



OCIE Message Specification - ADT

Optum Clinical Information Exchange
Release 3.1

Copyrights and Legal Disclaimers

© 2014 Optum, Inc. All rights reserved.

The information in this document is subject to change without notice. This documentation contains proprietary information, and is protected by U.S. and international copyright. All rights reserved. No part of this documentation may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, modifying, or recording, without the prior written permission of Optum, Inc. No part of this documentation may be translated to another program language without the prior written consent of Optum, Inc.

“Optum” is now the name of the entity formerly known as “Ingenix.”

Optum, Inc.
12125 Technology Drive
Eden Prairie, MN 55344
www.optum.com

Table of Contents

Copyrights and Legal Disclaimers	2
Introduction	4
Scope.....	4
Overview	4
References	4
Transaction Specific Information	5
HL7 Message Structure	5
Segment Layout.....	5
File Delimiters	6
File Specifications.....	6
Message Segment Table – Key	7
Optionality Designation.....	7
ADT Message Segments	9
MSH – Message Header Segment.....	9
EVN – Event Segment.....	14
PID – Patient Identification Segment.....	15
PD1- Additional Demographics Segment.....	21
ROL - Role Segment.....	22
PV1 – Patient Visit Segment.....	25
AL1 – Allergy Information Segment	27
DG1 – Diagnosis Information Segment.....	28
PR1 – Procedures Segment.....	30
IN1 – Insurance Segment	32
Message Samples.....	36
ADT Transaction Layout Examples.....	36
Acknowledgement Messages	37
MSA – Message Acknowledgment Segment	38

Introduction

Scope

This guide is to be used for the development of data interfaces transmitting Admit / Discharge / Transfer (ADT) messages to Optum Clinical Information Exchange (OCIE). As the healthcare industry evolves toward standards-based communications for clinical data OCIE has recognized the need to move away from custom and proprietary methods and move toward common standards that eliminate or substantially reduce the custom interface programming and program maintenance that may otherwise be required.

The OCIE standard is based on the Health Level Seven (HL7) version 2.5.1 messaging standard for electronic data exchange in healthcare environments which was designed to conform to the requirements of the American National Standards Institute (ANSI). During the development of the OCIE standard a deliberate effort was made to support prior version implementations of HL7 for applications and systems that can generate HL7 release 2.2, 2.3, 2.3.1, and 2.4 extracts in addition to the 2.5.1 version that our standard is based on.

This document describes the elements of HL7 messages as they relate to the OCIE standard for transmission of ADT data and is not intended to be an introduction to HL7 messages and standards. Readers unfamiliar with HL7 should first review the information describing the HL7 2.5.1 standard, available at www.hl7.org.

Overview

This **OCIE HL7 Message Specifications - ADT** has been written to assist you in designing and implementing HL7 transactions to meet the OCIE processing standard. **OCIE Message Specifications - ADT** must be used in conjunction with the instructions set forth by the American National Standards Institute (ANSI) HL7 Working Group.

OCIE Message Specifications - ADT identifies key data elements from the transaction set that we, as Optum, request you provide to us. The recommendations made herein are to enable you to more effectively complete ADT transactions with OCIE.

Updates to this guide occur periodically and new documents are distributed to all Data Partners in writing in advance with not less than 30 days' notice.

References

See Version 2.5.1 of the Health Level 7 standard, referred to herein as the *HL7 2.5.1 standard*, for a full description of all messages, segments, and fields. Information regarding HL7 is available at www.hl7.org.

Transaction Specific Information

HL7 Message Structure

HL7 messages include data fields of various lengths and are separated by delimiters. Fields are grouped by segments that may be required by HL7 rules, or may be optional to be used at the discretion of the submitter.

- Message
 - Segment (repeatable)
 - ◆ Fields (repeatable)
 - Components
 - Subcomponents

Segment Layout

- The first 3 characters = segment ID code
- Data field sequence:
 - Field separator (|)
 - If the value is not present, no further characters are required
 - Present but not null, include values/characters. Be aware of the maximum field length
 - If the field is separated into components:
 - ◆ Include component separators (^) if necessary
 - ◆ Include no characters for components that are not present but retain their position with a component separator (^) if more components follow
 - ◆ Include no separators for components not present at the end of a field
 - If the field is separated into Subcomponents:
 - ◆ Include Subcomponent separators (&) if necessary
 - ◆ Include no characters for Subcomponents that are not present but retain their position with a subcomponent separator (&) if more subcomponents follow
 - ◆ Include no separators for Subcomponents not present at the end of a field
 - ◆ If the field definition repeats (if allowed):
 - Use Repetition separator (~) only if more than one occurrence is sent (Place between occurrences.)
- Repeat the Data Field sequence if there are any fields present to be sent. If no other data fields are present then no further characters are required
- ASCII carriage return character <CR> (hex 0D) is the Segment Terminator.

File Delimiters

Delimiter	Value	Encoding Character Position	Usage
Segment Terminator	<CR>	-	Terminates a segment record. This value cannot be changed by implementers.
Field Separator		-	Separates two adjacent data fields within a segment. It also separates the segment ID from the first data field in each segment.
Component Separator	^	1	Separates adjacent components of data fields where allowed.
Subcomponent Separator	&	4	Separates adjacent subcomponents of data fields where allowed. If there are no subcomponents, this character may be omitted.
Repetition Separator	~	2	Separates multiple occurrences of a field where allowed.
Escape Character	\	3	Escape character for use with any field represented by an ST, TX or FT data type, or for use with the data (fourth) component of the ED data type. If no escape characters are used in a message, this character may be omitted. However, it must be present if subcomponents are used in the message.

File Specifications

OCIE has outlined the **ADT Message Segments** herein to assist you in designing and programming the information we need in order to submit ADT data. For each message segment used by OCIE a table is provided that illustrates the fields for that segment. The table contains a row for each field in that segment.

Note: The provided tables illustrate segment and field use by OCIE and may not reflect the same information as the HL7 standard. A (*) denotation will indicate where the OCIE standard differs from the HL7 standard.

The columns in the message segment tables are used to describe the length, data type, optionality, repeatability, and HL7 table designation for each field within the segment. All segments, data elements, and codes supported in the HL7 guidelines are acceptable; however, all data may not be used in the processing of this transaction by OCIE.

ADT transactions sent with segments not supported in the HL7 guidelines will be rejected. This restriction applies also to custom segments.

Message Segment Table – Key

The following table defines the various column headers in the message segment tables.

Table Item	Definition
SEQ	Sequence of elements as numbered in the segment
ELEMENT	Element name as specified by HL7 (Reference only and does not appear in message)
LEN	Length of the element
DT	Data Type
OPT	R = Required by OCIE (does not indicate HL7 standard requirement) O = Optional C = Conditional B = Backward compatible See Appendix for more detailed information.
RP/#	Blank = No repetitions permitted Y = repeatable indefinitely Y/x (where x = repeatable times)
TBL#	HL7 Table number (Reference only and does not appear in the message)

Optionality Designation

The following table outlines the optionality designations that have been defined by HL7 and supported by OCIE.

Value	Definition	Description	OCIE Requirement
R	Required	A conforming sending application shall populate all R elements with a non-empty value. Conforming receiving application shall process (save/print/archive/etc.) or ignore the information conveyed by required elements. A conforming receiving application must not raise an error due to the presence of a required element, but may raise an error due to the absence of a required element. Any element designated as required in a standard HL7 message definition shall also be required in all HL7 message profiles of that standard message.	These elements must have a value that conforms to the element’s data type specification. Lack of a value or invalid coding of this element generates an error and results in the message being rejected.

