



Admission, Discharge, Transfer (ADT)
Notifications Inbound Data Exchange Solution

Implementation Guide for Senders

Version 59

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1. Introduction

1.1 Purpose of Data Exchange Solution

Supports sending notifications on the status of a patient's care transition(s) to every care team member interested in that patient.

Admission, discharge, transfer (ADT) notifications are widely regarded as a keystone for improving patient care coordination through health information exchange. ADT notifications are sent when a patient is admitted to a hospital, transferred to another facility, or discharged from the hospital. Notifications are then sent to update physicians and care management teams on a patient's status, thus improving post-discharge transitions, prompting follow-up, improving communication among providers, and supporting patients with multiple or chronic conditions.

When a patient is admitted to a hospital, transferred, or discharged, an ADT notification is created by the hospital's electronic health record (EHR) system. The hospital EHR system sends the ADT notification to Michigan Health Information Network Shared Services (MiHIN), which operates the ADT Notification service.

While participating organizations can be onboarded either as a sender or receiver of ADT messages, this guide will seek to focus on organizations that are submitting as sending organizations. For more information on the onboarding process for receiving organizations, please refer to the ADT Notifications Outbound Data Exchange Solution Implementation Guide for Receivers.

1.2 Message Content

For this data exchange solution, Message Content refers to a message conforming to HL7 2.5.1 standards identified as an ADT message type and any applicable message enrichments.

1.3 Data Flow

1.3.1 Functional Data Flow

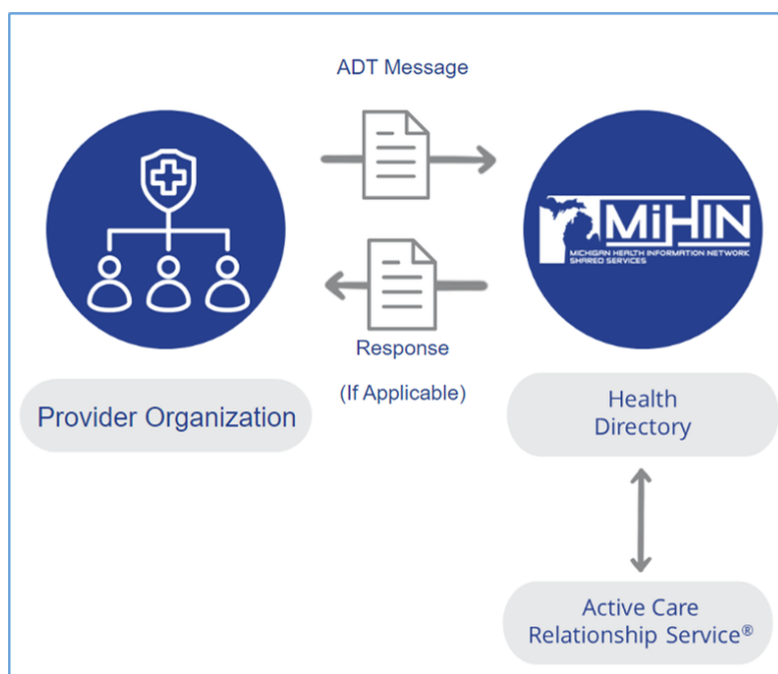


Figure 1. ADT Sender Data Flow Diagram

1. Provider Organization sends the ADT message to MiHIN via established transport method.
2. MiHIN receives and processes the sent ADT message and returns an acknowledgement (ACK) or other applicable response to the provider organization to confirm receipt.

1.3.2 Actors

- **Actor:** Provider Organization
 - **Role:** Collects patient registration and movement information within their healthcare institution and forwards this information to MiHIN. Receives and ingests any applicable acknowledgments or responses sent from MiHIN.
- **Actor:** MiHIN
 - **Role:** Receives patient registration and movement information from the sending organization and processes and routes it to receiving organizations. May normalize data, create enrichments or add information to message Z-

Segment before routing. Returns acknowledgements (ACKs) or other applicable responses messages to sending organizations to confirm receipt.

The data exchange solution summary is available online at:

<https://mihin.org/resourcehub/>

You can contact MiHIN at www.mihin.org/requesthelp for more information.

2. Onboarding

2.1 Prerequisites

Participating organizations must complete legal onboarding prior to beginning the technical onboarding process. Once all required legal agreements are fully executed, the participating organization will proceed to the technical onboarding phase.

2.1.1 Universal Legal Prerequisites

Upon a participating organization indicating interest in onboarding, MiHIN will review the organization's legal status to confirm whether the appropriate agreements are in place. If required legal agreements have not yet been executed, a MiHIN staff member will work with the participating organization to complete the necessary pre-onboarding legal steps.

Prior to initiating technical onboarding, the participating organization must have an executed Participation Agreement or the applicable legacy master data-sharing agreement plus applicable Use Case Exhibits (UCEs) executed. In some cases, execution of a Statement of Work (SOW) may also be required.

To initiate the pre-onboarding legal process, please contact MiHIN's Help Desk by visiting our portal <https://mihinhelp.refined.site/portal/50>

2.1.2 Technical Requirements

The following implementation dependencies and technical requirements must be completed for the Admission, Discharge, Transfer (ADT) Data Exchange Solution to operate in a production environment.

2.1.2.1 Data Exchange Solution Requirements

The following data exchange solution implementations need to be conducted for ADT Notifications to function.

- There are no data exchange requirements necessary for the sending of ADT notifications.

While there are no data exchange solution requirements to participate in sending

ADTs, it should be noted that MiHIN automatically creates Real-Time ACRS® relationships for any sending organizations based on their sent ADT messages. If a sending organization also wishes to receive messages based on these relationships, then they will need to go through the onboarding process to receive messages as well. This process is covered in the ADT Notifications Outbound Data Exchange Solution Implementation Guide for Receivers.

2.1.2.2 Other Technical Requirements

Sending organizations that are onboarding must be able to meet the following prerequisites for the ADT Data Exchange Solution to function:

- Organizations must be able to generate ADT notification messages based on patient encounters within the facilities in question that meet specifications listed in Section 1.2 and Section 3.
- Organization-generated ADT messages must be able to meet conformance thresholds described in Section 2.3 through the submission of correctly formatted mapping tables during the implementation process.
- Organizations must be able to establish a VPN connection with MiHIN's HIE Platform and send ADT messages to the endpoints established for ADTs within that platform.
- Organizations must have and be able to populate ADT messages with valid and appropriately placed facility and organization OIDs that correspond with the information provided in their OID mapping tables.

2.2 ADT Sender Onboarding Process

2.2.1 MiHIN Engagement and Legal Onboarding

- Express interest in the ADT data exchange solution by contacting MiHIN's Help Desk. <https://mihinhelp.refined.site/portal/50>
- Meet with MiHIN staff to:
 - Review business needs
 - Discuss the data exchange solution
 - Complete required legal onboarding
- Upon completion of legal onboarding, MiHIN's onboarding team will initiate the technical onboarding process.

