Death Notifications
Implementation Guide

Version 10
December 19th, 2025

Document History

Date	Version	Sections Revised	Description	Modifier
01/21/20	1	All	Document Created	M. Gibbs
04/02/20	2	Acronyms/Abbreviations, Definitions, 1.1, 1.2, 1.3	Proof and edits	A. Boon
03/16/22	3	All	Updated all sections	J. Bourgeois
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11/4/25	10	All	General editing	S. Denhof
12/19/25	10	All	Applied Final Edits	M. Allen

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1. Introduction

1.1 Purpose of the Data Exchange Solution

Allows participating organizations to receive notifications of deaths in a timely and efficient manner.

There are approximately 104,000 deaths annually in Michigan, a death rate of approximately one percent. Roughly 75% of these deaths are residents over the age of 65 who are likely to have been Medicare beneficiaries.

For many years, delayed death notifications have financially impacted healthcare facilities and government departments. There have also been accounts of people using these delays for fraudulent insurance claims or other criminal activities. For example:

- Michigan had an estimated $39.9 million in unallowable Medicaid capitation payments after death for period 2014-16.
- A Michigan Unemployment Insurance Agency audit found approximately $20 million in improper payments to deceased persons during Jan 2020–Oct 2022.
- Health systems continue outreach to patients despite patients being deceased. In one 2023 study of 11,700 patients, 5.8% were marked alive in the EMR though deceased, and 80% of those had subsequent outreach from healthcare staff and outstanding appointments, causing avoidable resource waste, administrative burden, and unnecessary stress for families.

The Death Notifications Data Exchange Solution can provide broad benefits, including but not limited to the following:

- **Timely awareness of patient death:** ensures clinicians know when their patient dies, mitigating administrative burden and avoiding inappropriate follow-up.
- **Improved medication safety:** prevents prescriptions being authorized for deceased patients.
- **Optimized resource allocation:** opens staff time that would otherwise be spent managing records or appointments for deceased patients
- **Data completeness for population health and real-time mortality surveillance:** Facilitates faster reporting of deaths, enabling better detection of public health trends, and improves the accuracy of vital statistics

- **Reduction in improper payments:** prevents claims or capitation payments being made for deceased beneficiaries
- **Fraud prevention:** minimizes opportunities for benefits fraud used deceased patient information

1.2 Message Content

For this data exchange solution, Message Content refers to a message conforming to HL7 2.7.1 standards identified as an ADT message type.

1.3 Data Flow

1.3.1 Functional Data Flow

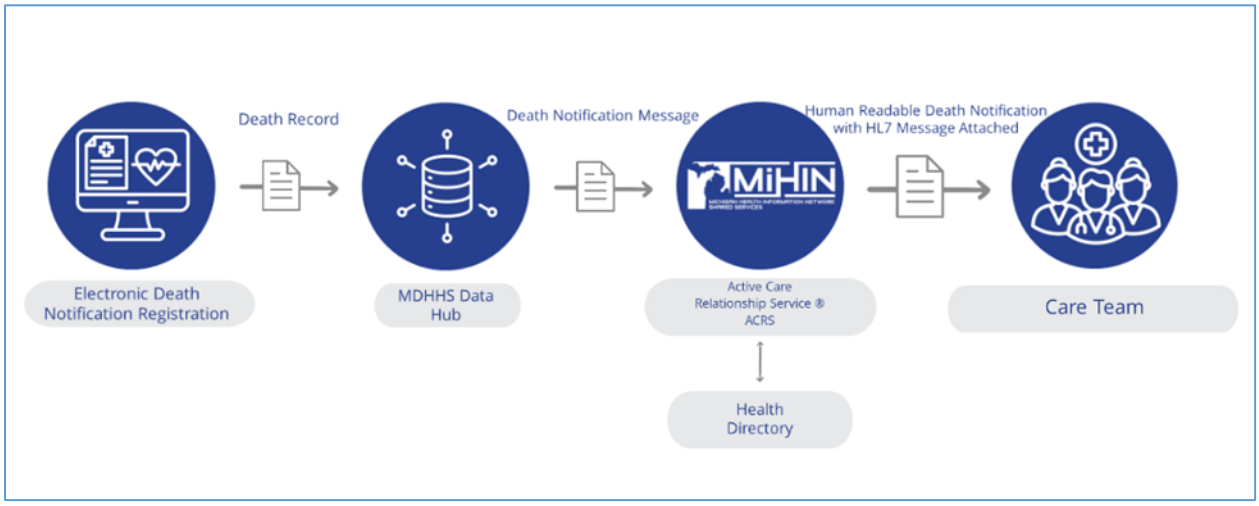

Figure 11. Electronic Death Notifications Workflow

Electronic death notifications are generated on a transactional basis.

