NM^87528|||||249778528
PD1|||
PV1|1|SANTA FE HO^||^MULLIGAN,WALLACE
J||HOS|||||IHS|||||||19940901120000|19940902000000
ZV1|19940913|10^99IHS|SANTA FE
HO|19940913|^99IHS|^99IHS|^99IHS|||||
```

### 4.4.3 Discharge Patient – Event A03

```
MSH|^~\&|RPMS_GCPR|CIMARRON||CIMARRON|20000620101250||ADT^A03|IHS-
170|P|2.3.1||AL|AL|
EVN|A03|20000620101250||
PID|1||202810999999^DULCE HEALTH
CENTER.IHS.GOV^DNS||DAMU^CARMEN^W.^^^|19421022|F||PO BOX 88^LAKE
VALLEY^NM^87528|||||249778528
PD1|||
PV1|1|SANTA FE HO^||^MULLIGAN,WALLACE
J||HOS|||||IHS|||||||19940901120000|19940902000000
ZV1|19940913|10^99IHS|SANTA FE
HO|19940913|^99IHS|^99IHS|^99IHS|||||
DG1|1|250^DM UNCOMPL/T-II/NIDDM,NS UNCON^I9||PV|||||PRI
ZDX|DM|^99IHS|^99IHS|2^REVISIT^99IHS|^99IHS
```

#### 4.4.4 Register Patient – Event A04

```

MSH|^~\&|RPMS_GCP|R|CIMARRON|GCP|R_FRAMEWORK|CIMARRON|20000620101555||ADT^A0
4|IHS-179|P|2.3.1|||AL|AL|
EVN|A04|20000620101555||
PID|1||202810007325^^^^DULCE HEALTH
CENTER.IHS.GOV^DNS||CHEVAZ^ADRIAN^RYAN^^^|CURYZ^EDWENA^GARCIA^^^|19540929|
M|||POB 364^CLOUDCROFT^NM^87528||759-3330|759-3242 EXT 283|||585182546
PD1|||
ZP2|19860122|19980921|||^99IHS||19980921|||^99IHS|^99IHS|SANTO DOMINGO
PUEBLO^NEW MEXICO||120^SANTO DOMINGO PUEBLO,
NM^99IHS|FULL|FULL|01^INDIAN/ALASKA
NATIVE^99IHS|19810417||DULCE|^99IHS||^99IHS|||SANTO
DOMINGO^NM|SANTO DOMINGO^NM
ZP4|^DULCE^99IHS|19810417|19860122
NK1|1|CHEVAZ^ELLIOTT^^^^|02^FATHER^99IHS|P O BOX 107^^ISLETA
PUEBL^NM^87528|505-465-0237||NOK^NEXT OF KIN^99IHS
NK1|2|CHEVAZ^NELLIE^C^^|02^SPOUSE^99IHS|PO BOX 624^^CHSKA TOH
SH^NM^87528|759-3330/3613||EC^EMERGENCY CONTACT^99IHS
NK1|3||01^SELF^99IHS|||01^SELF^99IHS|||JICARILLA APACHE TRIBE
NK1|4||02^SPOUSE^99IHS|||02^SPOUSE^99IHS|||JICARILLA APACHE TRIBE
IN1|1||NEW MEXICO BC/BS INC||JICARILLA
AP|||19860601|||CHAVEZ, PATRICK, SR||19540929000000|||
|M|||YIA585645281
IN2
IN1|2||NM BC/BS DENTAL CLASSIC||JICARILLA
AP|||19950701|||CHAVEZ, PATRICK, SR||19540929000000|||
|M|||YIA585645281
IN2

```

#### 4.4.5 Update Patient Information – Event A08

```

MSH|^~\&|RPMS_GCP|R|CIMARRON||CIMARRON|20000620101618||ADT^A08|IHS-
180|P|2.3.1|||AL|AL|
EVN|A08|20000620101618||
PID|1||202810007325^^^^DULCE HEALTH
CENTER.IHS.GOV^DNS||CHEVAZ^ADRIAN^RYAN^^^|CURYZ^EDWENA^GARCIA^^^|19540929|
M|||POB 364^CLOUDCROFT^NM^87528||759-3330|759-3242 EXT 283|||585182546
PD1|||
ZP2|19860122|19980921|||^99IHS||19980921|||^99IHS|^99IHS|SANTO DOMINGO
PUEBLO^NEW MEXICO||120^SANTO DOMINGO PUEBLO,
NM^99IHS|FULL|FULL|01^INDIAN/ALASKA
NATIVE^99IHS|19810417||DULCE|^99IHS||^99IHS|||SANTO
DOMINGO^NM|SANTO DOMINGO^NM
ZP4|^DULCE^99IHS|19810417|19860122
NK1|1|CHEVAZ^ELLIOTT^^^^|02^FATHER^99IHS|P O BOX 107^^ISLETA
PUEBL^NM^87528|505-465-0237||NOK^NEXT OF KIN^99IHS
NK1|2|CHEVAZ^NELLIE^C^^|02^SPOUSE^99IHS|PO BOX 624^^CHSKA TOH
SH^NM^87528|759-3330/3613||EC^EMERGENCY CONTACT^99IHS
NK1|3||01^SELF^99IHS|||01^SELF^99IHS|||JICARILLA APACHE TRIBE
NK1|4||02^SPOUSE^99IHS|||02^SPOUSE^99IHS|||JICARILLA APACHE TRIBE
PV1|1|DULCE HEALTH
CENTER^GENERAL|||AMB|||IHS|||1999051712000
0
ZV1|19990517|^99IHS|DULCE HEALTH
CENTER|19990518|^99IHS|^99IHS|^99IHS|||
OBX|1|ST|^SNM^^LYTES^99IHS|LYTES|||
OBX|2|ST|^SNM^^SODIUM^99IHS|SODIUM|145||137^145|
OBX|3|ST|^SNM^^POTASSIUM^99IHS|POTASSIUM|2.3||3.6^5|L*