2.2.3 Technical Onboarding Activities

- At a high level, the following activities will occur during technical onboarding:
- Conduct a kickoff meeting to:
 - Review the ADT data exchange solution in detail
 - Clarify roles and responsibilities
 - Address outstanding questions
- Complete and return all required onboarding documentation.
- MiHIN, the EMR/vendor, and the participating organization will:
 - Establish or confirm transport connectivity
 - Conduct message and data flow testing
- Go-Live
- Complete Data Quality Assurance (DQA)

2.3 Technical Connectivity Process

Currently, MiHIN supports the following transport methods:

- **LLP over IPsec VPN** – Lower-Layer Protocol over Internet Protocol Security Virtual Private Network
 - MiHIN's VPN request form must be completed, sent to, and approved by MiHIN. A pre-shared key is then exchanged between the organization and MiHIN to initialize the connection. The LLP over IPsec VPN is the most efficient transport for very high volumes of messages.
- **DSM** – Direct Secure Messaging
 - MiHIN accepts Direct Secure Messages from Health Internet Service Provider (HISPs) that have EHNAC-DTAAP (DirectTrust) accreditation. Test messages are sent to verify HISP connectivity ("ping pong"). The Message Header section in the test messages is verified for appropriate routing configuration.
- **SFTP** – Secure File Transfer Protocol
 - Organizations must have a MiHIN-hosted SFTP account provisioned for them with the appropriate submission and return folders for the ADT Notifications data exchange solution. MiHIN will configure file paths for all needed folders and provide login credentials for access.
- **REST API** - Representational State Transfer Application Programming Interface (REST API)

- Organizations will need to provide their email address so that Cognito credentials can be created and distributed, as well as provide their source IP for whitelisting. Organizations connecting via this transport will need to contact MiHIN's OAuth2 endpoint— listed in [Section 3.1](#)— and acquire a token that will be used to make a connection with MiHIN's REST API URL endpoint, also listed in [Section 3.1](#). For more information on this process, see [Section 3.2.4](#).

For VPN connectivity, two VPNs are required. A primary VPN will facilitate regular traffic. A secondary will be established for fail-over purposes.

The following steps describe the technical onboarding process. However, MiHIN typically conducts onboarding kick-off meetings with new organizations to go through each of these steps in detail and answer any questions.

1. Prior to setting up the selected transport or sending any messages— test or otherwise— onboarding organizations will need to provide the following information so MiHIN can update its internal tables to recognize and properly process messages from the sender. This information is as follows:
 - a. Source connectivity information for the sending organization:
 - i. Source IP if sending via VPN or REST API
 - ii. Source DSM Address if sending via Direct Secure Messaging
 - b. Facility name(s) and the associated OID(s) that will be sending ADT notifications
 - c. Facility OID (or other unique identifier) location within generated ADT messages
 - d. OID identifying the managing organization of the sending facility/facilities
 - e. ACRS population name covering all facilities included within the ADT sending feed
 - f. ADT mapping table for normalization and conformance
2. The organization selects one or more supported transport methods and establishes connectivity with MiHIN. This step varies based on the method selected.
3. Testing will differ depending on the transport mechanism selected:
 - a. **LLP over IPsec VPN** - Testing will be conducted by having the onboarding facility(ies) send a test message to the pre-production endpoint specified in [Section 3.1](#). MiHIN will monitor for inbound messages and confirm receipt by sending back an acknowledgment message (ACK) to the sending facility. Once ADT messages and associated ACKs have been received and

confirmed, testing is considered complete.

- b. **DSM and SFTP** – Testing will be conducted by having the onboarding facility(ies) send a test message to the pre-production endpoint specified in [Section 3.1](#). MiHIN will monitor inbound messages and confirm receipt. For DSM and SFTP transport methods, internal MiHIN staff perform this task by monitoring the DSM address or the SFTP submission folder and confirming receipt of sent messages.
 - c. **REST API** – For REST API transport, testing will be conducted by having the onboarding facility(ies) send a test message to the pre-production URL endpoint specified in [Section 3.1](#). MiHIN will monitor inbound traffic for sent messages and return responses will be sent back to the organization upon receipt. For an example of the response format returned for REST API, please see [Appendix A](#).
4. A go-live call will occur after testing is complete. During this process, configuration settings are promoted to the MiHIN production environment, and the onboarding facilities will generate and send production ADTs to the production endpoint specified in [Section 3.1](#). MiHIN will monitor for inbound traffic and return an acknowledgment upon receipt. Once ADTs and responses have been successfully received , the organization is considered live and in production.

Once the onboarding organization is live with their production ADT feed, they will work with MiHIN to bring their ADT messages into conformance. For more information on this process, please refer to [Appendix B](#).

3. Specifications

3.1 Overview

3.1.1 Environments

- MiHIN Pre-Production
 - ADT IP Endpoint: 54.158.212.76:9000
 - ADT DSM Address Endpoint: adt.preprod@direct.mihin.net
 - ADT REST API Endpoint: https://messages.preprod.mihin.services/send?message_type=adt
 - Cognito oAuth2 Endpoint: <https://mitp-adt-hub-preprod.auth.us-east-1.amazonaws.com/oauth2/token>
 - ADT SFTP Submission Information
 - Server: sftp.preprod.mihin.services
 - Folder structure: oid/adt/upload
- MiHIN Production
 - ADT IP Endpoint: 3.235.81.34:10000
 - ADT DSM Endpoint: adt@direct.mihin.net
 - ADT REST API Endpoint: https://messages.mihin.services/send?message_type=adt
 - Cognito oAuth2 Endpoint: <https://mitp-adt-hub-prod.auth.us-east-1.amazonaws.com/oauth2/token>
 - ADT SFTP Submission Information
 - Server: sftp.mihin.services
 - Folder structure: oid/adt/upload

3.2 General Requirements

3.2.1 Message and Event Types Supported

ADT messages version 2.5.1 with compatibility for version 2.3.1 messages are supported with this specification. The following event types are sent into MiHIN's FHIR® repository and available in the Longitudinal Record Viewer.

Event Types	
A01	ADT/ACK - Admit/Visit notification
A03	ADT/ACK - Discharge/End Visit
A04	ADT/ACK - Register a Patient
A31	ADT/ACK - Update Person Information
A60	ADT/ACK - Update Allergy Information

3.2.2 Date/Time Formatting

The number of characters populated (excluding the time zone specification) specifies the precision.

Example: |199904| specifies April 1999.

Example: |199904011503| specifies April 1st, 1999 at 1503

Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ].

Thus:

1. Only the first four are used to specify a precision of "year"
2. The first six are used to specify a precision of "month"
3. The first eight are used to specify a precision of "day"
4. The first ten are used to specify a precision of "hour"
5. The first twelve are used to specify a precision of "minute"
6. The first fourteen are used to specify a precision of "second"
7. The first sixteen are used to specify a precision of "one tenth of a second"
8. The first nineteen are used to specify a precision of "one ten thousandths of a second"

The time zone (+/-ZZZZ) is represented as +/-HHMM, offset from Coordinated Universal Time (UTC) (formerly Greenwich Mean Time (GMT)), where +0000 or -0000 both represent UTC (without offset). The specific data representations used in the HL7 encoding rules are compatible with ISO 8824- 1987(E). Note that if the time zone is not included; the time zone is assumed to be that of the local time zone of the sender. Also note that a DTM or TS valued field with the HHMM part set to "0000" represents midnight of the night extending from the previous day to the day given by the YYYYMMDD part.

[3.2.3 Message Acknowledgements](#)

HL7 message acknowledgments are a valuable tool for effective interface messaging and will be used routinely, unless the submitter is unable to support. The submitter will communicate their ability to receive messages acknowledgements in the Message Header (MSH) segment. The message acknowledgement will be communicated in the Message Acknowledgement (MSA) segment.