1. A death record is filed electronically in the Electronic Death Notification Registration System (EDRS).
2. The record is transmitted to the Michigan Department of Health and Human Services (MDHHS) State Data Hub.
3. Upon receipt, MDHHS generates an electronic death notification message and forwards it to MiHIN.
4. MiHIN receives the message and queries ACRS® to verify the death notification.

5. MiHIN utilizes MiHIN's Common Key Service (CKS) to assist with patient matching and to identify relevant participating organizations.
6. MiHIN evaluates the notification and routes it to the appropriate participating organizations and care team members.
7. MiHIN sends a human-readable Death Notification, along with an HL7® message, to participating organizations and care teams that receive notifications via Direct Secure Messaging (DSM).

For more information about this data exchange solution, refer to the documents linked below.

1.3.2 Actors

- **Actor***:* Death Record Submitter
  - *Role:* Registers death record in EDRS
- **Actor***:* Electronic Death Registration System (EDRS)
  - *Role:* Allows death records to be registered electronically by funeral directors, physicians, medical examiners, nursing homes, and hospitals; submits the death notification to the State's Data Hub
- **Actor**: State's Data Hub
  - *Role:* Receives death notification from EDRS and transforms custom XML file to an ADT message. Submits ADT^A04 to MiHIN in the event of a new death notification, an ADT^A08 to MiHIN in the event of an amended death notification, or an ADT^A23 to MiHIN in the event of a voided, retraction, or sealed death notification
- **Actor**: Death Notification Receiver
  - *Role:* Receives a death notification through the delivery preference specified in MiHIN's Health Directory for a deceased patient with whom the receiver has an active care relationship with. The organization receives a human-readable Death Notification with raw HL7 message attached via DSM. Also responsible for submitting both the ACRS Attribution and ACRS Delivery files to support accurate routing and patient matching.

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

2. Onboarding

2.1 Prerequisites

Participating organizations will need to complete two onboarding tracks, in the following order:

1. Obtain, review, and execute legal agreements, then
2. Establish technical transport and testing.

2.1.1 Universal Legal Prerequisites

The following legal documentation will need to be executed prior to kick-off or any connectivity being established between MiHIN and participating organizations.

- Statement of Work (SOW), Where applicable
- MiHIN's Exhibit A Agreement (Found on the MiHIN Legal Portal)
- Participant Agreement (Found on the MiHIN Legal Portal)
- Must select the appropriate data exchange solution on the MiHIN Legal Portal in addition to the above agreements.

To initiate the legal onboarding contact, email help@mihin.org.

2.1.2 Technical Requirements

The following data exchange solution implementations and technical requirements will need to be conducted for Death Notifications to function.

- Common Key Service
- Active Care Relationship Service
- Health Directory

See **Figure 1** for an example of how these data exchange solutions work together.