OBX|4|ST|^SNM^^CHLORIDE^99IHS|CHLORIDE|123||98^107|H
OBX|5|ST|^SNM^^CO2^99IHS|CO2|25.2||22^30|

```



## 5.0 Order Entry

### 5.1 Trigger Events

#### 5.1.1 Supported Outbound Events

Event	Description
O01	RDS – Pharmacy Treatment / Dispense Message
V01	VXQ – Query for Vaccination Record
V02	VXX – Response to Vaccination Query with multiple PID matches
V03	VXR – Vaccination Record Response
V04	VXU – Unsolicited Vaccination Record Update

#### 5.1.2 Supported Inbound Events

Event	Description
O01	RDS – Pharmacy Treatment / Dispense Message
V01	VXQ – Query for Vaccination Record
V02	VXX – Response to Vaccination Query with multiple PID matches
V02	VXR – Vaccination Record Response
V04	VXU – Unsolicited Vaccination Record Update

## 5.2 Message Definitions

### 5.2.1 RDS – Pharmacy Treatment / Dispense Message (event O01)

The RDS message is used to transmit/receive pharmacy prescription information to/from the RPMS system.

Outbound Supported Segments:

Segment	Description
MSH	Message Header
PID	Patient Identification
{ZP1}	IHS Patient Information: HRCN
PV1	Patient Visit
ZV1	IHS Patient Visit Information
ORC	Common Order
RXD	Pharmacy / Treatment Dispense

Inbound Supported Segments:

Segment	Description
MSH	Message Header

Segment	Description
PID	Patient Identification
{ZP1}	IHS Patient Information: HRCN
PV1	Patient Visit
ZV1	IHS Patient Visit Information
ORC	Common Order
RXD	Pharmacy / Treatment Dispense

### 5.2.2 VXQ – Query for Vaccination Record (Event V01)

The V01 event is used to query another system for a particular vaccination record. Please see CDC Implementation Guide for Immunization Data Transactions using Version 2.3.1 of the HL7 Standard Protocol, 2.0 dated June 1999 for detailed information. The IHS specification uses all of the required fields.

Outbound Supported Segments:

Segment	Description
MSH	Message Header
QRD	Query Definition Segment
[QRF]	Query Filter Segment

Inbound Supported Segments:

Segment	Description
MSH	Message Header
QRD	Query Definition Segment
[QRF]	Query Filter Segment

### 5.2.3 VXX - Response to Vaccination Query with Multiple PID Matches(Event V02)

The V02 event is used to respond to the originating query when an exact match cannot be made. Please see CDC Implementation Guide for Immunization Data Transactions using Version 2.3.1 of the HL7 Standard Protocol, 2.0 dated June 1999 for detailed information. The IHS specification uses all of the required fields.

Outbound Supported Segments:

Segment	Description
MSH	Message Header
QRD	Query Definition Segment
[QRF]	Query Filter Segment
PID	Patient Identification
NK1	Next of Kin

Inbound Supported Segments:

Segment	Description
MSH	Message Header
QRD	Query Definition Segment
[QRF]	Query Filter Segment
PID	Patient Identification
NK1	Next of Kin

#### 5.2.4 VXR - Vaccination Record Response (Event V03)

The V03 event is used to transmit/receive a response to the originating query that contains vaccination update information to/from the RPMS system. Please see CDC Implementation Guide for Immunization Data Transactions using Version 2.3.1 of the HL7 Standard Protocol, 2.0 dated June 1999 for detailed information. The IHS specification uses all of the required fields.