Value	Definition	Description	OCIE Requirement
C	Conditional	The element may be missing from the message, but may be required based on some other field(s). The field definitions following the segment attribute table should specify the algorithm that defines the conditionality for this field. A conforming sending application must be capable of providing all C elements. If the conforming sending application knows the required values for the element, then it must send that element. If the conforming sending application does not know the required values that element is omitted.	These elements are expected to always be populated with a valid value that conforms to the element's data type specification. Incorrectly coded data values cause the message to be rejected.
O	Optional	The component/sub-component may be populated, but this is entirely at the discretion of the sending system. If the component/sub-component is populated (non-NULL), it must conform to the specifications of that component/sub-component in HL7 version 2.5.1. Otherwise, the receiving application may indicate an error. Any specification of content or formatting for these components or sub-components beyond what is specified in HL7 version 2.5.1 must be negotiated separately between trading partners.	These elements may be populated at the discretion of the sending application with a value that conforms to the element's data type specification. Lack of a data value does NOT cause an error or automatic rejection of the message.
B	Backward Compatible	The element has been left in for backward compatibility with previous versions of HL7. The field definitions following the segment attribute table should denote the optionality of the field for prior versions. Elements sent in backward compatible fields are ignored.	These elements can continue to be sent in the pre version 2.5.1 location. The receiving application is able to understand HL7 versions earlier than 2.5.1, and does not generate an error or reject a message for information received in an earlier version format.

ADT Message Segments

Message segments that are supported in ADT transactions and contain elements used in processing are detailed in the tables below.

Fields within each segment that are required by OCIE are defined beneath each table. Commonly sent optional and conditional fields may also be defined. Uncommon optional and conditional fields are generally not defined.

Message segments that are supported by OCIE, but do not contain elements processed by OCIE, are considered to be optional segments. These are noted herein for clarity, but generally not detailed.

Certain descriptions provided herein are taken directly from the HL7 messaging standards.

MSH – Message Header Segment

The MSH segment is used to define the intent, source, destination, and some specifics of the syntax of a message.

The MSH segment is required.

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
1	Field Separator	1	ST	R		
2	Encoding Characters	4	ST	R		
3	Sending Application	227	HD	O		361
4	Sending Facility	227	HD	R*		362
5	Receiving Application	227	HD	O		361
6	Receiving Facility	227	HD	R*		362
7	Date/Time Of Message	26	TS	R		
8	Security	40	ST	O		
9	Message Type	15	MSG	R		
10	Message Control ID	20	ST	R		
11	Processing ID	3	PT	R		
12	Version ID	60	VID	R		
13	Sequence Number	15	NM	O		
14	Continuation Pointer	180	ST	O		
15	Accept Acknowledgment Type	2	ID	O		155
16	Application Acknowledgment Type	2	ID	O		155
17	Country Code	3	ID	O		399

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
18	Character Set	16	ID	O	Y	
19	Principal Language Of Message	250	CE	O		
20	Alternate Character Set Handling Scheme	20	ID	O		356
21	Message Profile Identifier	427	EI	O	Y	

MSH-1 Field Separator [R] - 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.

Value is |, (ASCII 124).

MSH-2 Encoding Characters [R] - This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator.

Values are:

- Component delimiter = ^
- Repeating delimiter = ~
- Escape character = \
- Sub-component delimiter = &
- (ASCII 94, 126, 92, and 38, respectively)

MSH-3 Sending Application [O] - This field uniquely identifies the sending application for purposes of differentiation between sources of data. The Universal ID, if specified, should be set to the OID (Object Identifier) of the application. The Universal ID Type, if the OID is specified, should be set to ISO for 'International Standards Organization Object Identifier.' Refer to HL7 Table 0301 - Name Type for valid values. While not required, it is highly recommended that this field is sent.

HL7 format for HD data type:

<Namespace ID (IS)> ^ <Universal ID (ST)> ^ <Universal ID Type (ID)>

Field: MSH-3 Sending Application (HD)

Component/Sub-Component	OPT
Namespace ID (IS)	R
Universal ID (ST)	O
Universal ID Type (ID)	O

Value Example
ADTApplication or ADTApplication^1.1.1.131.1^ISO

MSH-4 Sending Facility [R] - This field further describes the MSH-3-sending application and is OCIE’s assigned identifier for the organizational entity responsible for the sending application. The value in this field should be set to the identifier that uniquely identifies this organization to OCIE and that has been agreed upon between the submitter and OCIE. This is usually the submitter’s Object Identifier (OID). The Universal ID Type, if an OID is specified, should be set to ISO for ‘International Standards Organization Object Identifier.’ Refer to HL7 Table 0301 - Name Type for valid values. HL7 format for HD data type:

<Namespace ID (IS)> ^ <Universal ID (ST)> ^ <Universal ID Type (ID)>

Field: MSH-4 Sending Facility (HD)

Component/Sub-Component	OPT
Namespace ID (IS)	R
Universal ID (ST)	O
Universal ID Type (ID)	O

Value Example
GOODHEALTHHOSPITAL^1.1.1.131^ISO

MSH-5 Receiving Application [O] – This field uniquely identifies the receiving application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise. The Universal ID Type, if an OID is specified, should be set to ISO for ‘International Standards Organization Object Identifier.’ Refer to HL7 Table 0301 - Name Type for valid values. While not required, it is highly recommended that this field is sent. HL7 format for HD data type:

<Namespace ID (IS)> ^ <Universal ID (ST)> ^ <Universal ID Type (ID)>

Field: MSH-5 Receiving Application (HD)

Component/Sub-Component	OPT
Namespace ID (IS)	R
Universal ID (ST)	O
Universal ID Type (ID)	O

Value Example
OptumApplication^1.1.1.121.1^ISO

MSH-6 Receiving Facility [R] - This field identifies the receiving application among multiple identical instances of the application running on behalf of different organizations. The Universal ID Type, if an OID is specified, should be set to ISO for 'International Standards Organization Object Identifier.' Refer to HL7 Table 0301 - Name Type for valid values.

HL7 format for HD data type:

<Namespace ID (IS)> ^ <Universal ID (ST)> ^ <Universal ID Type (ID)>

Field: MSH-6 Receiving Facility (HD)

Component/Sub-Component	OPT
Namespace ID (IS)	R
Universal ID (ST)	O
Universal ID Type (ID)	O

Value Example
GOODHEALTHHIE^1.1.1.121^ISO

MSH-7 Date/Time of Message [R] - This field contains the date/time that the sending system created the message. If the time zone is specified, it is used throughout the message as the default time zone. This field should be reported to at least a precision of minutes. Values with lesser precisions are considered non-conformant. The TS data type component degree of precision is a HL7 backward compatible value as of HL7 v2.3 and is ignored if sent.

HL7 format for TS data type:

YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]^<degree of precision>

Field: MSH-7 Date/Time of Message (TS)

Component/Sub-Component	OPT
YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]	R
degree of precision	O

Value Example
minimum precision YYYYMMDDHHMM: 200911241217 [12:17 pm on November 24, 2009]

MSH-9 Message Type [R] - This field contains the message type, trigger event, and the message structure ID for the message.