2.2 Death Notifications Onboarding Process

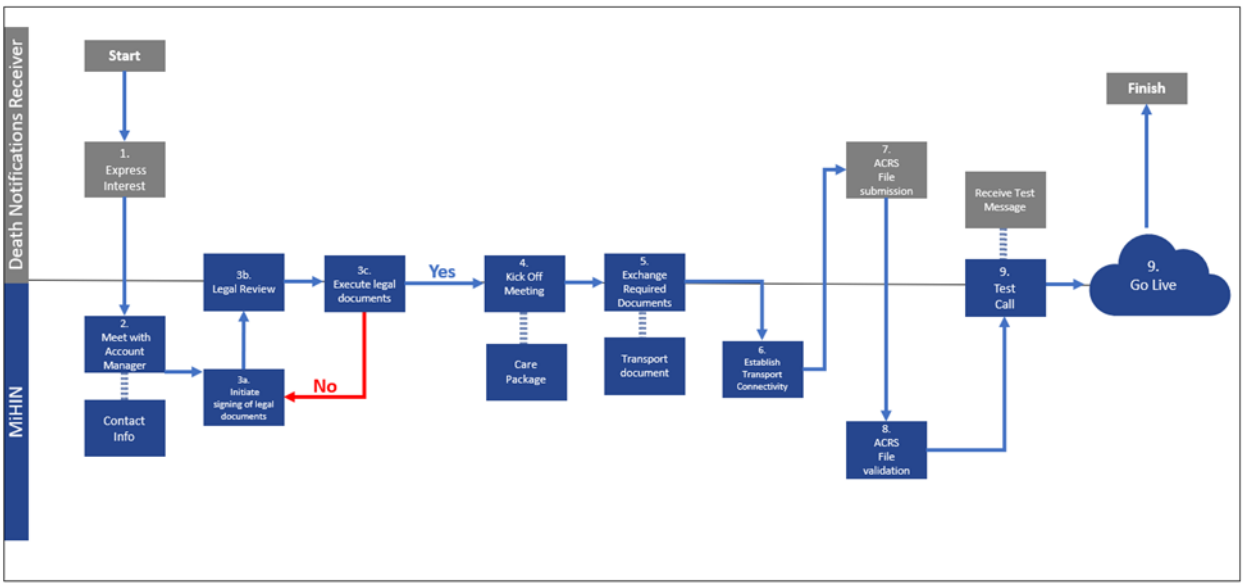

Figure 2. MiHIN Death Notifications Receiver Onboarding Flowchart

- Express interest in participating in the Death Notification Data Exchange Solution
- Meet with an Account Manager
- Begin the legal process by initiating the signing of required agreements.
- Execute legal documents
- MiHIN to distribute the Death Notifications care package
- Participate in a kick-off meeting with the Customer Success Team
- Exchange required documents
    - Transport document
- Establish transport method/connectivity (e.g., via HIE, VPN, or DSM)
- Send ACRS file(s) securely
- Validate ACRS file(s)
- Test Call
- Go live

2.3 Technical Connectivity Process

MiHIN considers itself "transport agnostic" and offers multiple options for organizations to establish technical connectivity to transport data to MiHIN. Organizations should select one or more connectivity methods for message transport

based on their technical capabilities and should communicate the selection(s) to www.mihin.org/requesthelp early in the onboarding process.

Currently the ONLY transport methods MiHIN accepts are:

- **LLP over IPsec VPN – Lower-Layer Protocol over Internet Protocol Security Virtual Private Network**
- **DSM – Direct Secure Messaging**

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. The organization selects one or more supported transport methods and establishes connectivity with MiHIN. This step varies based on the method selected:

   a. LLP over IPsec VPN – MiHIN's site-to-site VPN request form must be completed, sent to, and approved by MiHIN. Send a request via www.mihin.org/requesthelp to obtain the VPN request form. 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.

   b. 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.

1. Test messages are sent by MiHIN to the organization.
   a. MiHIN will send a test Death Notification ADT to the onboarding organization via their chosen transport type.
   b. The receiving organization will monitor for receipt of a test Death Notification message and confirm receipt with MiHIN.
   c. MiHIN will monitor for an acknowledgement message returned from the receiving organization and confirm receipt.

d. When all messages have been confirmed, testing will be considered successful and complete.

Please Note: In the case of the DSM transport type, testing can be largely performed via email correspondence due to the nature of the transport message and that is completed through monitoring of inboxes.

2.3.3 Receiving Death Notification ACRS® Delivery File Requirements

Organizations must submit an ACRS® delivery file and an attribution file to receive death notifications. MiHIN will utilize the file to manage delivery preferences at the managing organization, practice, and provider level for outbound messages.

Organizations should indicate "LLP" for LLP over IPsec VPN or "DIRECT" for Direct Secure Messaging (DSM) in the "Death Delivery" column of the ACRS delivery file. More information about the Active Care Relationship Service® can be found here:

https://mihin.org/active-care-relationship-service-use-case-2/

For more information on the ACRS® onboarding procedure and details on delivery file specifications, please refer to the ACRS® Implementation Guide, which can be found at the following link, under the **Use Cases Supporting Network Infrastructure** Section: https://mihin.org/resourcehub/ .