Outbound Supported Segments:

Segment	Description
MSH	Message Header
QRD	Query Definition Segment
[QRF]	Query Filter Segment
PID	Patient Identification
NK1	Next of Kin
PV1	Patient Visit
ZV1	IHS Patient Visit Information
IN1	Insurance
IN2	Additional Insurance
ORC	Common Order
RXA	Pharmacy / Treatment Administration
ZRA	IHS Pharmacy / Treatment Extension

Inbound Supported Segments:

Segment	Description
MSH	Message Header
QRD	Query Definition Segment
[QRF]	Query Filter Segment
PID	Patient Identification
NK1	Next of Kin
PV1	Patient Visit
ZV1	IHS Patient Visit Information
IN1	Insurance
IN2	Additional Insurance
ORC	Common Order
RXA	Pharmacy / Treatment Administration
ZRA	IHS Pharmacy / Treatment Extension

## 5.2.5 VXU - Unsolicited Vaccination Record Update (Event V04)

The V04 event is used to transmit/receive unsolicited vaccination update information to/from the RPMS system. Please see CDC Implementation Guide for Immunization Data Transactions using Version 2.3.1 of the HL7 Standard Protocol, 2.0 dated June 1999 for detailed information. The IHS specification uses all of the required fields.

Outbound Supported Segments:

Segment	Description
MSH	Message Header
PID	Patient Identification
NK1	Next of Kin
PV1	Patient Visit
ZV1	IHS Patient Visit Information
IN1	Insurance
IN2	Additional Insurance
ORC	Common Order
RXA	Pharmacy / Treatment Administration
ZRA	IHS Pharmacy / Treatment Extension

Inbound Supported Segments:

Segment	Description
MSH	Message Header
PID	Patient Identification
NK1	Next of Kin
PV1	Patient Visit
ZV1	IHS Patient Visit Information
IN1	Insurance
IN2	Additional Insurance
ORC	Common Order
RXA	Pharmacy / Treatment Administration
ZRA	IHS Pharmacy / Treatment Extension

## 5.3 Message Segments

### 5.3.1 ORC - Common Order Segment (Events O01, V04)

#### 5.3.1.1 ORC Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
	2	ID	R		00215	Order Control	B
	22	EI	C		00216	Placer Order Number	
	22	EI	C		00217	Filler Order Number	B
	22	EI			00218	Placer Group Number	
	2	ID			00219	Order Status	

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
	1	ID			00220	Response Flag	
	200	TQ			00221	Quantity/Timing	B
	200	CM			00222	Parent	
	26	TS			00223	Date/Time of Transaction	
	120	XCN			00224	Entered By	B
	120	XCN			00225	Verified By	
	120	XCN			00226	Ordering Provider	B
	80	PL			00227	Enterer's Location	
	40	XTN		Y/2	00228	Call Back Phone Number	
	26	TS			00229	Order Effective Date/Time	
	200	CE			00230	Order Control Code Reason	
	60	CE			00231	Entering Organization	
	60	CE			00232	Entering Device	
	120	XCN			00233	Action By	
	40	CE			01310	Advanced Beneficiary Notice	

### 5.3.1.2 ORC Field Definitions

#### Order Control (ID) 00215

Order control codes and their meaning:

Value	Description	Event
NW	New order	O01
RP	Change existing record	O01
DC	Delete existing record	O01
RE	Observations to follow	V04

#### Filler Order Number (EI) 00217

Components: <V File IEN> ^ <Visit Date/Time> ^ <IMM/MED>

#### Quantity / Timing (TQ) 00221

Components: <quantity> ^ <sig> ^ <days prescribed> ^ ^ ^ ^ sig text O01 event only.

#### Entered By (XCN) 00224

#### Ordering Provider (XCN) 00226

Components: <DEA number> ^ <last name> ^ <first name> ^ <middle initial> ^ ^ ^ <degree (e.g., MD)>O01 event only.