Refer to HL7 Table 0076 - Message type for valid values for the message code. The OCIE interface definition requires ADT to be sent for the <Message Code (ID)>.

Refer to HL7 Table 0003 - Event type for valid values for the trigger event. The OCIE interface definition requires this element to be sent for the <Trigger Event (ID)>.

Refer to HL7 Table 0354 - Message structure for valid values for the message structure. The OCIE interface definition requires ADT_Axx to be sent for the <Message Structure (ID)>.

HL7 format for MSG data type:

<Message Code (ID)> ^ <Trigger Event (ID)> ^ <Message Structure (ID)>

Field: MSH-9 Message Type (MSG)

Component/Sub-Component	OPT
Message Code (ID)	R
Trigger Event (ID)	R
Message Structure (ID)	R

Value Example
ADT^A01^ADT_A01

MSH-10 Message Control ID [R] - This field contains a number or other identifier that uniquely identifies the message. The receiving system echoes this ID back to the sending system in the Message acknowledgment segment (MSA). The sending system must assign an identifier for the message that remains globally unique for the lab service provider (MSH-3). This guarantees that the combination of the Message control ID and the Sending Application constitute a globally unique message identifier.

MSH-11 Processing ID [R] - This field is used to decide whether to process the message as defined in HL7 Application (level 7) Processing rules.

Recommended Values are P or T (Production order = P Testing = T) HL7 format for PT data type:

<Processing ID (ID)> ^ <Processing Mode (ID)>

Field: MSH-11 Processing ID (PT)

Component/Sub-Component	OPT
Processing ID (ID)	R
Processing Mode (ID)	O

MSH-12 Version ID [R] - This field is matched by the receiving system to its own version to be sure the message is interpreted correctly. The OCIE standard is based on HL7 version 2.5.1 but has attempted to accommodate backward compatibility to HL7 version 2.2. Valid values include 2.2, 2.3, 2.3.1, 2.4, 2.5.

HL7 format for VID data type:

<Version ID (ID)> ^ <Internationalization Code (CE)> ^ <International Version ID (CE)>

Field: MSH-12 Version ID (VID)

Component/Sub-Component	OPT
Version ID (ID)	R
Internationalization Code (CE)	O
Internationalization Version ID (CE)	O

Value Example
2.5.1

Additional MSH fields are optional values.

SFT Segment(s) are optional and no fields are required.

UAC Segment is optional and no fields are required.

EVN – Event Segment

The EVN segment is used to communicate necessary trigger event information to receiving applications.

The EVN segment is required.

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
1	Event Type Code	3	ID	B		
2	Recorded Date/Time	26	TS	R		
3	Date/Time Planned Event	26	TS	O		
4	Event Reason Code	3	IS	O		62
5	Operator ID	250	XCN	O	Y	188
6	Event Occurred	26	TS	O		
7	Event Facility	241	HD	O		

EVN-1 Event Type Code [B] – This field has been retained for backward compatibility only. If sent, the value is ignored.

EVN-2 Recorded Date/Time [R] - Most systems default to the system date/time when the transaction was entered.

HL7 format for TS data type:

YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]^<degree of precision>

Field: EVN-2 Date/Time of Message (TS)

Component/Sub-Component	OPT
YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]	R
degree of precision	O

Value Example
minimum precision YYYYMMDDHHMM: 200911241217 [12:17 pm on November 24, 2009]

Additional EVN fields are optional values.

PID – Patient Identification Segment

The PID segment is used by all applications as the primary means of communicating patient identification information. This segment contains permanent patient identifying and demographic information that, for the most part, is not likely to change frequently.

The PID segment is required.

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
1	Set ID - PID	4	SI	O		
2	Patient ID	20	CX	B		
3	Patient Identifier List	250	CX	R	Y	
4	Alternate Patient ID - PID	20	CX	B	Y	
5	Patient Name	250	XPN	R	Y	200
6	Mother's Maiden Name	250	XPN	O	Y	
7	Date/Time of Birth	26	TS	O		
8	Administrative Sex	1	IS	O		0001
9	Patient Alias	250	XPN	B	Y	
10	Race	250	CE	O	Y	0005
11	Patient Address	250	XAD	O	Y	
12	County Code	4	IS	O		
13	Phone Number - Home	250	XTN	O	Y	
14	Phone Number - Business	250	XTN	O	Y	
15	Primary Language	250	CE	O		
16	Marital Status	250	CE	O		0002
17	Religion	250	CE	O		0006
18	Patient Account Number	250	CX	O		

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
19	SSN Number - Patient	16	ST	B		
20	Driver's License Number - Patient	25	DLN	B		
21	Mother's Identifier	250	CX	O	Y	
22	Ethnic Group	250	CE	O	Y	0189
23	Birth Place	250	ST	O		
24	Multiple Birth Indicator	1	ID	O		0136
25	Birth Order	2	NM	O		
26	Citizenship	250	CE	O	Y	
27	Veterans Military Status	250	CE	O		
28	Nationality	250	CE	B		
29	Patient Death Date and Time	26	TS	O		
30	Patient Death Indicator	1	ID	O		0136
31	Identity Unknown Indicator	1	ID	O		0136
32	Identity Reliability Code	20	IS	O	Y	0445
33	Last Update Date/Time	26	TS	O		
34	Last Update Facility	241	HD	O		
35	Species Code	250	CE	O		
36	Breed Code	250	CE	O		
37	Strain	80	ST	O		
38	Production Class Code	250	CE	O	2	0429
39	Tribal Citizenship	250	CWE	O	Y	

PID-1 Set ID - PID [O] - This field contains the number that identifies this transaction. The HL7 standard identifies that for the first occurrence of the segment within the parent MSH segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc. For the OCIE standard, since only a single PID segment is requested for a MSH segment, this value should always be set to 1.

PID-2 Patient ID [B] - This field contains the OCIE assigned Patient Identifier and has been retained for backward compatibility only. It is recommended to use PID-3 - Patient Identifier List for all patient identifiers. See description in PID-3 for additional information for population of this field.

When used for backward compatibility this field is valued when the patient is from another institution, outside office, etc., and the identifier used by that institution can be shown in this field. This may be a number that multiple disparate corporations or facilities share.

PID-3 Patient Identifier List [R] - This field contains the list of identifiers (one or more) used by the healthcare facility to uniquely identify a patient (e.g., medical record number, billing number, birth registry, national unique individual identifier). In Canada, the Canadian Provincial Healthcare Number should be sent in this field. The arbitrary term of 'internal ID' has been removed from the

name of this field for clarity. The OCIE assigned Patient Identifier must be the first value sent in this repeating value field before any other sets of identifiers.

If data provider specific identifiers are sent they should be coded using the identifier type code associated with the ID number being submitted. The type of identifier for each identifier sent should be indicated in the <identifier type code (ID)> component. Refer to HL7 Table 0203 – Identifier type for the complete list. The patient identifier itself should be placed in the <ID (ST)> component.