Please note that not all transportation methods include acknowledgements. For example, with Direct Secure Messaging or SFTP transport, receipt confirmation is not conveyed through messages; instead, MiHIN staff manually verify the receipt. In contrast, when utilizing REST API transport, a response message is generated, and you can find an example in Appendix A.

[3.3 General Message Requirements](#)

[3.3.1 Sending Organization Requirements](#)

[3.3.1.1 Message Header Segment Requirements for Sending Organizations](#)

ADT senders populating the receiving facility OID in message header segments 5 and 6 should use MiHIN's OID, which is 2.16.840.1.113883.3.1481.

[3.3.1.2 Segment Requirements for Sending Organization](#)

Conformant ADT senders will adhere to the following usage requirements:

- Segments with usage code R will always be sent.
- Segments with usage code C will be sent conditionally, based upon fulfillment of the condition contained in the "Comments" column.
- Segments with usage code RE will be sent if information corresponding to the segment definition exists on the sending system.
- Segments with usage code CE will be sent conditionally, based upon fulfillment of the condition contained in the "Comments" column, if information corresponding to the segment definition exists on the sending system.
- Segments with usage code X, or whose segment ID does not appear in the static definition corresponding to the trigger event of the message will be ignored.

3.3.1.3 Segment Cardinality Requirements for Sending Organizations

Conformant sending organizations will adhere to the following cardinality requirements for message segments:

- No fewer occurrences of each segment will be sent than the number indicated by the minimum cardinality of the segment in the message-level static definition corresponding to the trigger event of the message.
- Occurrences of each segment exceeding the number indicated by the maximum cardinality of the segment in the message-level static definition corresponding to the trigger event of the message will be ignored.

3.3.1.4 Field and Subfield Usage Requirements for Sending Organizations

Conformant sending organizations will adhere to the following usage requirements for message fields, components, and subcomponents:

- Fields and subfields with usage code R will always be sent.
- Fields and subfields with usage code C will be sent conditionally, based upon fulfillment of the condition contained in the "Comments" column.
- Fields and subfields with usage code RE will be sent if the information corresponding to the field or subfield definition exists on the sending system.
- Fields and subfields with usage code CE will be sent conditionally, based upon fulfillment of the condition contained in the "Comments" column, if information corresponding to the field or subfield definition exists on the sending system.

3.3.1.5 Field and Subfield Cardinality Requirements for Sending Organizations

Conformant sending organizations will adhere to the following usage requirements for message fields, components, and subcomponents:

- Fields and subfields with usage code R will always be sent.
- Fields and subfields with usage code C will be sent conditionally, based upon fulfillment of the condition contained in the "Comments" column.
- Fields and subfields with usage code RE will be sent if the information corresponding to the field or subfield definition exists on the sending system.
- Fields and subfields with usage code CE will be sent conditionally, based upon fulfillment of the condition contained in the "Comments" column, if information corresponding to the field or subfield definition exists on the sending system.
- Fields and subfields with usage code X, or whose field or subfield sequence

number does not appear in the static definition of the field or subfield will be ignored.

3.3.2 Required Segments for ADT Messaging

Segment	Name	Description
MSH	Message Header	Information explaining how to parse and process the message information, including identification of message delimiters, sender, receiver, message type, timestamp, etc.
EVN	Event Type	Trigger event information for receiving application
PID	Patient Identification	Patient identifying and demographic information
PV1	Patient Visit	Information related to this visit at this facility including the nature of the visit, critical timing information, and a unique visit identifier.
OBX	Observation / Result	Clinical information and observations. This segment is repeatable.
DG1	Diagnosis	Admitting diagnosis and, optionally, working and final Diagnosis information. This segment is repeatable.
PR1	Procedures	Information relative to various types of procedures performed.

This segment is repeatable.

IN1	Insurance	Information about insurance policy coverage information. This segment is repeatable.

3.4 Specific Segment and Field Definitions

Usage indicates whether the message element (segment, segment group, field, component, or subcomponent) is required, optional, or conditional in the corresponding message element.

R = Required

RA = Required Information if Available

CR = Conditionally Required

O = Optional

3.4.1 Message Header (MSH) Segment

The MSH Segment is used to define the intent, source, destination, and some specifics of the syntax of the message. This segment includes identification of message delimiters, sender, receiver, message type, timestamp, etc.

Field	Name	Requirements
MSH:1	Field Separator	R
MSH:2	Encoding Character	R
MSH:3	Sending Application	O
MSH:3.1	ADT Message Sending Application ID	O
MSH:3.2	Sending Application Universal ID	O
MSH:4.1	Sending Facility ID	CR
MSH 4.2	Sending Facility OID	CR
MSH:5	Receiving Application	O
MSH:6	Receiving Facility	O
MSH:7	Date/Time of Message	R
MSH:8	Security	O
MSH:9	Message Type	R
MSH:9.1	Message Type - Type	R
MSH:9.2	Message Type - Event	R

MSH:10	Message Control ID	R
MSH:11	Processing ID	R
MSH:12	Version ID	R
MSH:13	Sequence Number	O
MSH:14	Continuation Number	O
MSH:15	Ack Type	O
MSH:16	Application Ack Type	O

Example for A01 Admit transaction with Acknowledgment:

A01 Admit Transaction Example

MSH|^~\&|NEXTGEN PATIENT
 GEN|2.16.840.1.113883.3.1097.205^2.16.840.1.113883.3.1097||1.2.4.9.8.61.123.45
 6|20250731083135||ADT^A01^ADT_A01|45597127|T|2.6

A01 Admit Acknowledgement Example

MSH|^~\&|||ADT_EVENT|20250723083228||ACK^A01^ACK|5204083228538916
 TM49|P|2.5\rMSA|AA|1101584098|7af19d0f-64e7-4cae-b541-afc629392b83\r

3.4.2 Event Type (EVN) Segment

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

Field	Name	Requirements
EVN:1	Event Type Code	O
EVN:2	Recorded Date/Time	R
EVN:3	Date/Time Planned Event	O
EVN:4	Event Reason Code	O
EVN:5	Operator ID	O
EVN:5.1	ID Number	O
EVN:5.2	Last Name	O
EVN:5.3	First Name	O

EVN:6	Event Occurred	O
EVN:7	Event Facility	O

Example that shows Facility Identifier:

MSH|^~\&|MS4ADT|2.16.840.1.113883.3.5044^2.16.840.1.113883.3.5044|EPIC704_GLHCCHS|101|20250827141926||ADT^A04|332340202|P|2.3||||||\r

EVN|||ADT_EVENT|E111053^TAYLOR^CORINNE^A^^^^COV^^^^ECC\r

3.4.3 Patient Identification (PID) Segment

The PID Segment is used as the primary means of communicating patient identification information. This segment contains pertinent patient identifying and demographic information.