3 Specifications

3.1 Overview

3.1.1 Environments

- **Production**
  - Endpoint Information: MI Rhapsody PROD2: 172.16.5.70/9822
- **Test**
  - Endpoint Information: MI Rhapsody TEST: 172.16.5.95/8822

3.1.1 Message Trigger Events

- ADT^A04 – Register a Patient Message in the event of a new death notification or in a case where a previous record was un-voided, un-sealed, or un-retracted.
- ADT^A08 – Update Patient Information Message in the event of an amended death notification
- ADT^A23 – Delete a Patient Record Message in the event of a voided, retracted, or sealed death notification

3.1.2 Specification for ADT^A04 – Register a Patient Message

Below is the specification of the ADT^A04:

Segment	Description	Usage	Cardinality	HL7 Chapter	Description
MSH	Message header	R	1..1	2	The Message Header (MSH) segment contains information describing how to parse and process the message. This includes identification of message delimiters, sender, receiver, message type, timestamp, etc.
EVN	Event type	O	1..1	3	
PID	Patient identification	R	1..1	3	The Patient Identification (PID) segment is used to communicate infant identifying information.

3.1.3 Specification for ADT^A08 – Update Patient Information Message

Below is the specification of the ADT^A08:

Segment	Description	Usage	Cardinality	HL7 Chapter	Description
MSH	Message header	R	1..1	2	The Message Header (MSH) segment contains information describing how to parse and process the message. This includes identification of message delimiters, sender, receiver, message type, timestamp, etc.
EVN	Event type	O	1..1	3	
PID	Patient identification	R	1..1	3	The Patient Identification (PID) segment is used to communicate infant identifying information.

3.1.4 Specification for ADT^A23 – Delete a Patient Record Message

Below is the specification of the ADT^A23:

Sequence	Length	DT	Usage	Cardinality	TBL#	Item#	Element Name	Comments
1	1	ST	R	1..1		00001	Field Separator	Literal value: '|' [ASCII (124)].
2	5	ST	R	1..1		00002	Encoding Characters	Four characters, always appearing in the same order: |^~\&#|. Literal value: '^~\&#'.

3		HD	R	1..1	0361	00003	Sending Application	Literal value of “HESB^2.16.840.1.114222.4.3.2.2.3.161.1.4372^ISO”
4		HD	R	1..1	0362	00004	Sending Facility	Literal value of “MDHHS^2.16.840.1.114222.4.3.2.2.3.161.1^ISO”
5		HD	R	1..1	0361	00005	Receiving Application	Literal value of “MiHIN”
6		HD	R	1..1	0362	00006	Receiving Facility	Literal value of “MiHIN”
7		TS	R	1..1		00007	Date/Time Of Message	
9		MSG	R	1..1	0076 0003	00009	Message Type	For the result message Literal Value: ‘ADT^A04’. For the acknowledgement message Literal Value: ‘ACK^A04’. For the result message Literal Value: ‘ADT^A08’. For the acknowledgement message Literal Value:

								‘ACK^A08’. For the result message Literal Value: ‘ADT^A23’. For the acknowledgement message Literal Value: ‘ACK^A23’.
10	199	ST	R	1..1		00010	Message Control ID	It should be unique for the sender.
11		PT	R	1..1		00011	Processing ID	Field that may be used to indicate the intent for processing the message, such as "T" (training or testing) or "P" (production).
12		VID	R	1..1	0104	000012	Version ID	For this message, the version ID will always be literal value: “2.7.1”
15	2	ID	X	0..0	0155	00015	Accept Acknowledgment Type	Due to the public health nature of this message and a need to retransmit if the message was not received, MDHHS will acknowledge all messages and

								ignore this value. This field points out the conditions under which accept acknowledgements should be returned regarding this message.
16	2	ID	X	0..0	0155	00016	Application Acknowledgment Type	Due to the public health nature of this message and a need to retransmit if the message was not received, MDHHS will acknowledge all messages and ignore this value. NOTE: Some HIEs may require this field to be populated with 'AL'. Check with your HIE for details.
17	3	ID	O	0..1		00017	Country Code	
18	15	ID	O	0..99		00692	Character Set	

19		CWE	O	0..1			Principal Language Of Message	

Segment	Description	Usage	Cardinality	HL7 Chapter	Description
MSH	Message header	R	1..1	2	The Message Header (MSH) segment contains information describing how to parse and process the message. This includes identification of message delimiters, sender, receiver, message type, timestamp, etc.
EVN	Event type	O	1..1	3	
PID	Patient identification	R	1..1	3	The Patient Identification (PID) segment is used to communicate infant identifying information.

3.2 General Message Requirements

Single message transmission is required per fact of death. For the Death Notifications Data Exchange Solution, a message will contain a single fact of death. This will be a single message at a time, not batching. The message could be an Add, an Update, or a Delete.