HL7 format for CX data type:

<ID Number (ST)> ^ <Check Digit (ST)> ^ <Check Digit Scheme (ID)> ^ <Assigning Authority (HD)> ^ <Identifier Type Code (ID)> ^ <Assigning Facility (HD)> ^ <Effective Date (DT)> ^ <Expiration Date (DT)> ^ <Assigning Jurisdiction (CWE)> ^ <Assigning Agency or Department (CWE)>

Field: PID3 Patient Identifier List (CX)

Component/Sub-Component	OPT
ID Number (ST)	R
Check Digit (ST)	O
Check Digit Scheme (ID)	O
Assigning Authority (HD)	O
Identifier Type Code (ID)	O
Assigning Facility (HD)	O
Effective Date (DT)	O
Expiration Date (DT)	O
Assigning Jurisdiction (CWE)	O
Assigning Agency or Department (CWE)	O

Value Example
987123456^^^MR

PID-4 Alternate Patient ID [B] - From V2.3.1, this field has been retained for backward compatibility only. It is recommended to use PID-3 - Patient Identifier List for all patient identifiers. When used for backward compatibility this field contains the alternate, temporary, or pending optional patient identifier to be used, if needed, or additional numbers that may be required to identify a patient. This field may be used to convey multiple patient IDs when more than one exist for a patient. Possible contents might include a visit number, a visit date, or a Social Security Number.

PID-5 Patient Name [R] - This field contains the names of the patient.

HL7 format for XPN data type:

<Family Name (FN)> ^ <Given Name (ST)> ^ <Second and Further Given Names or Initials Thereof (ST)> ^ <Suffix (e.g., JR or III) (ST)> ^ <Prefix (e.g., DR) (ST)> ^ <Degree (e.g., MD) (IS)> ^ <Name Type Code (ID)> ^ <Name Representation Code (ID)> ^ <Name Context (CE)> ^ <Name Validity Range

(DR)> ^ <Name Assembly Order (ID)> ^ <Effective Date (TS)> ^ <Expiration Date (TS)> ^ <Professional Suffix (ST)>

Field: PID-5 Patient Name (XPN)

Component/Sub-Component	OPT
Family Name (FN)	R
Given Name (ST)	R
Second and Further Given Names or Initials Thereof (ST)	O
Suffix (e.g. JR or III) (ST)	O
Prefix (e.g. DR) (ST)	O
Degree (e.g. MD) (IS)	B
Name Type Code (ID)	O
Name Representation Code (ID)	O
Name Context (CE)	O
Name Validity Range (DR)	B
Name Assembly Order (ID)	O
Effective Date (TS)	O
Expiration Date (TS)	O
Professional Suffix (ST)	O

Value Example
Smith^John^Q

PID-7 Date/Time of Birth [O] - This field contains the patient’s date and time of birth. The TS data type component degree of precision is a HL7 backward compatible value as of HL7 v2.3 and is ignored if sent. While not required by OCIE, it is highly recommended that this field is sent as some consuming systems do require this field.

HL7 format for TS data type:

YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]^<degree of precision>

Field: PID-7 Date/Time of Birth (TS)

Component/Sub-Component	OPT
YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]	R
degree of precision	O

Value Example
minimum precision YYYYMMDD: 20091124 [November 24, 2009]

PID-8 Administrative Sex [R] - This field contains the patient's sex. Refer to User-defined Table 0001 - Administrative Sex for the HL7 defined values.

PID-9 Patient Alias [B] – From V2.4, this field has been retained for backward compatibility only. It is recommended to use *PID-5 - Patient Name* for all patient names. This field contained the name(s) by which the patient has been known at some time. Refer to *HL7 Table 0200 - Name Type* for valid values.

PID-11 Patient Address [O] - This field contains the mailing address of the patient.

HL7 format for XAD data type:

<Street Address (SAD)> ^ <Other Designation (ST)> ^ <City (ST)> ^ <State or Province (ST)> ^ <Zip or Postal Code (ST)> ^ <Country (ID)> ^ <Address Type (ID)> ^ <Other Geographic Designation (ST)> ^ <County/Parish Code (IS)> ^ <Census Tract (IS)> ^ <Address Representation Code (ID)> ^ <Address Validity Range (DR)> ^ <Effective Date (TS)> ^ <Expiration Date (TS)>

Field: PID-11 Patient Address (XAD)

Component/Sub-Component	OPT
street address (SAD)	O
> street address (ST)	O
> street name (ST)	O
> dwelling number (ST)	O
other designation (ST)	O
city (ST)	O
state or province (ST)	O
zip or postal code (ST)	O
country (ID)	O
address type (ID)	O
other geographic designation (ST)	O
county/parish code (IS)	O
census tract (IS)	O
address representation code (ID)	O
address validity range (DR)	B
Address Validity Range (DR)	O
Effective Date (TS)	O
Expiration Date (TS)	O

Value Example
123 Main Street^Apt. 3B^St. Louis^MO^63146-85242

PID-12 County Code [B] – From V2.3, this field has been retained for backward compatibility. This field contains the patient’s county code. The county can now be supported in the county/parish code component of the XAD data type (*PID-11 - Patient Address*). Refer to *User-defined Table 0289 - County/Parish* for suggested values

PID-13 Phone Number – Home [O] – This field contains the patient’s personal phone numbers. All personal phone numbers for the patient are sent in the following sequence. The first sequence is considered the primary number (for backward compatibility). If the primary number is not sent, then a repeat delimiter is sent in the first sequence. Refer to HL7 Table 0201 - Telecommunication Use Code and HL7 Table 0202 - Telecommunication Equipment Type for valid values.

HL7 format for XTN data type:

<DEPRECATED-Telephone Number (ST)> ^ <Telecommunication Use Code (ID)> ^
 <Telecommunication Equipment Type (ID)> ^ <Email Address (ST)> ^ <Country Code (NM)> ^
 <Area/City Code (NM)> ^ <Local Number (NM)> ^ <Extension (NM)> ^ <Any Text (ST)> ^ <Extension Prefix (ST)> ^ <Speed Dial Code (ST)> ^ <Unformatted Telephone number (ST)>

Field: PID-13 Phone Number - Home (XTN)

Component/Sub-Component	OPT
DEPRECATED-Telephone Number (ST)	O
Telecommunication Use Code (ID)	O
Telecommunication Equipment Type (ID)	O
Email Address (ST)	O
Country Code (NM)	O
Area/City Code (NM)	R
Local Number (NM)	R
Extension (NM)	O
Extension Prefix (ST)	O
Any Text (ST)	O
Speed Dial Code (ST)	O
Unformatted Telephone number (ST)	O

Value Example
^^^^^987^5551212 OR ^WPN^PH^^^^987^5551212^^^call before 5:00 pm only~^ASN^PH^^^^789^5552121 [Example of two phone numbers sent]

PID-19 SSN – Patient [B] – From V2.3.1 onward, this field has been retained for backward compatibility only. It is recommended to use *PID-3 - Patient Identifier List* for all patient identifiers. However, in order to maintain backward compatibility, this field should also be populated. When used for backward compatibility, this field contains the patient’s social security number. This number may also be a RR retirement number.

PID-20 Driver’s License Number [B] – From V2.5 onward, this field has been retained for backward compatibility only. It is recommended to use *PID-3 - Patient Identifier List* for all patient identifiers. When used for backward compatibility, this field contains the patient’s driver’s license number. The default of the second component is the state in which the patient’s license is registered.

PID-28 Nationality [B] – From V2.4 onward, this field has been retained for backward compatibility only. It is recommended to refer to *PID-10 - Race*, *PID-22 - Ethnic group* and *PID-26 - Citizenship*. This field contains a code that identifies the nation or national grouping to which the person belongs. This information may be different from a person’s citizenship in countries in which multiple nationalities are recognized (for example, Spain: Basque, Catalan, etc.).