Segment	Name	Requirements
PID:1	Sequence Number	R
PID:2	Patient ID	RA
PID:3.1	Patient ID (Internal ID)	R
PID:3.2	Patient Identifier List Check Digit	O
PID:3.3	Patient Identifier List Code identifying check digit	O
PID.3.4	Patient Identifier MRN Assigning Authority (Identifier System)	R
PID.3.5	Patient Identifier MRN Identifier Type Code	R
PID.3.6	Patient Identifier MRN Assigning Facility	O
PID.4.1	Alternate Patient ID- PID	O
PID.4.4	Patient MRN (Alt Patient ID) Assigning Authority	O
PID.4.6	Patient MRN (Alt Patient	O

	ID) Assigning Facility	
PID:5	Patient Name	R
PID:5.1	Patient Name Last (Family)	R
PID:5.2	Patient Name First (Given)	R
PID:5.3	Patient Name Middle (Second and Further Given)	O
PID:5.4	Patient Name Suffix	O
PID:5.5	Patient Name Prefix	O
PID:5.6	Patient Name Degree	O
PID:6	Mother's Maiden Name	O
PID:7	Date/Time of Birth	R
PID:8	Administrative Sex	R
PID:9	Patient Alias	O
PID:10	Race	RA
PID:11	Patient Address	R
PID:11.1	Address Line 1	R
PID:11.2	Address Line 2	RA
PID:11.3	City	R
PID:11.4	State	R
PID:11.5	ZIP Code	R
PID:11.6	Country	O
PID:11.7	Type	O
PID:11.8	Other Geographic Designation	O
PID:11.9	County	O
PID:11.10	Census Tract	O
PID:12	County Code	O
PID:13	Phone Number- Home	RA
PID:13.1	Telephone Number	O

PID:13.2	Telecommunication use code	O
PID:13.3	Telecommunication Equipment Type	O
PID:13.4	Email Address	O
PID:13.5	Country Code	O
PID:13.6	Area/City Code	O
PID:13.7	Home Phone Number	O
PID:13.8	Home Extension	O
PID:13.9	Home Any Text	O
PID:13.10	Extension Prefix	O
PID:13.11	Speed Dial Code	O
PID:13.12	Unformatted Telephone Number	O
PID:14	Phone Number – Business	O
PID:14.1	Telephone Number	O
PID:14.2	Telecommunication use code	O
PID:14.3	Telecommunication Equipment Type	O
PID:14.4	Email Address	O
PID:14.5	Country Code	O
PID:14.6	Area/City Code	O
PID:14.7	Business Phone Number	O
PID:14.8	Business Extension	O
PID:14.9	Business Any Text	O
PID:14.10	Extension Prefix	O
PID:14.11	Speed Dial Code	O
PID:14.12	Unformatted Telephone Number	O
PID:15	Primary Language	O

PID:16	Marital Status	O
PID:17	Religion	O
PID:18	Patient Account Number	O
PID:19	SSN Number - Patient	RA
PID:20	Driver's License Number - Patient	O
PID:21	Mother's Identifier	O
PID:22	Ethnic Group	RA
PID:23	Birthplace	O
PID:24	Multiple Birth Indicator	O
PID:25	Birth Order	O
PID:26	Citizenship	O
PID:27	Veterans Military Status	O
PID:28	Nationality	O
PID:29	Patient Death Date/Time	RA
PID:30	Patient Death Indicator	RA
PD1:1	Living Dependency	O
PD1:2	Living Arrangement	O
PD1:3	Patient Primary Facility	O
PD1:4	Patient Primary Care Provider	RA
PD1:4.1	ID	RA
PD1:4.2	Last Name	RA
PD1:4.3	First Name	RA
PD1:5	Student Indicator	O
PD1:6	Handicap	O
PD1:7	Living Will Code	O
PD1:8	Organ Donor Code	O
PD1:9	Separate Bill	O
PD1:10	Duplicate Patient	O

PD1:11	Publicity Code	O
PD1:12	Protection Indicator	O

Example PID Segment:

PID|1|5092|PATID12245^5^M11^ADT1^MR||Hamilton^Dolores||19610430|F||2
106-3^White^HL70005|973 Park
Street^^Flint^MI^48506|||||||000005092|||N^Not Hispanic or
Latino^HL70189|||||||20301129003700+0000|N

3.4.4 Patient Visit

Field	Name	Requirement
PV1:1	Sequence Number	O
PV1:2	Patient Class	R
PV1:3	Assigned Patient Location	O
PV1:4	Admission Type	RA
PV1:5	Preadmit Number	O
PV1:6	Prior Patient Location	O
PV1:7	Attending Doctor	RA
PV1:7.1	ID	RA
PV1:7.2	Last Name	RA
PV1:7.3	First Name	RA
PV1.7.14	Attending Physician Location ID	RA
PV1:8	Referring Doctor	RA
PV1:8.1	ID	RA
PV1:8.2	Last Name	RA
PV1:8.3	First Name	RA
PV1.8.14	Referring Physician Location ID	RA
PV1:9	Consulting Doctor	RA
PV1:9.1	ID	RA

PV1:9.2	Last Name	RA
PV1:9.3	First Name	RA
PV1.9.14	Consulting Physician Location ID	RA
PV1:10	Hospital Service	RA
PV1:11	Temporary Location	O
PV1:12	Preadmit Test Indicator	O
PV1:13	Re-admission Indicator	O
PV1:14	Admit Source	RA
PV1:15	Ambulatory Status	O
PV1:16	VIP Indicator	O
PV1:17	Admitting Doctor	RA
PV1:17.1	ID	RA
PV1:17.2	Last Name	O
PV1:17.3	First Name	O
PV1:17.14	Admitting Provider Location ID	RA
PV1:18	Patient Type	RA
PV1.19.1	Visit Number (Unique Encounter Code)	R
PV1.19.2	Visit Number check digit	O
PV1.19.3	Visit Number check digit scheme	O
PV1.19.4	Visit Number Identifier System (Assigning authority)	O
PV1.19.5	Visit Number Identifier Type - 'VN'	O
PV1:20	Financial Class	O
PV1:21	Charge Price Indicator	O
PV1:22	Courtesy Code	O

PV1:23	Credit Rating	O
PV1:24	Contract Code	O
PV1:25	Contract Effective Date	O
PV1:26	Contract Amount	O
PV1:27	Contract Period	O
PV1:28	Interest Code	O
PV1:29	Transfer to Bad Debt Code	O
PV1:30	Transfer to Bad Debt Date	O
PV1:31	Bad Debt Agency Code	O
PV1:32	Bad Debt Transfer Amount	O
PV1:33	Bad Debt Recover Amount	O
PV1:34	Delete Account Indicator	O
PV1:35	Delete Account Date	O
PV1:36	Discharge Disposition	RA
PV1:37	Discharge To Location	RA
PV1:38	Diet Type	O
PV1:39	Servicing Facility	O
PV1:40	Bed Status	O
PV1:41	Account Status	R
PV1:42	Pending Location	O
PV1:43	Prior Temporary Location	O
PV1:44	Admit Date/Time	RA
PV1:45	Discharge Date/Time	RA
PV1:46	Current Patient Balance	O
PV1:47	Total Charges	O
PV1:48	Total Adjustment	O
PV1:49	Total Payments	O
PV1:50	Alternate Visit ID	O
PV1:51	Visit Indicator	O
PV1:52	Other Healthcare Providers	RA
PV1:52.1	ID	RA
PV1:52.2	Last Name	RA

PV1:52.3	First Name	RA
PV1:52.14	Other Provider Location ID	RA

Example PV1 Segment for an Inpatient Visit:

PV1|1|||E|||112345^Familyname^Givenname^^^DR^MD^^NEMedCtr&1234567
890&NPI|||M
ED|||7|||2222_001^^^GreaterNorthMedCtr&4356012945&NPI^VN|||||||
|||||||201 908171200