## 5.3.2 RXA – Pharmacy / Treatment Administration (Event V04)

### 5.3.2.1 RXA Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	4	NM	R		00342	Give Sub-ID Counter	B
2	4	NM	R		00344	Administration Sub-ID Counter	B
3	26	TS	R		00345	Date/Time Start of Administration	B
4	26	TS	R		00346	Date/Time End of Administration	
5	100	TS	R		00347	Administered Code	B
6	20	CE	R		00348	Administered Amount	
7	60	CE	C		00349	Administered Units	
8	60	CE			00350	Administered Dosage Form	
9	200	CE	C	Y	00351	Administration Notes	
10	200	XCN		Y	00352	Administering Provider	
11	200	CM	C		00353	Administered-at Location	
12	20	ST	C		00354	Administered Per (Time Unit)	
13	20	NM			01134	Administered Strength	
14	60	CE			01135	Administered Strength Units	
15	20	ST		Y	01129	Substance Lot Number	
16	26	TS		Y	01130	Substance Expiration Date	
17	60	CE		Y	01131	Substance Manufacturer Name	
18	200	CE		Y	01136	Substance Refusal Reason	
19	200	CE		Y	01123	Indication	
20	2	ID			01223	Completion Status	
21	2	ID			01224	Action Code	
22	26	TS			01225	System Entry Date/Time	

### 5.3.2.2 RXA Field Definitions

#### **Give Sub-ID Counter (NM) 00342**

This is always 1.

#### **Administration Sub-ID Counter (NM) 00344**

This is always 1.

#### **Date/Time Start of Administration (TS) 00346**

This is the visit date/time.

#### **Administered Code (CE) 00348**

Components: <immunization code> ^ <immunization name> ^ <CVX>

#### **Substance Lot Number (ST) 01129**

### Substance Manufacturer Name (CE) 01131

Components: <value> ^ <manufacturer description> ^ <MVX>

## 5.3.3 RXD – Pharmacy / Treatment Dispense (Event 001)

### 5.3.3.1 RXD Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	4	NM	R		00334	Dispense Sub-ID Counter	B
2	100	CE	R		00335	Dispense/Give Code	B
3	26	TS	R		00336	Date/Time Dispensed	B
4	20	NM	R		00337	Actual Dispense Amount	B
5	60	CE	C		00338	Actual Dispense Units	
6	60	CE			00339	Actual Dosage Form	
7	20	ST	R		00325	Prescription Number	
8	20	NM	C		00326	Number of Refills Remaining	
9	200	ST	O	Y	00340	Dispense Notes	
10	200	XCN		Y	00341	Dispensing Provider	
11	1	ID			00322	Substitution Status	
12	10	CQ			00329	Total Daily Dose	
13	200	CM	C		00299	Dispense-to Location	
14	1	ID			00307	Needs Human Review	
15	200	CE		Y	00330	Pharmacy/Treatment Supplier Special Dispensing Instructions	
16	20	NM			01132	Actual Strength	
17	60	CE			01133	Actual Strength Unit	
18	20	ST		Y	01129	Substance Lot Number	
19	26	TS		Y	01130	Substance Expiration Date	
20	60	CE		Y	01131	Substance Manufacturer Name	
21	200	CE		Y	01123	Indication	
22	20	NM			01220	Dispense Package Size	
23	60	CE			01221	Dispense Package Size Unit	
24	2	ID			01222	Dispense Package Method	

### 5.3.3.2 RXD Field Definitions

#### Dispense Sub-ID Counter (NM) 00334

This field starts with 1 and is incremented by 1 for each OBR segment within a message.

#### Dispense Give Code (CE) 00335

Components: <NDC code> ^ <Drug Name> ^ <99IHS> ^ ^ <non table drug name> ^ <99IHS>

**Date/Time Dispensed (TS) 00336**

**Actual Dispense Amount (NM) 00337**

**Prescription Number (NM) 00325**

This will contain the IHS prescription number.

**Dispense Notes (ST) 00340**

**Dispensing Provider (XCN) 00341**

Components: <DEA number> ^ <last name> ^ <first name> ^ <middle initial>

### 5.3.4 ZRA – IHS Pharmacy / Treatment Administration Extension (Event V04)

#### 5.3.4.1 ZRA Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	60	CE	O			Series	B
2	60	CE	O			Reaction	B

#### 5.3.4.2 ZRA Field Definitions

##### Series (CE)

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