Additional PID fields are optional values

PD1- Additional Demographics Segment

The patient additional demographic segment contains demographic information that is likely to change about the patient.

The PD1 segment is optional, but if sent, the following fields are used:

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
1	Living Dependency		CWE	O	Y	223
2	Living Arrangement		CWE	O		220
3	Patient Primary Facility		XON	O	Y	204
4	Patient Primary Care Provider Name & ID No.		XCN	B	Y	
5	Student Indicator		CWE	O		231
6	Handicap		CWE	O		295
7	Living Will Code		CWE	O		315
8	Organ Donor Code		CWE	O		316

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
9	Separate Bill		ID	O		136
10	Duplicate Patient		CX	O	Y	
11	Publicity Code		CWE	O		215
12	Protection Indicator		ID	O		136
13	Protection Indicator Effective Date		DT	O		
14	Place of Worship		XON	O	Y	
15	Advance Directive Code		CWE	O	Y	435
16	Immunization Registry Status		CWE	O		441
17	Immunization Registry Status Effective Date		DT	O		
18	Publicity Code Effective Date		DT	O		
19	Military Branch		CWE	O		140
20	Military Rank/Grade		CWE	O		141
21	Military Status		CWE	O		142
22	Advance Directive Last Verified Date		DT	n/a		

PD1 -4 Patient Primary Care Provider Name & ID No. [B] – This field is retained for backward compatibility only. The ROL segment is now used to convey more complete information about the primary care provider. This field contained the provider name and ID of the primary care provider. Multiple names are allowed for the same person. The legal name must be sent in the first sequence. If the legal name is not sent, then the repeat delimiter must be sent in the first sequence.

Additional PD1 fields are optional values

ROL - Role Segment

The role segment contains the data necessary to add, update, correct, and delete from the record persons involved, as well as their functional involvement with the activity being transmitted.

The ROL segment is optional, but if sent, the following fields are used:

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
1	Role Instance ID		EI	C		
2	Action Code		ID	R		287
3	Role-ROL		CE	R		443
4	Role Person		XCN	R	Y	
5	Role Begin Date/Time		DTM	O		

6	Role End Date/Time		DTM	O		
7	Role Duration		CWE	O		
8	Role Action Reason		CWE	O		
9	Provider Type		CWE	O	Y	
10	Organization Unit Type		CWE	O		406
11	Office/Home Address/Birthplace		XAD	O	Y	
12	Phone		XTN	O	Y	

ROL -1 Role Instance ID [C] – This field contains a unique identifier of the specific role record.

HL7 format for EI data type:

Components: <Entity Identifier (ST)> ^ <Namespace ID (IS)> ^ <Universal ID (ST)> ^ <Universal ID Type (ID)>

Field: ROL-1 Role Instance ID (EI)

Component/Sub-Component	OPT
Entity Identifier (ST)	O
Namespace ID (IS)	O
Universal ID (ST)	C
Universal ID Type (ID)	C

Value Example
LAB1^1.2.3.3.4.6.7^ISO

ROL -2 Action Code [R] - This field reveals the intent of the message. Refer to HL7 table 0287 – Problem/goal action code for valid values.

ROL -3 Role-ROL [R] - This field indicates the functional involvement with the activity being transmitted (e.g., Case Manager, Evaluator, Transcriber, Nurse Care Practitioner, Midwife, Physician Assistant, etc.). Refer to User-defined table 0443 – Provider role for valid values.

HL7 format for CE data type:

Components: <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^ <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate Coding System (ID)>

Component/Sub-Component	OPT
Identifier (ST)	O
Text (ST)	O
Name of Coding System (ID)	O

Component/Sub-Component	OPT
Alternate Identifier (ST)	O
Alternate Text (ST)	O
Name of Alternate Coding System (ID)	O

Value Example
PP^Primary Care Provider^HL70443

ROL -4 Role-ROL [R] - This field contains the identity of the person who is assuming the role that is being transmitted. This field correlates to STF-2 Staff ID Code and STF-3 Staff Name.

HL7 format for XCN data type:

Components: <ID Number (ST)> ^ <Family Name (FN)> ^ <Given Name (ST)> ^ <Second and Further Given Names or Initials Thereof (ST)> ^ <Suffix (e.g., JR or III) (ST)> ^ <Prefix (e.g., DR) (ST)> ^ <DEPRECATED-Degree (e.g., MD) (IS)> ^ <Source Table (IS)> ^ <Assigning Authority (HD)> ^ <Name Type Code (ID)> ^ <Identifier Check Digit (ST)> ^ <Check Digit Scheme (ID)> ^ <Identifier Type Code (ID)> ^ <Assigning Facility (HD)> ^ <Name Representation Code (ID)> ^ <Name Context (CE)> ^ <DEPRECATED-Name Validity Range (DR)> ^ <Name Assembly Order (ID)> ^ <Effective Date (TS)> ^ <Expiration Date (TS)> ^ <Professional Suffix (ST)> ^ <Assigning Jurisdiction (CWE)> ^ <Assigning Agency or Department (CWE)>

Component/Sub-Component	OPT
Identifier (ST)	O
Family Name (FN)	O
Given Name (ST)	O
Second and Further Given Names of Initials (ST)	O
Suffix (e.g. JR or III) (ST)	O
Prefix (e.g. DR) (ST)	O
DEPRECATED – Degree (e.g. MD) (IS)	B
Source Table (IS)	C
Assigning Authority (HD)	O
Name Type Code (ID)	O
Identifier Check Digit (ST)	O
Check Digit Scheme (ID)	C
Identifier Type Code (ID)	O
Assigning Facility (HD)	O

Component/Sub-Component	OPT
Name Representation Code (ID)	O
Name Contact (CE)	O
DEPRECATED – Name Validity Range (DR)	B
Name Assembly Order (ID)	O
Effective Date (TS)	O
Expiration Date (TS)	O
Professional Suffix (ST)	O
Assigning Jurisdiction (CWE)	O
Assigning Agency or Department (CWE)	O

Value Example
1234567^Everyman^Adam^A^III^DR^PHD^ADT01^^L^4^M11^MR

Additional ROL fields are optional values.

NK1 Segment is optional and no fields are required.

PV1 – Patient Visit Segment

The PV1 segment is used by Registration/Patient Administration applications to communicate information on an account or visit-specific basis.

The PV1 segment is required.