3.4.5 Merge Patient Information (MRG) Segment

Field	Name	Requirement
MRG:1	Prior Patient Identifier List	O
MRG:2	Prior Alternate Patient ID	O
MRG:3	Prior Patient Account Number	O
MRG:4	Prior Patient ID	O
MRG:5	Prior Visit Number	O
MRG:6	Prior Alternate Visit ID	O
MRG:7	Prior Patient Name	O

Example MRG Segment for an Inpatient Visit:

MRG|100002253^^^^VN^Windward|||1000538722

3.4.6 Next of Kin (NK1) Segment

Field	Name	Requirement
NK1:1	Set ID	O
NK1:2	Next of Kin Name	O
NK1:2.1	Last Name	O
NK1:2.2	First Name	O
NK1:2.3	Middle Name	O
NK1:3	Next of Kin Relationship to	O

	Patient	
NK1:4	Next of Kin Address	O
NK1:4.1	Address Line 1	O
NK1:4.2	Address Line 2	O
NK1:4.3	City	O
NK1:4.4	State	O
NK1:4.5	ZIP Code	O
NK1:4.6	Country	O
NK1:4.7	Type	O
NK1:4.8	Other Geographic	O
NK1:4.9	County/Parish	O
NK1:4.10	Census Tract	O
NK1:5	Next of Kin Phone Number	O
NK1:6	Next of Kin Employer Phone Number	O
NK1:7	Contact Role	O
NK1:8	Start Date	O
NK1:9	End Date	O
NK1:10	Next of Kin Job Title	O
NK1:11	Next of Kin Job Code/Class	O
NK1:12	Next of Kin Employee Number	O
NK1:13	Organization Name	O
NK1:14	Marital Status	O
NK1:15	Sex	O
NK1:16	Date of Birth	O
NK1:17	Living Dependency	O
NK1:18	Ambulatory Status	O
NK1:19	Citizenship	O
NK1:20	Primary Language	O

NK1:21	Living Arrangement	O
NK1:22	Privacy Type	O
NK1:23	Protection Indicator	O
NK1:24	Student Indicator	O
NK1:25	Religion	O
NK1:26	Mother's Maiden Name	O
NK1:27	Nationality	O
NK1:28	Ethnic Group	O
NK1:29	Contact Reason	O
NK1:30	Contact Person Name	O
NK1:31	Contact Phone	O
NK1:32	Contact Address	O
NK1:33	NK1 Identifiers	O
NK1:34	Job Status	O
NK1:35	Race	O
NK1:36	Handicap	O
NK1:37	Contact Person Social Security Number	O
NK1:38	Next of Kin Birth Place	O
NK1:39	VIP Indicator	O

Example NK1 Segment for an Inpatient Visit:

NK1|1|ADTTEST^JILLIAN|SPO|||C

3.4.7 Observation/Result (OBX) Segment

Field	Name	Requirement
OBX:1	Set ID	O
OBX:2	Value Type	RA
OBX-3.1	Observation Identifier Code	O

OBX-3.2	Observation Identifier Display	O
OBX-3.3	Observation Identifier System	RA
OBX:4	Observation Sub-ID	O
OBX:5	Observation Value	RA
OBX:6	Units	O
OBX:7	References Ranges	O
OBX:8	Abnormal Flags	O
OBX:9	Probability	O
OBX:10	Nature of Abnormal Test	O
OBX:11	Observation Results Status	RA
OBX:12	Effective Date of Reference Range	O
OBX:13	User Defined Access Checks	O
OBX:14	Date/Time of the Observation	O
OBX:15	Producer's ID	O
OBX:16	Responsible Observer	O
OBX:17	Observation Method	O
OBX:18	Date/Time of the Analysis	O

Example repeating OBX Segment for an Inpatient Visit:

OBX|1|CE|ACCRELATEDVI||No|||||F

[3.4.8 Patient Allergy Information \(AL1\) Segment](#)

Field	Name	Requirement
AL1:1	Set ID	O
AL1:2	Allergy Type	RA
AL1:2.1	Allergy Type Identifier	RA

AL1:3	Allergy Code	O
AL1:3.1	Identifier	RA
AL1:3.2	Description	O
AL1:3.3	Name of Coding System	RA
AL1.4.1	Allergy Severity Code	RA
AL1.4.2	Allergy Severity Code Display	O
AL1.4.3	Allergy Severity Code System	RA
AL1:5	Allergy Reaction	O
AL1:6	Identification Date	O

Example repeating AL1 Segment for an Inpatient Visit:

AL1 | 1 | Drug Allergy | 07055^Sulfa^KDC | MO | Hives |

3.4.9 Diagnosis (DG1) Segment

Field	Name	Requirement
DG1:1	Set ID	RA
DG1:2	Diagnosis Coding Method	RA
DG1:3	Diagnosis Code	RA
DG1:3.1	Identifier	RA
DG1:3.2	Description	RA
DG1:3.3	Name of Coding System	RA
DG1:4	Diagnosis Description	O
DG1:5	Diagnosis Date and Time	O
DG1:6	Diagnosis Type	RA
DG1:7	Major Diagnostic Category (MDB)	O
DG1:8	Diagnostic Related Group	O
DG1:9	DRG Approval Indicator	O
DG1:10	DRG Group Review Code	O

DG1:11	Outlier Type	O
DG1:12	Outlier Days	O
DG1:13	Outlier Cost	O
DG1:14	Grouper Version and Type	O
DG1:15	Diagnosis Priority	O
DG1:16	Diagnosing Clinician	O
DG1:17	Diagnosis Classification	O
DG1:18	Confidential Indicator	O
DG1:19	Attestation Date/Time	O

Example DG1 Segment:

DG1|1||R50^FEVER OF OTHER AND UNKNOWN ORIGIN^I10|||W (Working diagnosis from ICD10)

DG1|2||16932000^NAUSEA AND VOMITING^SCT|||W (Working diagnosis from SNOMED-CT)

DG1|1||J14^PNEUMONIA DUE TO HEMOPHILUS INFLUENZA^I10||201812271700|F

(Final diagnosis from ICD10)

3.4.10 Procedure (PR1) Segment

Field	Name	Requirement
PR1:1	Set ID - PR1	O
PR1:2	Procedure Coding Method	O
PR1:3	Procedure Code	O
PR1:3.1	Identifier	RA
PR1:3.2	Text	O

PR1:3.3	Name of Coding System	RA
PR1:3.4	Alternate Identifier	O
PR1:3.5	Alternate Text	O
PR1:3.6	Name of Alternate Coding System	O
PR1:4	Procedure Description	O
PR1:5	Procedure Date/Time	O
PR1:6	Procedure Functional Type	O
PR1:7	Procedure Minutes	O
PR1:8	Anesthesiologist	O
PR1:8.1	Identifier	O
PR1:8.2	Last Name	O
PR1:8.3	First Name	O
PR1:8.4	Middle Name	O
PR1:8.5	Suffix	O
PR1:8.6	Prefix	O
PR1:8.7	Degree	O
PR1:8.8	Source Table	O
PR1:8.9	Assigning Authority	O
PR1:8.9.1	Namespace ID	O
PR1:8.9.2	Universal ID	O
PR1:8.9.3	Universal ID Type	O
PR1:8.10	Name Type Code	O
PR1:8.11	Identifier Check Digit	O
PR1:8.12	Check Digit Scheme	O
PR1:8.13	Identifier Type Code	O
PR1:9	Anesthesia Code	O
PR1:10	Anesthesia Minutes	O
PR1:11	Surgeon	O
PR1:11.1	Identifier	O