3.3 Specific Segment and Field Definitions

3.3.1 Message Header (MSH) Segment

The message header (MSH) segment contains information describing how to parse and process the message. This includes identification of message delimiters, sender, receiver, message type, timestamp, etc.

3.3.2 Event Type (EVN) Segment

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

Sequence	Length	DT	Usage	Cardinality	TBL#	Item#	Element Name	Comments
2		DTM	R	1..1		00100	Recorded Date Time	
3		DTM	O	0..1		00101	Date Time Planned Event	
4		CWE	O	0..1	0062	00102	Event Reason Code	Indicates whether the transmission includes valid information or not.
5		XCN	O	0..99	0188	00103	Operator ID	
6		DTM	O	0..1		01278	Event Occurred	
7		HD	O	0.11		01534	Event Facility	

3.3.3 Patient Identification (PID) Segment

The patient identification (PID) segment is used to communicate patient identification information. The segment contains patient identifying information that is usually permanent and is unlikely to change.

Sequence	Length	DT	Usage	Cardinality	TBL#	Item#	Element Name	Comments
1	4	SI	R	1..1		00104	Set ID – Patient ID	Literal Value: '1'.
3		CX	R	1..1		00106	Patient Identifier List	
5		XPN	R	1..99		00108	Patient Name	
6		XPN	O	0..1		00109	Mother's Maiden Name	
7		DTM	O	1..1		00110	Date/Time of Birth	Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]
8		CWE	O	1..1	0001	00111	Administrative Sex	
10		CWE	O	1..99	0005	00113	Race	
11		XAD	O	0..99		00114	Patient Address	
13		XTN	O	0..99		00116	Phone Number – Home	
14		XTN	O	0..99		00117	Phone Number – Business	
15		CWE	O	0..99	0296	00118	Primary Language	

16		CWE	O	0..0	0002	00119	Marital Status	
17		CWE	O	0..0	0006	00120	Religion	
18		CX	O	0..0		00121	Patient Account Number	
21		CX	O	0..99		00124	Mother's Identifier	
22		CWE	O	0..99	0189	00125	Ethnic Group	
23		ST	O	0..1		00126	Birthplace	
24	1	ID	O	1..1	0136	00127	Multiple Birth Indicator	
25		NM	O	0..1		00128	Birth Order	
29		TS	C	0..1		00740	Patient Death Date and Time	This field contains the date and time at which the patient death occurred. It is conditionally required if PID-30 = Y.
30	1	ID	C	0..1	0136	00741	Patient Death Indicator	This field indicates whether the patient is deceased. It is conditionally required if the patient is deceased.

31	1	ID	O	0..0	0136	01535	Identity Unknown Indicator	
32		CWE	O	0..0	0445	01536	Identity Reliability Code	
33		TS	O	0..1		01537	Last Update Date/Time	
34		HD	CE	0..1		01538	Last Update Facility	It is conditionally required if known if PID-33 is populated.

4. Production Support

	Severity Levels			
	1	***2***	***3***	***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 degraded 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
Initial Response	Within **30 minutes**	Within **30 minutes**	Within **3 business hours**	Within **6 business hours**
Resolution Goal	**<2** hours Restore Time from 7 am – 6 pm EST Monday-Friday and **<4** hours nights, weekends and holidays	**<4** hours Restore Time from 7 am- 6 pm EST Monday-Friday and **<8** hours nights, weekends and holidays	**<12** hours Restore Time from 7 am -6 pm EST 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 data exchange solutions 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 data exchange solution, 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 data exchange solution 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

Sample messages for ADT^A04, ADT^A08 and ADT^A23 are included for reference.

MSH|^~&&|HESB^2.16.840.1.114222.4.3.2.2.3.161.1.4372^ISO|MDHHS^2.16.840.1.114222.4.3.2.2.3.161.1^ISO|MIHIN|MIHIN|||ADT^A04|20220224161202.930|T|2.7.1[0D]

PID|1||123456789^^^^SS~2018Oakland200165^^^^U~507744^^^^A||Cooper^Stanley~Cooper^Stan~Coop^Stan||1960^01^01|M|||2222&Grand Boulevard^^Royal Oak^Michigan^48975^United States^^South^Oakland||||||||||||||||2018^05^01^10^00|5[0D]

MSH|^~&&|HESB^2.16.840.1.114222.4.3.2.2.3.161.1.4372^ISO|MDHHS^2.16.840.1.114222.4.3.2.2.3.161.1^ISO|MIHIN|MIHIN|||ADT^A23|20220224161541.082|T|2.7.1[0D]