##### Reaction (CE)

Components: <IHS internal value> ^ <IHS external value> ^ <99IHS>

## 5.4 Example Transactions

### 5.4.1 RDS – Pharmacy Treatment / Dispense Message

```
MSH|^~\&|RPMS_GCPR|CIMARRON|GCPR_FRAMEWORK|CIMARRON|20000620101252||RDS^O0
1|IHS-176|P|2.3.1|||NE|NE|
PID|1||202810072926^^^^DULCE HEALTH
CENTER.IHS.GOV^DNS||PASETE^TAYLOR^JR.^^^|CUUPAR^HEATHER^DEE^^^|19950
630|M||POB 911^^MESCALRO RES^NM^87528||759-3562|||648382170
PV1|1||DULCE HEALTH
CENTER^|||||AMB|||||||IHS|||||||19990428120000
ZV1|19990428|19^^99IHS|DULCE HEALTH
CENTER|19990428|^99IHS|^99IHS|^99IHS|||||||
ORC|OU||191645^19990428120000^|||INSTILL 5 DROPS INTO INTO THE
L~^1^30|||||||
RXD|^CARBAMIDE PEROXIDE 6.5% OTIC^99IHS^^|1
```

### 5.4.2 V01 – Query for Vaccination Record

```
MSH|^~\&|RPMS_GCPR|CIMARRON|GCPR_FRAMEWORK|CIMARRON|20000620101252||VXQ^V0
1|IHS-177|P|2.3.1|||AL|AL|
QRD|20000620101252|R|I|IHS-177|||VXI|CENTRAL REGISTRY^SIIS|T
QRF|IMMUNIZATION|||ANY|FIN|REV
```

### 5.4.3 V02 – Response to Vaccination Query with Multiple PID Matches

```
MSH|^~\&|RPMS_GCPR|CIMARRON|GCPR_FRAMEWORK|CIMARRON|20000619132137||VXR^V0
3|IHS-237|P|2.3.1|||AL|AL|
MSA||IHS-166|||
QRD|20000619131900|R|I|IHS-
166||25|20281035393^MERYE^CLARISSA^JEAN^^^|VXI|CENTRAL REGISTRY^SIIS||
QRF|IMMUNIZATION|||649620561~19981214~NM~~~~GUNZELAS~~~|ANY|FIN|REV
PID|1||202611000000^^^^IGNACIO HC.IHS.GOV^DNS|20281035393^^^^DULCE HEALTH
CENTER.IHS.GOV^DNS|MERE^CLARISSA^JEAN^^^|GUNZELAS^STACEY^R^^^|19981214|F||
|POB 336^^RIO RANCHO^NM^87528||NONE|||||649620561
NK1|1|MERYE^GABRIEL^SHAUN^^^|19^FATHER^99IHS|P.O. BOX 215^^CASA
SALAZAR^NM^87528|759-3784||NOK^NEXT OF KIN^99IHS
PID|1||202699000001^^^^IGNACIO HC.IHS.GOV^DNS|20289935392^^^^DULCE HEALTH
CENTER.IHS.GOV^DNS|DOE^JANE^JEAN^^^|^^^^|19981214|F||POB 336^^NEW
RANCHO^NM^87529||NONE|||||649240568
NK1|1|DOE^GABRIEL^SHAUN^^^|19^FATHER^99IHS|P.O. BOX 215^^NEW
SALAZAR^NM^87528|777-3914||NOK^NEXT OF KIN^99IHS
```

### 5.4.4 V03 – Vaccination Query Response

```
MSH|^~\&|RPMS_GCPR|CIMARRON|GCPR_FRAMEWORK|CIMARRON|20000619132137||VXR^V0
3|IHS-237|P|2.3.1|||AL|AL|
MSA||IHS-166|||
QRD|20000619131900|R|I|IHS-
166||25|20281035393^MERYE^CLARISSA^JEAN^^^|VXI|CENTRAL REGISTRY^SIIS||
QRF|IMMUNIZATION|||649620561~19981214~NM~~~~GUNZELAS~~~|ANY|FIN|REV
PID|1||202611000000^^^^IGNACIO HC.IHS.GOV^DNS|20281035393^^^^DULCE HEALTH
CENTER.IHS.GOV^DNS|MERYE^CLARISSA^JEAN^^^|GUNZELAS^STACEY^R^^^|19981214|F||
|POB 336^^RIO RANCHO^NM^87528||NONE|||||649620561
```



## 6.0 Observation Reporting

### 6.1 Trigger Events

#### 6.1.1 Supported Outbound Events

Event	Description
R01	ORU - Unsolicited observation message

#### 6.1.2 Supported Inbound Events

Event	Description
R01	ORU - Unsolicited observation message

### 6.2 Message Definitions

#### 6.2.1 ORU - Unsolicited Observation Message (event R01)

Outbound Supported Segments:

Segment	Description
MSH	Message Header
PID	Patient Identification
{ZP1}	IHS Patient Information: HRCN
PD1	Additional Patient Identification
PV1	Patient Visit
ZV1	IHS Patient Visit Information
OBR	Observation Request
OBX	Observation/Result

Inbound Supported Segments:

Segment	Description
MSH	Message Header
PID	Patient Identification
{ZP1}	IHS Patient Information: HRCN
PD1	Additional Patient Identification
PV1	Patient Visit
ZV1	IHS Patient Visit Information
OBR	Observation Request
OBX	Observation/Result

Many report headers (OBR) may be sent beneath each patient segment, with many separate observation segments (OBX) beneath each OBR.