PR1:11.2	Last Name	O
PR1:11.3	First Name	O
PR1:11.4	Middle Name	O
PR1:11.5	Suffix	O
PR1:11.6	Prefix	O
PR1:11.7	Degree	O
PR1:11.8	Source Table	O
PR1:11.9	Assigning Authority	O
PR1:11.9.1	Namespace ID	O
PR1:11.9.2	Universal ID	O
PR1:11.9.3	Universal ID Type	O
PR1:11.10	Name Type Code	O
PR1:11.11	Identifier Check Digit	O
PR1:11.12	Check Digit Scheme	O
PR1:11.13	Identifier Type Code	O
PR1:12	Procedure Practitioner	O
PR1:12.1	Identifier	O
PR1:12.2	Last Name	O
PR1:12.3	First Name	O
PR1:12.4	Middle Name	O
PR1:12.5	Suffix	O
PR1:12.6	Prefix	O
PR1:12.7	Degree	O
PR1:12.8	Source Table	O
PR1:12.9	Assigning Authority	O
PR1:12.9.1	Namespace ID	O
PR1:12.9.2	Universal ID	O
PR1:12.9.3	Universal ID Type	O
PR1:12.10	Name Type Code	O
PR1:12.11	Identifier Check Digit	O

PR1:12.12	Check Digit Scheme	O
PR1:12.13	Identifier Type Code	O
PR1:13	Consent Code	O
PR1:13.1	Identifier	O
PR1:13.2	Text	O
PR1:13.3	Name of Coding System	O
PR1:13.4	Alternate Identifier	O
PR1:13.5	Alternate Text	O
PR1:13.6	Name of Alternate Coding System	O
PR1:14	Procedure Priority	O
PR1:15	Associated Diagnosis Code	O
PR1:15.1	Identifier	O
PR1:15.2	Text	O
PR1:15.3	Name of Coding System	O
PR1:15.4	Alternate Identifier	O
PR1:15.5	Alternate Text	O
PR1:15.6	Name of Alternate Coding System	O
PR1:16	Procedure Code Modifier	O
PR1:16.1	Identifier	O
PR1:16.2	Text	O
PR1:16.3	Name of Coding System	O
PR1:16.4	Alternate Identifier	O
PR1:16.5	Alternate Text	O
PR1:16.6	Name of Alternate Coding System	O
PR1:17	Procedure DRG Type	O
PR1:18	Tissue Type Code	O
PR1:18.1	Identifier	O

PR1:18.2	Text	O
PR1:18.3	Name of Coding System	O
PR1:18.4	Alternate Identifier	O
PR1:18.5	Alternate Text	O
PR1:18.6	Name of Alternate Coding System	O
PR1:19	Procedure Identifier	O
PR1:19.1	Entity Identifier	RA
PR1:19.2	Namespace ID	RA
PR1:19.3	Universal ID	O
PR1:19.4	Universal ID Type	O
PR1:20	Procedure Action Code	O

Example Repeating PR1 Segment for an Inpatient Visit:

PR1|1|||202401301106|D|||||1||1|0||U

3.4.11 Guarantor (GT1) Segment

Field	Name	Requirement
GT1:1	Set ID - GT1	O
GT1.2.1	Guarantor Number	RA
GT1.2.2	Guarantor Number - System	RA
GT1:3	Guarantor Name	O
GT1:3.1	Last Name	O
GT1:3.2	First Name	O
GT1:3.3	Middle Name	O
GT1:3.4	Prefix	O
GT1:3.5	Suffix	O
GT1:3.6	Degree	O
GT1:4	Guarantor Spouse Name	O

GT1:5	Guarantor Address	O
GT1:5.1	Address Line 1	O
GT1:5.2	Address Line 2	O
GT1:5.3	City	O
GT1:5.4	State	O
GT1:5.5	ZIP	O
GT1:5.6	Country	O
GT1:5.7	Type	O
GT1:5.8	Other Geographic	O
GT1:5.9	County/Parish	O
GT1:6	Guarantor Phone Number – Home	O
GT1:7	Guarantor Phone Number – Business	O
GT1:8	Guarantor Date of Birth	O
GT1:9	Guarantor Sex	O
GT1:10	Guarantor Type	O
GT1:11	Guarantor Relationship	O
GT1:12	Guarantor SSN	O
GT1:13	Guarantor Date – Begin	O
GT1:14	Guarantor Date – End	O
GT1:15	Guarantor Priority	O
GT1:16	Guarantor Employer Name	O
GT1:17	Guarantor Employer Address	O
GT1:17.1	Address Line 1	O
GT1:17.2	Address Line 2	O
GT1:17.3	City	O
GT1:17.4	State	O
GT1:17.5	ZIP	O

GT1:17.6	Country	O
GT1:17.7	Type	O
GT1:17.8	Other Geographic	O
GT1:17.9	County/Parish	O
GT1:18	Guarantor Employer Phone	O
GT1:19	Guarantor Employee ID Number	O
GT1:20	Guarantor Employment Status	O
GT1:21	Guarantor Organization	O
GT1:21.1	Organization Name	O
GT1:21.2	Organization Name Type Code	O
GT1:21.3	ID Number	O
GT1:21.4	Check Digit	O
GT1:21.5	Check Digit Scheme	O
GT1:21.6	Assigning Authority	O
GT1:21.7	Identifier Type Code	O
GT1:21.8	Assigning Facility	O
GT1:22	Guarantor Billing Hold Flag	O
GT1:23	Guarantor Credit Rating Code	O
GT1:24	Guarantor Death Date/Time	O
GT1:25	Guarantor Death Indicator	O
GT1:26	Guarantor Charge Adjustment Code	O
GT1:27	Guarantor House Annual Income	O
GT1:28	Guarantor Household Size	O
GT1:29	Guarantor Employer ID	O

	Number	
GT1:30	Guarantor Marital Status Code	O
GT1:31	Guarantor Hire Effective Date	O
GT1:32	Employment Stop Date	O
GT1:33	Living Dependency	O
GT1:34	Ambulatory Status	O
GT1:35	Citizenship	O
GT1:36	Primary Language	O
GT1:37	Living Arrangement	O
GT1:38	Privacy Type	O
GT1:39	Protection Indicator	O
GT1:40	Student Indicator	O
GT1:41	Religion	O
GT1:42	Mother's Maiden Name	O
GT1:43	Nationality	O
GT1:44	Ethnic Group	O
GT1:45	Contact Person Name	O
GT1:46	Contact Person Phone	O
GT1:47	Contact Reason	O
GT1:48	Contact Relationship	O
GT1:49	Job Title	O
GT1:50	Job Code	O
GT1:51	Guarantor Employer Organization Name	O
GT1:52	Handicap	O
GT1:53	Job Status	O
GT1:54	Guarantor Financial Class	O
GT1:55	Guarantor Race	O

GT1:56	Guarantor Birth Place	O
GT1:57	VIP Indicator	O

Example Repeating GT1 Segment for an Inpatient Visit:

GT1 | 1 | 4462108 | FATHER^AMBCIDER | | 3 TESTING TRAIL^^ANN
 ARBOR^MI^48105^US^^^WASHTENAW | (734)555-
 1212^P^H | | 19720901 | M | P/F | FAT