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
1	Set ID - PV1		SI	O		
2	Patient Class		IS	R		4
3	Assigned Patient Location		PL	O		
4	Admission Type		CWE	O		7
5	Preadmit Number		CX	O		
6	Prior Patient Location		PL	O		
7	Attending Doctor		XCN	O	Y	10
8	Referring Doctor		XCN	O	Y	10
9	Consulting Doctor		XCN	B	Y	
10	Hospital Service		CWE	O		69

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
11	Temporary Location		PL	O		
12	Preadmit Test Indicator		CWE	O		87
13	Re-admission Indicator		CWE	O		92
14	Admit Source		CWE	O		23
15	Ambulatory Status		CWE	O	Y	9
16	VIP Indicator		CWE	O		99
17	Admitting Doctor		XCN	O	Y	10
18	Patient Type		CWE	O		18
19	Visit Number		CX	O		
20	Financial Class		FC	O	Y	64
21	Charge Price Indicator		CWE	O		32
22	Courtesy Code		CWE	O		45
23	Credit Rating		CWE	O		46
24	Contract Code		CWE	O	Y	44
25	Contract Effective Date		DT	O	Y	
26	Contract Amount		NM	O	Y	
27	Contract Period		NM	O	Y	
28	Interest Code		CWE	O		73
29	Transfer to Bad Debt Code		CWE	O		110
30	Transfer to Bad Debt Date		DT	O		
31	Bad Debt Agency Code		CWE	O		21
32	Bad Debt Transfer Amount		NM	O		
33	Bad Debt Recovery Amount		NM	O		
34	Delete Account Indicator		CWE	O		111
35	Delete Account Date		DT	O		
36	Discharge Disposition		CWE	O		112
37	Discharged to Location		DLD	O		113
38	Diet Type		CWE	O		114
39	Servicing Facility		CWE	O		115
40	Bed Status			B		
41	Account Status		CWE	O		117
42	Pending Location		PL	O		
43	Prior Temporary Location		PL	O		

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
44	Admit Date/Time		DTM	O		
45	Discharge Date/Time		DTM	O		
46	Current Patient Balance		NM	O		
47	Total Charges		NM	O		
48	Total Adjustments		NM	O		
49	Total Payments		NM	O		
50	Alternate Visit ID		CX	O		203
51	Visit Indicator		CWE	O		326
52	Other Healthcare Provider			B		
53	Service Episode Description		ST	n/a		
54	Service Episode Identifier		CX	n/a		

PV1-2 – Patient Class [R] - Definition: This field is used by systems to categorize patients by site. It does not have a consistent industry-wide definition. It is subject to site-specific variations. Refer to *HL7 User-defined Table 0004 – Patient Class* for suggested values.

Component/Sub-Component	OPT
Identifier (ST)	O

Value Example
O

Additional PV1 fields are optional values.

PV2 Segment is optional and no fields are required.

DB1 Segment(s) are optional and no fields are required.

OBX Segment(s) are optional and no fields are required.

AL1 – Allergy Information Segment

The AL1 segment contains patient allergy information of various types. Most of this information is derived from user-defined tables. Each AL1 segment describes a single patient allergy.

The AL1 segment is optional, but if sent, the following fields are used:

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
1	Set ID - AL1		SI	R		
2	Allergen Type Code		CE	O		127
3	Allergen Code/Mnemonic/Description		CE	R		
4	Allergy Severity Code		CE	O		128
5	Allergy Reaction Code		ST	O	Y	
6	Identification Date			B		

AL1-1 – Set ID [R] - Definition: This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

AL1-3 – Allergen Code/Mnemonic/Description [R] - Allergen Code/Mnemonic Description - Definition: This field uniquely identifies a particular allergen. This element may conform to some external, standard coding system (that must be identified), or it may conform to local, largely textual or mnemonic descriptions.

HL7 example for CE data format type:

Components: <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^ <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate Coding System (ID)>

Component/Sub-Component	OPT
Identifier (ST)	O
Text (ST)	O
Name of Coding System (ID)	O
Alternate Identifier (ST)	O
Alternate Text (ST)	O
Name of Alternate Coding System (ID)	O

Value Example
DG123^DRUG ALLERGY^L^416098002^Drug allergy (disorder)^SNOMED CT

Additional AL1 fields are optional values.

DG1 – Diagnosis Information Segment

The DG1 segment contains patient diagnosis information of various types, for example, admitting, primary, etc. The DG1 segment is used to send multiple diagnoses (for example, for medical records encoding). It is also used when the *FT1-19 - Diagnosis Code - FT1* does not provide sufficient

information for a billing system. This diagnosis coding should be distinguished from the clinical problem segment used by caregivers to manage the patient (see *Chapter 12, Patient Care in the HL7 2.5.1 standard*). Coding methodologies are also defined.

The DG1 segment is optional, but if sent, the following fields are used:

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
1	Set ID - DG1		SI	R		
2	Diagnosis Coding Method		ID	(B) R		
3	Diagnosis Code - DG1		CE	O		51
4	Diagnosis Description		ST	B		
5	Diagnosis Date/Time		TS	O		
6	Diagnosis Type		IS	R		52
7	Major Diagnostic Category		CE	B		
8	Diagnostic Related Group		CE	B		
9	DRG Approval Indicator		ID	B		
10	DRG Grouper Review Code		IS	B		
11	Outlier Type		CE	B		
12	Outlier Days		NM	B		
13	Outlier Cost		CP	B		
14	Grouper Version And Type		ST	B		
15	Diagnosis Priority		ID	O		359
16	Diagnosing Clinician		XCN	O	Y	
17	Diagnosis Classification		IS	O		228
18	Confidential Indicator		ID	O		136
19	Attestation Date/Time		TS	O		
20	Diagnosis Identifier		EI	C		
21	Diagnosis Action Code		ID	C		206

DG1-1 – Set ID [R] - Definition: This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

DG1-2 – Diagnosis Coding Method [(B)R] - Definition: *As of Version 2.3, this field has been retained for backward compatibility only.* Use the components of *DG1-3 - Diagnosis Code –DG1* instead of this field. When used for backward compatibility, ICD9 is the recommended coding methodology. Refer to *User-defined Table 0053 - Diagnosis Coding Method in the HL7 2.5.1 standard* for suggested values.

DG1-3 – Diagnosis Code – DG1[O] - Definition: Use this field instead of *DG1-2 - Diagnosis Coding Method* and *DG1-4 - Diagnosis Description*, which have been retained, as of Version 2.3, for backward compatibility only. *DG1-3 - Diagnosis Code - DG1* contains the diagnosis code assigned to this diagnosis. Refer to *User-defined Table 0051 - Diagnosis Code in the HL7 2.5.1 standard* for suggested values. This field is a CE data type for compatibility with clinical and ancillary systems.

HL7 Example for CE data type:

Components: <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^ <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate Coding System (ID)>

Component/Sub-Component	OPT
Identifier (ST)	O
Text (ST)	O
Name of Coding System (ID)	O
Alternate Identifier (ST)	O
Alternate Text (ST)	O
Name of Alternate Coding System (ID)	O

Value Example
787.02 ^NAUSEA ALONE^ICD9

DG1-6 – Diagnosis Type[R] - Definition: This field contains a code that identifies the type of diagnosis being sent. Refer to *User-defined Table 0052 in the HL7 2.5.1 standard - Diagnosis Type* for suggested values. This field should no longer be used to indicate DRG because the DRG fields have moved to the new DRG segment.

Additional DG1 fields are optional values and as of version 2.3, some of these have been retained for backward compatibility only.

The DRG Segment is optional and no fields are required.

PR1 – Procedures Segment

The PR1 segment contains information relative to various types of procedures that can be performed on a patient. The PR1 segment can be used to send procedure information, for example: Surgical, Nuclear Medicine, X-ray with contrast. The PR1 segment is used to send multiple procedures, for example, for medical records encoding or for billing systems.