## 6.3 Message Segments

### 6.3.1 OBR - Observation Request Segment (Event R01)

When observations are successfully completed, the message returned to the placer will include the order segment (OBR) followed by observation (OBX) segments for each distinct observation generated by the order. See Chapter 5 for details on the OBX segment.

#### 6.3.1.1 OBR Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	4	SI	C		00237	Set ID - OBR	
2	22	EI	C		00216	Placer Order Number	
3	22	EI	C		00217	Filler Order Number +	B
4	200	CE	R		00238	Universal Service ID	B
5	2	ID	X		00239	Priority	
6	26	TS	X		00240	Requested Date/time	
7	26	TS	C		00241	Observation Date/Time *	B
8	26	TS			00242	Observation End Date/Time *	B
9	20	CQ			00243	Collection Volume *	
10	60	XCN		Y	00244	Collector Identifier *	
11	1	ID			00245	Specimen Action Code *	
12	60	CE			00246	Danger Code	
13	300	ST	C		00247	Relevant Clinical Info.	
14	26	TS	C		00248	Specimen Received Date/Time *	
15	300	CM			00249	Specimen Source *	
16	80	XCN		Y	00226	Ordering Provider	B
17	40	XTN		Y/2	00250	Order Callback Phone Number	
18	60	ST			00251	Placer field 1	
19	60	ST			00252	Placer field 2	
20	60	ST			00253	Filler Field 1 +	
21	60	ST			00254	Filler Field 2 +	
22	26	TS			00255	Results Rpt/Status Chng - Date/Time +	
23	40	CM			00256	Charge to Practice +	
24	10	ID	C		00257	Diagnostic Serv Sect ID	
25	1	ID	C		00258	Result Status +	B
26	400	CM			00259	Parent Result +	
27	200	TQ		Y	00221	Quantity/Timing	
28	150	XCN		Y/5	00260	Result Copies To	
29	200	CM			00261	Parent	
30	20	ID			00262	Transportation Mode	
31	300	CE		Y	00263	Reason for Study	
32	200	CM			00264	Principal Result Interpreter +	

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
33	200	CM		Y	00265	Assistant Result Interpreter +	
34	200	CM		Y	00266	Technician +	
35	200	CM		Y	00267	Transcriptionist +	
36	26	TS			00268	Scheduled Date/Time +	
37	4	NM			01028	Number of Sample Containers *	
38	60	CE			01029	Transport Logistics of Sample *	
39	200	CE			01030	Collector's Comment *	
40	60	CE			01031	Transport Arrangement Resp	
41	30	ID			01032	Transport Arranged	
42	1	ID			01033	Escort Required	
43	200	CE		Y	01034	Planned Patient Transport Comment	
44	80	CE			00393	Procedure Code	
45	80	CE		Y	01316	Procedure Code Modifier	

### 6.3.1.2 OBR Field Definitions

The daggered (+) items in this segment are known to the filler, not the placer. They are valued by the filler as needed when the OBR segment is returned as part of a result.

The starred (\*) fields are only relevant when an observation is associated with a specimen.. Some are completed by the placer when the order is placed. Others are completed by the filler when the filler obtains the specimen.

#### Filler Order Number (EI) 00217

Components: <V File entry IEN> ^ <Visit Date/Time> ^ <V File global name (without AUPNV)>

This is the identifier for the result.

#### Universal Service ID (CE) 00238

Components: <IHS file number> ^ <IHS file name> ^ <99IHS> ^ <Value Type Name> ^ <Value Type Code>

This field identifies and groups results that will be transmitted in subsequent OBX segments.

#### Observation Date/Time (TS) 00241

This field is the actual date and time the observation was made.

#### Observation End Date/Time (TS) 00241

This field is the actual end date and time the observation was made. In RPMS it is used for Skin Tests only.



### Results Status (ID) 00258

This field is the status of results for this order. This will be “F” in the RPMS OBR segment.

Value	Description
C	Correction to results (use to cancel in OC, amend in Repository)
F	Final results (use to amend finals as well)
P	Preliminary results (use to amend preliminaries as well)
D	Delete results (use to cancel in Repository)
W	Wrong results (use to cancel in Repository)

### 6.3.2 OBX - Observation / Result Segment (Event R01)

The OBX segment is used to transmit a single observation or observation fragment. It represents the smallest indivisible unit of a report. Its principal mission is to carry information about observations in report messages.