3.4.12 Insurance (IN1) Segment

Field	Name	Requirement
IN1:1	Set ID - IN1	O
IN1.2.1	Insurance Plan ID	RA
IN1.2.2	Insurance Plan ID Text	RA
IN1.2.3	Insurance System	RA
IN1:3	Insurance Company ID	O
IN1:3.1	ID	RA
IN1:3.2	Code Identifying the Check Digit Scheme Employed	O
IN1:3.3	Assigning Authority	O
IN1:3.4	Identifier Type Code	RA
IN1:3.5	Assigning Facility	RA
IN1:4	Insurance Company Name	RA
IN1:5	Insurance Company Address	O
IN1:5.1	Street Address	O
IN1:5.2	Other Designation	O
IN1:5.3	City	O
IN1:5.4	State or Province	O
IN1:5.5	ZIP or Postal Code	O

IN1:5.6	Address Type	O
IN1:5.7	Other Geographic Designation	O
IN1:5.8	Country/Parish Code	O
IN1:5.9	Census Tract	O
IN1:6	Insurance Comp Contact Person	O
IN1:7	Insurance Company Phone Number	O
IN1:8	Group Number	O
IN1:9	Group Name	O
IN1:10	Insured's Group Employer ID	O
IN1:11	Insured's Group Employer Name	O
IN1:12	Plan Effective Date/Time	O
IN1:13	Plan Expiration Date	O
IN1:14	Authorization Information	O
IN1:14.1	Authorization Number	O
IN1:14.2	Date	O
IN1:14.3	Source	O
IN1:15	Plan Type	O
IN1:16	Name of Insured	O
IN1:16.1	Last Name	O
IN1:16.2	First Name	O
IN1:16.3	Middle Name	O
IN1:16.4	Suffix	O
IN1:16.5	Prefix	O
IN1:16.6	Degree	O

IN1:17	Insured's Relationship to Patient	O
IN1:18	Insured's Date of Birth	O
IN1:19	Insured's Address	O
IN1:19.1	Address Line 1	O
IN1:19.2	Address Line 2	O
IN1:19.3	City	O
IN1:19.4	State	O
IN1:19.5	ZIP	O
IN1:19.6	Country	O
IN1:19.7	Type	O
IN1:19.8	Other Geographic	O
IN1:19.9	County/Parish	O
IN1:20	Assignment of Benefits	O
IN1:21	Coordination of Benefits	O
IN1:22	Coordination of Benefits Priority	O
IN1:23	Notice of Admission Code	O
IN1:24	Notice of Admission Date	O
IN1:25	Report of Eligibility Code	O
IN1:26	Report of Eligibility Date	O
IN1:27	Release Information Code	O
IN1:28	Pre-admit Certification (PAC)	O
IN1:29	Verification Date/Time	O

IN1:30	Verification By	O
IN1:31	Type of Agreement Code	O
IN1:32	Billing Status	O
IN1:33	Lifetime Reserve Days	O
IN1:34	Delay Before Life Reserve Day	O
IN1:35	Company Plan Code	O
IN1:36	Policy Number	O
IN1:37	Policy Deductible	O
IN1:38	Policy Limit – Maximum Amount	O
IN1:39	Policy Limit – Maximum Days	O
IN1:40	Room Rate – Semi-Private	O
IN1:41	Room Rate – Private	O
IN1:42	Insured's Employment Status	O
IN1:43	Insured's Sex	O
IN1:44	Insured's Employer Address	O
IN1:45	Verification Status	O
IN1:46	Prior Insurance Plan ID	O
IN1:47	Coverage Type	O
IN1:48	Handicap	O
IN1:49	Insured's ID Number	O
IN1:50	Signature Code	O
IN1:51	Signature Code Date	O
IN1:52	Insured's Birth Place	O
IN1:53	VIP Indicator	O

IN2:1	Insured's Employee ID	O
IN2:2	Insured's SSN	O
IN2:3	Insured's Employer ID and Name	O
IN2:3.1	Employer ID	O
IN2:3.2	Employer Name	O
IN2:4	Employer Information Data	O
IN2:5	Mail Claim Party	O
IN2:6	Medicare Health Insurance Card Number	O
IN2:7	Medicaid Case Name	O
IN2:8	Medicaid Case Number	O
IN2:9	Champus Sponsor Name	O
IN2:10	Champus ID Number	O
IN2:11	Dependent of Champus Recipient	O
IN2:12	Champus Organization	O
IN2:13	Champus Station	O
IN2:14	Champus Service	O
IN2:15	Champus Rank/Grade	O
IN2:16	Champus Status	O
IN2:17	Champus Retire Date	O
IN2:18	Champus Non-Avail Cert on File	O
IN2:19	Baby Coverage	O
IN2:20	Combine Baby Bill	O
IN2:21	Blood Deductible	O

IN2:22	Special Coverage Approval Number	O
IN2:23	Special Coverage Approval Title	O
IN2:24	Non-Covered Insurance Code	O
IN2:25	Payor ID	O
IN2:26	Payor Sub ID	O
IN2:27	Eligibility Source	O
IN2:28	Room Coverage Type/Amount	O
IN2:28.1	Room Type	O
IN2:28.2	Amount Type	O
IN2:28.3	Coverage Amount	O
IN2:29	Policy Type/Amount	O
IN2:29.1	Policy Type	O
IN2:29.2	Amount Class	O
IN2:29.3	Amount	O
IN2:30	Daily Deductible	O
IN2:31	Living Dependency	O
IN2:32	Ambulatory Status	O
IN2:33	Citizenship	O
IN2:34	Primary Language	O
IN2:35	Living Arrangement	O
IN2:36	Privacy Type	O
IN2:37	Protection Indicator	O
IN2:38	Student Indicator	O
IN2:39	Religion	O
IN2:40	Mother's Maiden Name	O
IN2:41	Nationality	O

IN2:42	Ethnic Group	O
IN2:43	Marital Status	O
IN2:44	Insured Employment Start	O
IN2:45	Insured Employment Stop	O
IN2:46	Job Title	O
IN2:47	Job	O
IN2:48	Job Status	O
IN2:49	Employer Contact Person	O
IN2:50	Employer Contact Phone	O
IN2:51	Employer Contact Reason	O
IN2:52	Insured Contact Person	O
IN2:53	Insured Contact Phone	O
IN2:54	Insured Contact Reason	O
IN2:55	Relationship to Patient Start Date	O
IN2:56	Relationship to Patient Stop Date	O
IN2:57	Insurance Company Contact Reason	O
IN2:58	Insurance Company Contact Phone	O
IN2:59	Policy Scope	O
IN2:60	Policy Source	O
IN2:61	Patient Member Number	O

IN2:62	Guarantor Relation to Insured	O
IN2:63	Insured Home Phone Number	O
IN2:64	Insured Employer Phone Number	O
IN2:65	Military Handicapped Program Code	O
IN2:66	Suspend Flag	O
IN2:67	Copay Limit Flag	O
IN2:68	Stop Loss Limit Flag	O
IN2:69	Insured Organization Name and ID	O
IN2:70	Insured Employer Organization Name/ID	O
IN2:71	Race	O
IN2:72	Patient Relationship to Insured	O

Example Repeating IN1 Segment for an Inpatient Visit:

IN1|1|1772^STATE HEALTH

PLAN|1027|MEDICAID|||||01012024|12312024||Hamilton^Dolores^Carr|
|973 Park Street^^Flint^MI^48506

3.5 Transport Specifications

3.5.1 Sending via REST API

Those senders interested in the REST API method should follow these steps and specifications:

1. Onboarding organizations will need to provide an email address that Cognito credentials can be provided to. They will also need to provide their source IP so

it may be whitelisted.