The PR1 segment is optional, but if sent the following fields are used:

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
1	Set ID - PR1		SI	R		

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
2	Procedure Coding Method		IS	(B)R		
3	Procedure Code		CE	R	Y	88
4	Procedure Description		ST	B		
5	Procedure Date/Time		TS	R		
6	Procedure Functional Type		IS	O		230
7	Procedure Minutes		NM	O		
8	Anesthesiologist		XCN	B		
9	Anesthesia Code		IS	O		19
10	Anesthesia Minutes		NM	O		
11	Surgeon		XCN	B		
12	Procedure Practitioner		XCN	B		
13	Consent Code		CE	O		59
14	Procedure Priority		ID	O		418
15	Associated Diagnosis Code		CE	O		51
16	Procedure Code Modifier		CE	O	Y	340
17	Procedure DRG Type		IS	O		416
18	Tissue Type Code		CE	O	Y	417
19	Procedure Identifier		EI	C		
20	Procedure Action Code		ID	C		206

PR1-1 – Set ID [R] - Definition: This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

PR1-2 – Procedure Coding Method [(B)R] - Definition: *As of Version 2.3, this field has been retained for backward compatibility only.* Use the components of *PR1-3 - Procedure Code* instead of this field. When used for backward compatibility, *PR1-2 - Procedure Coding Method* contains the methodology used to assign a code to the procedure (CPT4, for example). If more than one coding method is needed for a single procedure, this field and the associated values in *PR1-3 - Procedure Code* and *PR1-4 - Procedure Description* may repeat. In this instance, the three fields (*PR1-2* through *PR1-4*) are directly associated with one another. Refer to *User-defined Table 0089 - Procedure Coding Method in the HL7 2.5.1 standard* for suggested values.

PR1-3- Procedure Code [R] - Definition: Use this field instead of *PR1-2 - Procedure Coding Method* and *PR1-4 - Procedure Description*. Those two fields have been retained for backward compatibility only. This field contains a unique identifier assigned to the procedure. Refer to *User-defined Table 0088 - Procedure Code in the HL7 2.5.1 standard* for suggested values. This field is a CE data type for compatibility with clinical and ancillary systems.

HL7 example for CE data type:

Components: <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^ <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate Coding System (ID)>

Component/Sub-Component	OPT
Identifier (ST)	O
Text (ST)	O
Name of Coding System (ID)	O
Alternate Identifier (ST)	O
Alternate Text (ST)	O
Name of Alternate Coding System (ID)	O

Value Example
87.0 ^DIAGNOSTIC RADIOLOGY^ICD9

PR1-4-Procedure Description [B] - Definition: *As of Version 2.3, this field has been retained for backward compatibility only.* Use the components of PR1-3 - Procedure Code instead of this field. The field contains a text description that describes the procedure.

PR1-5 – Procedure Date and Time [R] – Definition: This field contains the date/time that the procedure was performed.

Additional PR1 fields are optional values, and as of version 2.3 some of these have been retained for backward compatibility only.

GT1 Segment(s) are optional and no fields are required.

IN1 – Insurance Segment

The IN1 segment contains insurance policy coverage information necessary to produce properly pro-rated and patient and insurance bills.

The IN1 segment is optional, but if sent the following fields are used:

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
1	Set ID - IN1		SI	R		
2	Health Plan ID		CE	R		72
3	Insurance Company ID		CX	R	Y	
4	Insurance Company Name		XON	O	Y	

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
5	Insurance Company Address		XAD	O	Y	
6	Insurance Co Contact Person		XPN	O	Y	
7	Insurance Co Phone Number		XTN	O	Y	
8	Group Number		ST	O		
9	Group Name		XON	O	Y	
10	Insured's Group Emp ID		CX	O	Y	
11	Insured's Group Emp Name		XON	O	Y	
12	Plan Effective Date		DT	O		
13	Plan Expiration Date		DT	O		
14	Authorization Information		AUI	O		
15	Plan Type		IS	O		86
16	Name Of Insured		XPN	O	Y	
17	Insured's Relationship To Patient		CE	O		63
18	Insured's Date Of Birth		TS	O		
19	Insured's Address		XAD	O	Y	
20	Assignment Of Benefits		IS	O		135
21	Coordination Of Benefits		IS	O		173
22	Coord Of Ben. Priority		ST	O		
23	Notice Of Admission Flag		ID	O		136
24	Notice Of Admission Date		DT	O		
25	Report Of Eligibility Flag		ID	O		136
26	Report Of Eligibility Date		DT	O		
27	Release Information Code		IS	O		93
28	Pre-Admit Cert (PAC)		ST	O		
29	Verification Date/Time		TS	O		
30	Verification By		XCN	O	Y	
31	Type Of Agreement Code		IS	O		98
32	Billing Status		IS	O		22
33	Lifetime Reserve Days		NM	O		
34	Delay Before L.R. Day		NM	O		
35	Company Plan Code		IS	O		42
36	Policy Number		ST	O		
37	Policy Deductible		CP	O		

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
38	Policy Limit - Amount		CP	B		
39	Policy Limit - Days		NM	O		
40	Room Rate - Semi-Private		CP	B		
41	Room Rate - Private		CP	B		
42	Insured's Employment Status		CE	O		66
43	Insured's Administrative Sex		IS	O		1
44	Insured's Employer's Address		XAD	O	Y	
45	Verification Status		ST	O		
46	Prior Insurance Plan ID		IS	O		72
47	Coverage Type		IS	O		309
48	Handicap		IS	O		295
49	Insured's ID Number		CX	O	Y	
50	Signature Code		IS	O		535
51	Signature Code Date		DT	O		
52	Insured's Birth Place		ST	O		
53	VIP Indicator		IS	O		99

IN1-1 – Set ID [R] - Definition: This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

IN1-2 – Insurance Plan ID [R] - Definition: This field contains a unique identifier for the insurance plan. Refer to User-defined Table 0072 - Insurance Plan ID for suggested values.

HL7 Example for CE data type:

Components: <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^ <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate Coding System (ID)>

Component/Sub-Component	OPT
Identifier (ST)	O
Text (ST)	O
Name of Coding System (ID)	O
Alternate Identifier (ST)	O
Alternate Text (ST)	O
Name of Alternate Coding System (ID)	O

Value Example
BCCO ^ANTHEM BLUE CROSS^222

IN1-3 – Insurance Company ID [R] - Definition: This field contains unique identifiers for the insurance company. The assigning authority and identifier type code are strongly recommended for all CX data types.

HL7 format for CX data type:

<ID Number (ST)> ^ <Check Digit (ST)> ^ <Check Digit Scheme (ID)> ^ <Assigning Authority (HD)> ^ <Identifier Type Code (ID)> ^ <Assigning Facility (HD)> ^ <Effective Date (DT)> ^ <Expiration Date (DT)> ^ <Assigning Jurisdiction (CWE)> ^ <Assigning Agency or Department (CWE)>

Field: IN1-3 Insurance Company ID (CX)

Component/Sub-Component	OPT
ID Number (ST)	R
Check Digit (ST)	O
Check Digit Scheme (ID)	O
Assigning Authority (HD)	O
Identifier Type Code (ID)	R
Assigning Facility (HD)	O
Effective Date (DT)	O
Expiration Date (DT)	O
Assigning Jurisdiction (CWE)	O
Assigning Agency or Department (CWE)	O

Value Example
22222^^^^HC

Additional IN1 fields are optional values.

IN2 Segment(s) are optional and no fields are required.

IN3 Segment(s) are optional and no fields are required.

ACC Segment is optional and no fields are required.

UB1 Segment is optional and no fields are required.

UB2 Segment is optional and no fields are required.

PDA Segment is optional and no fields are required.

Message Samples

ADT Transaction Layout Examples

The layout of two example ADT messages is listed below. Braces, { . . . }, indicate there can be one or more repetitions of the enclosed group of segments. Brackets, [. . .], indicate the enclosed group of segments is optional.