#### 6.3.2.1 OBX Attributes

Seq	Len	DT	Opt	RP/#	Item#	Element Name	Sup
1	10	SI			00569	Set ID - OBX	
2	2	ID	R		00570	Value Type	
3	590	CE	R		00571	Observation Identifier	
4	20	ST	C		00572	Observation Sub-ID	
5	<sup>64K2</sup> *	*	C	Y/3	00573	Observation Value	
6	60	CE			00574	Units	
7	60	ST			00575	References Range	
8	5	ID		Y	00576	Abnormal Flags	
9	5	NM			00577	Probability	
10	2	ID		Y	00578	Nature of Abnormal Test	
11	1	ID			00579	Observ Result Status	
12	26	TS			00580	Date Last Obs Normal Values	
13	20	ST			00581	User Defined Access Checks	
14	26	TS			00582	Date/Time of the Observation	
15	60	CE			00583	Producer's ID	
16	80	XCN		Y	00584	Responsible Observer	
17	60	CE		Y	00936	Observation Method	

### 6.3.3 OBX Field Definitions

#### Set ID - OBX (SI) 00569

This field contains the sequence number within the HL7 Message.

**Value Type (ID) 00570**

This field contains the format of the observation value in OBX. It must be valued.

## Value Types

Value	Description
CE	Coded Entry
DT	Date
FT	Formatted Text (Display)
NM	Numeric
SN	Structured Numeric
ST	String Data.
TM	Time
TS	Time Stamp (Date & Time)
TX	Text Data (Display)

**Observation Identifier (CE) 00571**

Components: <field number> ^ <field title> ^ <99IHS>

**Observation Value (\*) 00573**

This field contains the value observed by the observation producer.

**Units (CE) 00574**

This field contains the result value units. In RPMS it is used for lab results.

**References Range (ST) 00575**

This field will be used for lab reference ranges.

**Abnormal Flags (ID) 00576**

This field contains a value indicating the normalcy status of the result.

**Date/Time of the Observation (TS) 00582**

This is the visit date and time.

**Responsible Observer (XCN) 00584**

This is the provider for Patient Education only.

## 6.4 Examples

### 6.4.1 ORU – Unsolicited Observation Message

```
MSH|^~\&|RPMS_GCPR|CIMARRON|GCPR_FRAMEWORK|CIMARRON|20000620101252||ORU^R0
1|IHS-175|P|2.3.1||AL|AL|
PID|1||202810002783^^^^DULCE HEALTH
CENTER.IHS.GOV^DNS||RUMARU^JUNE^W^^^|MERYE^SISSY^MAE^^^|19430604|F||BOX
386^^TORRANCE CO^NM^87528||NONE|759-3291||||585181165
PV1|1||OFFICE^||||^DONLON,SUSAN
F||AMB|||||IHS|||||||19990310082500
ZV1|19990428|10^^99IHS|OFFICE|19990428|^99IHS|^99IHS|^99IHS|OFFICE|||
|||||
OBR|1||343034^19990310082500^MSR|9000010.01^V
MEASUREMENT^99IHS^WT^WEIGHT||19990310082500|||||||F
OBX|1|ST|WT^WEIGHT^99IHS|WT|163.5
OBR|2||343035^19990310082500^MSR|9000010.01^V
MEASUREMENT^99IHS^PU^PULSE||19990310082500|||||||F
OBX|2|ST|PU^PULSE^99IHS|PU|72
OBR|3||343036^19990310082500^MSR|9000010.01^V
MEASUREMENT^99IHS^RS^RESPIRATIONS||19990310082500|||||||F
OBX|3|ST|RS^RESPIRATIONS^99IHS|RS|20
```

## 7.0 Master File Notification/ Acknowledgement

### 7.1 Trigger Events

#### 7.1.1 Supported Outbound Events

Event	Description
MFN/Z01	MFN – Update Drug File
MFK/Z01	MKF – Update Drug File Acknowledgment

#### 7.1.2 Supported Inbound Events

Event	Description
MFN/Z01	MFN – Update Drug File
MFK/Z01	MKF – Update Drug File Acknowledgment

## 7.2 Message Definitions

### 7.2.1 MFN/Z01 – Master File Notification/Update Drug File

Outbound Supported Segments:

Segment	Description
MSH	Message Header
MFI	Master File Identification
MFE	Master File Entry
ZFD	IHS Drug File Update

Inbound Supported Segments:

Segment	Description
MSH	Message Header
MFI	Master File Identification
MFE	Master File Entry
ZFD	IHS Drug File Update

### 7.2.2 MFK/Z01 – Master File Notification/Update Drug File Acknowledgement

Outbound Supported Segments:

Segment	Description
MSH	Message Header
MSA	Message Acknowledgement

Segment	Description
MFI	Master File Identification
MFA	Master File Acknowledgement

Inbound Supported Segments:

Segment	Description
MSH	Message Header
MSA	Message Acknowledgement
MFI	Master File Identification
MFA	Master File Acknowledgement

## 7.3 Message Segments

### 7.3.1 MFI – Master File Identification

#### 7.3.1.1 MFI Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	60	CE	R		00658	Master File Identifier	O
2	180	HD	O		00659	Master File Application Identifier	
3	3	ID	R		00660	File Level Event Code	O
4	26	TS	O		00661	Entered Date/Time	
5	26	TS	O		00662	Effective Date/Time	
6	2	ID	R		00663	Response Level Code	O

#### 7.3.1.2 MFI Field Definitions

##### Master File Identifier (CE) 00658

Components: ^^50^DRUG^99IHS

This is the identifier for the file

##### File Level Event Code (ID) 00660

Components: “UPD”

##### Response Level Code (ID) 00663

Will be “NE” for never acknowledge in this case, as MSH will handle the acknowledgement.