2. MiHIN will have the CognitoUser configured on their end of the connection.
3. MiHIN will send the Cognito credentials— specifically the *clientId* and *secret*— to the authorized user via the provided email address. Each will be sent via a separate email for security purposes.
4. The organization will participate in the Rest API Server Test scheduled with MiHIN to ensure conformity to these specifications and connectivity. The organization will need to make a call to MiHIN's OAuth2 endpoint and have a token assigned to be used for the forthcoming API call. OAuth2 endpoints for pre-production and production are listed in [section 3.1](#).

These tokens are obtained by calling the following URLs. Users must ensure they use tokens from the correct environment when making calls to the corresponding environment endpoint, specifically:

a. **Pre-Production** –

- i. Token: <https://mitp-adt-hub-preprod.auth.us-east-1.amazonaws.com/oauth2/token> used for:
- ii. Endpoint: https://messages.preprod.mihin.services/send?message_type=ccda

b. **Production** –

- i. Token: <https://mitp-adt-hub-prod.auth.us-east-1.amazonaws.com/oauth2/token> used for:
- ii. Endpoint: https://messages.mihin.services/send?message_type=ccda

5. During testing, organizations will request the appropriate token and then send test ADTs to the specified endpoint. Response messages will be returned based on confirmation of receipt. Examples of these responses are listed in [Appendix A](#).

3.5.1.1 ADT Sender API REST Specifications

Authentication

- CognitoUser is hosted by MiHIN
- Use MiHIN-provided Cognito credentials
 - *ClientId*
 - *Secret*
- Credentials are used to call MiHIN's OAuth2 endpoint, which returns a token that is then used for the REST API call.

Expected Payload

- HL7 Standard 2.5.1 ADT Message

4. Production Support

	Severity 1	Severity 2	Severity 3	Severity 4
Description	A critical production system is down or does not function at all, and there is no circumvention or workaround for the problem; a significant number of users are affected, and a production business system is inoperable.	More than 90% of messages received and delivered successfully, but some messages are not delivered/received with required accuracy. Service component severely restricted in one of the following ways: • High impact risk or actual occurrence of patient care affected or operational impairment • Business critical service has a partial failure for multiple TDSOs • A critical service is online however, is operating in a <u>degraded</u> state and having a significant impact on multiple TDSOs	Service component restricted in one of the following ways: • A component is not performing as documented or there are unexpected results • Business critical service has failed for a two or more TDSOs • A critical service is usable however, a workaround is available, or less significant features are unavailable	No operational impact to MiHIN. A non-critical service component is malfunctioning, causing minimal impact, or a test system is down.
Initiation Method	Call (844) 454-2443 and submit a ticket online at www.mihin.org/requesthelp	Call (844) 454-2443 and submit a ticket online at www.mihin.org/requesthelp	Submit a ticket online at www.mihin.org/requesthelp	Submit a ticket online at www.mihin.org/requesthelp
Acknowledgement Communication	Within 30 minutes	Within 30 minutes	Within 3 business hours	Within 6 business hours
Resolution Goal	<2 hours Restore Time from 8 am – 5 pm ET Monday-Friday and <4 hours nights, weekends and holidays	<4 hours Restore Time from 8 am - 5 pm ET Monday-Friday and <8 hours nights, weekends and holidays	<12 hours Restore Time from 8 am - 5 pm ET Monday-Friday and <24 hours nights, weekends and holidays	Within 5 business days

If you have questions, please contact the MiHIN Help Desk:

- www.mihin.org/requesthelp
- Phone: (884) 454-2443
- Monday – Friday 8:00 AM – 5:00 PM (Eastern)

5. Legal Advisory Language

This reminder applies to all use cases covering the exchange of electronic health information:

The Data Sharing Agreement (DSA) establishes the legal framework under which participating organizations can exchange messages through the MiHIN Platform, and sets forth the following approved reasons for which messages may be exchanged:

- a. By health care providers for Treatment, Payment and/or Health Care Operations consistent with the requirements set forth in HIPAA
- b. Public health activities and reporting as permitted by HIPAA and other Applicable Laws and Standards
- c. To facilitate the implementation of “Meaningful Use” criteria as specified in the American Recovery and Reinvestment Act of 2009 and as permitted by HIPAA
- d. Uses and disclosures pursuant to an Authorization provided by the individual who is the subject of the Message or such individual’s personal representative in accordance with HIPAA
- e. By Data Sharing Organizations for any and all purposes, including but not limited to pilot programs and testing, provided that such purposes are consistent with Applicable Laws and Standards
- f. For any additional purposes as specified in any use case, provided that such purposes are consistent with Applicable Laws and Standards

Under the DSA, “**Applicable Laws and Standards**” means all applicable federal, state, and local laws, statutes, acts, ordinances, rules, codes, standards, regulations and judicial or administrative decisions promulgated by any governmental or self-regulatory agency, including the State of Michigan, the Michigan Health Information Technology Commission, or the Michigan Health and Hospital Association, as any of the foregoing may be amended, modified, codified, reenacted, promulgated or published, in whole or in part, and in effect from time to time. “Applicable Laws and Standards” includes but is not limited to HIPAA; the federal Confidentiality of Alcohol and Drug Abuse Patient Records statute, section 543 of the Public Health Service Act, 42 U.S.C. 290dd-2, and its implementing regulation, 42 CFR Part 2; the Michigan Mental Health Code, at MCLA §§ 333.1748 and 333.1748a; and the Michigan Public Health Code, at MCL § 333.5131, 5114a.

It is each participating organization's obligation and responsibility to ensure that it is aware of Applicable Laws and Standards as they pertain to the content of each message sent, and that its delivery of each message complies with the Applicable Laws and Standards. This means, for example, that if a use case is directed to the exchange of physical health information that may be exchanged without patient authorization under HIPAA, the participating organization must not deliver any message containing health information for which an express patient authorization or consent is required (e.g., mental or behavioral health information).

Disclaimer: The information contained in this implementation guide was current as of the date of the latest revision in the Document History in this guide. However, Medicare and Medicaid policies are subject to change and do so frequently. HL7 versions and formatting are also subject to updates. Therefore, links to any source documents have been provided within this guide for reference. MiHIN applies its best efforts to keep all information in this guide up-to-date. It is ultimately the responsibility of the participating organization and sending facilities to be knowledgeable of changes outside of MiHIN's control.

6. Appendices

6.1 Appendix A – Message Examples

6.1.1 Example REST API Response Message

from log group

/aws/api-gateway/adt-hub-api-in-usqhin-prod

requestId: 05be2753-d197-4969-8697-165590a3957d, ip: 52.204.176.226, caller: -, user: -, requestTime: 27/Aug/2025:17:00:52 +0000, httpMethod: POST, resourcePath: /send, status: 200, protocol: HTTP/1.1, responseLength: 71

6.2 Appendix B – Conformance Reporting Information

For more information on conformance for ADT Notifications and the use of the MIGateway module concerning this process please refer to the Conformance Reporting User Guide which can be found here: <https://mihin.org/resourcehub/>

6.3 Appendix C – External Information

Hospital Pay-for-Performance Documentation

<https://www.bcbsm.com/providers/network/value-partnerships/>