The following table describes the required segments and cardinality of segments and groups of segments in the sample ADT message below sent to OCIE. For a complete listing of possible segment and segment groups, refer to the *HL7 2.5.1 standard*.

Example 1: Hospital admits Inpatient	
MSH	Message Header Segment
EVN	Event Type
PID	Patient Identification
[[NK1]]	Next of Kin
PV1	Patient Visit
[[DG1]]	Diagnosis Information
[[GT1]]	Guarantor
[[IN1]]	Insurance

```
MSH|^~\&|SENDING APPLICATION^1.2.3.4.1^ISO|SENDING FACILITY^1.2.3.4^ISO|RECEIVING APPLICATION^9.9.9.1^ISO|RECEIVING FACILITY^9.9.9.9^ISO|201308090046||ADT^A01^ADT_A01|ADT3283385|P|2.5.1|
EVN||201308090046|
PID|1||5555555^&1.1.1.1&ISO||MOUSE^MICKEY^F|Vole|19250604|M||2106-3|1234 DISNEYLAND WAY^^ANAHEIM^CA^94035^US||||S||H123456789^&^AN||||N|
NK1|1|MOUSE^MINNIE|SPO|1234 DINSEYLAND WAY^^ANAHEIM^CA^94035|||C
PV1|1||ICU^ICU128^A^ASV|E|||BB^BROWN^BETTY^&^&^AA^AZURE^ANNA||MED|||ER|||BB^BROWN^BETTY|IN||BC||||||||||
|||||||ASV||ADM IN|||201308090044|
DG1|1||909.1|||W
GT1|1||DUCK^DONALD^F||1234 MUDDY MEADOWS
DR^^CARONSVILLE^CA^99999|^PH^^555^5555555|||SEL|555128888|||TASTERS|16 KEEN ROAD^^CARONSVILLE^CA^99999|^PH^^555^5551952|
IN1|1|BCCO|222^^^HC|ANTHEM BLUE CROSS|BOX 17777^^MOUNTAIN VIEW^CA^99999|^PH^^999^8888888|11111|||UNKNOWN|20070106|||SEL||||||||||||||ABC987A72302|
```

Example 2: Add person information	
MSH	Message Header Segment
EVN	Event Type

Example 2: Add person information	
PID	Patient Identification
[[NK1]]	Next of Kin
PV1	Patient Visit

```
MSH|^~\&|SENDING APPLICATION^1.2.3.4.1^ISO|SENDING FACILITY^1.2.3.4^ISO|RECEIVING APPLICATION^9.9.9.1^ISO|RECEIVING FACILITY^9.9.9.9^ISO|201308090046||ADT^A28^ADT_A05|ADT32833385|P|2.5.1|
EVN||201308090046|
PID|1||5555555^^&1.1.1.1&ISO||MOUSE^MICKEY^F|Vole|19250604|M||2106-3|1234 DISNEYLAND
WAY^^ANAHEIM^CA^94035^US||||S||H123456789^^^AN||||N|
NK1|1|MOUSE^MINNIE|SPO|1234 DISNEYLAND WAY^^ANAHEIM^CA^94035||||C
PV1|1||ICU^ICU128^A^ASV|E||BB^BROWN^BETTY^^^AA^AZURE^ANNA||MED|||ER||BB^BROWN^BETTY|IN||BC|||||||
|||||||ASV||ADM IN|||201308090044|
```

Acknowledgement Messages

The layout of the message response is listed below. Braces, { . . . }, indicate one or more repetitions of the enclosed group of segments. Brackets, [. . .], show that the enclosed group of segments is optional. The following table describes the required segments and cardinality of segments and groups of segments in the OCIE HL7 response message.

Segment Identifier	Usage	Cardinality	Segment Name
MSH	R	[1..*]	Message Header
[[SFT]]			Software Segment
MSA	R	[1..1]	Message Acknowledgment
[[ERR]]	O	[0..1]	Error Segment

The response message conforms directly to the information submitted in the original message. If the acknowledgment indicates an error was found within the MSH a single ERR (Error Segment) is included following the MSA. If no errors were found in the MSH no ERR segment is included.

A standard ACK acknowledgement message consists of one of the following scenarios:

1. A successful processing of a message without errors results in a ACK message with a value of AA in the MSA-1 Acknowledgement Code
2. An error found within the MSH-9 Message Type, MSH-12 Version ID, or MSH-11 Processing ID results in an ACK message with a value of AR in the MSA-1 Acknowledgement Code and the message is excluded from processing
3. An error found within the functional segment fields results in an ACK message with a value of AE in the MSA-1 Acknowledgement Code and the message is excluded from processing.

MSA – Message Acknowledgment Segment

The MSA segment contains information sent while acknowledging another message.

SEQ	ELEMENT NAME	LEN	DT	OPT	RP/#	TBL#
1	Acknowledgment Code	2	ID	R		0008
2	Message Control ID	20	ST	R		
3	Text Message	80	ST	O		
4	Expected Sequence Number	15	NM	O		
5	Delayed Acknowledgment Type					
6	Error Condition	250	CE	O		0357

MSA-1 Acknowledgment Code [R] - Definition: This field contains an acknowledgment code, see message processing rules. Refer to HL7 Table 0008 - Acknowledgment code for valid values. Values included in the OCIE standard are AA and AE.

HL7 Table 0008 – Acknowledgment code

Value	Description	Comment
AA	Original mode: Application Accept - Enhanced mode: Application acknowledgment: Accept	
AE	Original mode: Application Error - Enhanced mode: Application acknowledgment: Error	
AR	Original mode: Application Reject - Enhanced mode: Application acknowledgment: Reject	Not Used
CA	Enhanced mode: Accept acknowledgment: Commit Accept	Not Used
CE	Enhanced mode: Accept acknowledgment: Commit Error	Not Used
CR	Enhanced mode: Accept acknowledgment: Commit Reject	Not Used

MSA-2 Message Control ID [R] - Definition: This field contains the message control ID of the message sent by the sending system. It allows the sending system to associate this response with the message for which it is intended. This value contains the MSH-10 Message Control ID value related to this acknowledgement.

MSA-3 Text Message - Optional Value

The MSA-3 was deprecated as of v 2.4. The reader is referred to the ERR segment. The ERR segment allows for richer descriptions of the erroneous conditions.

This field will NOT be included in the OCIE MSA segment.

MSA-4 Expected Sequence Number - Optional Value

This field will NOT be included in the OCIE MSA segment.

MSA-5 Delayed Acknowledgment Type- Attention: The MSA-5 was deprecated as of v2.2 and the detail was withdrawn and removed from the standard as of v 2.5. This field will NOT be included in the OCIE MSA segment.

MSA-6 Error Condition -Optional Value

This field will NOT be included in the OCIE MSA segment.

Positive Acknowledgment Sample:

```
MSH|^~\&|SENDING APPLICATION^1.2.3.4.1^ISO||RECEIVING APPLICATION^9.9.9.9.1^ISO||20140514093051||ACK|MSG-20140514-093051-0337|P|2.5.1  
MSA|AA|ADT32833385
```

Application Error Sample:

```
MSH|^~\&|SENDING APPLICATION^1.2.3.4.1^ISO||RECEIVING APPLICATION^9.9.9.9.1^ISO||20140514093051||ACK|MSG-20140514-093051-0337|P|2.5.1  
MSA|AE|ADT32833385
```