## 7.3.2 MFE– Master File Entry

### 7.3.2.1 MFE Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	3	ID	R		00664	Record Level Event Code	O
2	20	ST	C		00665	MFN Control ID	
3	26	TS	O		00662	Effective Date/Time	
4	200	Vary	R	Y	00667	Primary Key Value – MFE	O
5	3	ID	R	Y	01319	Primary Key Value Type	

### 7.3.2.2 MFE Field Definitions

#### Record Level Event Code (ID) 00664

Components: MDL – Delete Record, MUP – Update Record, MDC – Deactivate Record

#### Primary Key Value (Vary) 00667

Components: <NDC> ^ <Drug Name> ^ <"NDC">

## 7.3.3 MFA – Master File Acknowledgement

### 7.3.3.1 MFA Attributes

Seq	Len	DT	Opt	RP/#	Item #	Element Name	Sup
1	3	ID	R		00664	Record Level Event Code	O
2	20	ST	C		00665	MFN Control ID	
3	26	TS	O		00668	Event Completion Date/Time	
4	60	CE	R		00669	MFN Record Level Event Return	O
5	60	CE	R	Y	01308	Primary Key Value	O
6	3	ID	R	Y	01320	Primary Key Value Type	

### 7.3.3.2 MFA Field Definitions

#### Record Level Event Code (ID) 00664

Components: MDL – Delete Record, MUP – Update Record, MDC – Deactivate Record

#### MFN Record Level Event Return (CE) 00669

Components: “S” for successful or “U” for Unsuccessful

**Primary Key Value (CE) 01308**

Components: <NDC> ^ <Drug Name> ^ <"NDC">

**7.3.4 ZFD – IHS Drug File Update (Event Z01)**

The ZFD segment is used to transmit IHS Drug File Update information to another system.

**7.3.4.1 ZFD Attributes**

Seq	Len	DT	Opt	RP/#	Item#	Element Name	Sup
1	40	ST	R			Generic Name	O
2	11	ID	O	Y		Warning Label	O
3	3	NM	O			Maximum Dose Per Day	O
4	1	ID	R			DEA Schedule	O
5	60	ST	O			Standard SIG	O
6	3	ID	R			Order Unit	O
7	10	MO	R			Price Per Order Unit	O
8	10	ST	R			Dispense Unit	O
9	10	MO	R			Price Per Dispense Unit	O
10	5	NM	R			Dispense Units Per Order Unit	O
11	1	ID	R			Non-Formulary	O
12	8	DT	C			Inactive Date	O
13	68	ST	O			Message	O
14	1	ID	O			Chemotherapy Drug	O

**7.4 Examples**

**7.4.1 MFN/Z01 – Master File Notification/IHS Drug File Update**

```
MSH|^~\&|RPMS|CIMARRON|GCPR_FRAMEWORK|CIMARRON|20000620123608||MFN^Z01|IHS
-185|P|2.3.1|||NE|NE|
MFI|^^^50^DRUG^99IHS||UPD|||NE|
MFE|MUP|||0009-7385-02^IBUPROFEN 400MG TAB^NDC
ZFD|IBUPROFEN 400MG TAB|8,10||O|T 1-2 TAB Q6H WITH FOOD PRN F
PAIN|2|7.02|TAB|0.014|500|O||STK BTL ON COUNTER, MORE RIGHT OF FRIG|O
```

**7.4.2 MFK/Z01 – Master File Notification/IHS Drug File Update Acknowledgement**

```
MSH|^~\&|RPMS|CIMARRON|GCPR_FRAMEWORK|CIMARRON|20000621125702||MFK^Z01|IHS
-590|P|2.3.1|||NE|NE|
MSA|AE|IHS-195|||
MFI|^^^50^DRUG^99IHS||UPD|||NE|
MFA|MUP|IHS-195||U|0009-7385-02^IBUPROFEN 400MG TAB^NDC|CE
```