PID|1||123456789^^^^SS~2018Oakland200165^^^^U~507744^^^^A||Cooper^Stanley~Cooper^Stan~Coop^Stan||1960^01^01|M|||2222&Grand Boulevard^^Royal Oak^Michigan^48975^United States^^South^Oakland||||||||||||||||2018^05^01^10^00|5[0D]

MSH|^~&&|HESB^2.16.840.1.114222.4.3.2.2.3.161.1.4372^ISO|MDHHS^2.16.840.1.114222.4.3.2.2.3.161.1^ISO|MIHIN|MIHIN|||ADT^A08|20220224161541.082|T|2.7.1[0D]

PID|1||123456789^^^^SS~2018Oakland200165^^^^U~507744^^^^A||Cooper^Stanley~Cooper^Stan~Coop^Stan||1960^01^01|M|||2222&Grand Boulevard^^Royal Oak^Michigan^48975^United States^^South^Oakland||||||||||||||||2018^05^01^10^00|5[0D

7. Acronyms and Abbreviations

ADT	Admission, Discharge, Transfer		**MiHIN**	Michigan Health Information Network
DSM	Direct Secure Messaging		**NPI**	National Provider Identifier
EDRS	Electronic Death Notification Registration System		**OID**	Object Identifier
HIE	Health Information Exchange		**SSO**	Single Sign On
HIN	Health Information Network		**URL**	Uniform Resources Locators
HL7®	Health Level Seven®		**VPN**	Virtual Private Network
HPD	Health Provider Directory		**XML**	Extensible Markup Language
IHE	Integrating the Healthcare Enterprise			

8. Definitions

Attribution. The connection between a consumer and their healthcare providers. One definition of attribution is "assigning a provider or providers, who will be held accountable for a member based on an analysis of that member's claim data." The attributed provider is deemed responsible for the patient's cost and quality of care, regardless of which providers actually deliver the service.

Admission, Discharge, Transfer (ADT). An event that occurs when a patient is admitted to, discharged from, or transferred from one care setting to another care setting or to the patient's home. For example, an Admission, Discharge, Transfer (ADT) event occurs when a patient is discharged from a hospital. An ADT event also occurs when a patient arrives in a care setting such as a health clinic or hospital.

ADT Message. A type of Health Level Seven® (HL7®) message generated by healthcare systems based upon Admission, Discharge, Transfer (ADT) events and the HL7 *"Electronic Data Exchange in Healthcare"* standard. The HL7 ADT message type is used to send and receive patient demographic and healthcare encounter information generated by source system(s). The ADT messages contain patient demographic, visit, insurance, and diagnosis information.

ADT Notification. An electronic notification that a given patient has undergone an Admission, Discharge, Transfer (ADT) event. An ADT Notification is not a complete ADT Message.

Conforming Message. A message that is in a standard format that strictly adheres to the implementation guide for its applicable data exchange solution.

Data Exchange Solution Summary (DESS). The document providing the executive summary, business justification, and value proposition of a data exchange solution. Data exchange solutions summaries are provided by Michigan Health Information Network Shared Services (MiHIN) upon request and via the MiHIN website at www.mihin.org.

Michigan's Electronic Death Registration System (EDRS). Provides a secure, web-based environment that supports online collaboration, from the creation of records to the production of certified copies. EDRS allows funeral homes, medical certifiers, medical examiners, and registrars offices to complete death certificates online, securely, faster, and with fewer errors than on paper, 24 hours a day.

eHealth Exchange. See the definition for The Sequoia Project.

Electronic Address. A string that identifies the transport protocol and end point address for communicating electronically with a recipient. A recipient may be a person, organization, or other entity that has designated the electronic address as the point at which it will receive electronic messages. Examples of an electronic address include a secure email address (Direct via secure Simple Mail Transfer Protocol) or secure URL (SOAP/XDR/REST/FHIR). Communication with an electronic address may require a digital certificate or participation in a trust bundle.

Electronic Medical Record or Electronic Health Record (EMR/EHR). A digital version of a patient's paper medical chart.

Electronic Service Information (ESI). All information reasonably necessary to define an electronic destination's ability to receive and use a specific type of information (e.g., discharge summary, patient summary, laboratory report, query for patient/provider/healthcare data). Electronic Service Information (ESI) may include the type of information (e.g., patient summary or query), the destination's electronic address, the messaging framework supported (e.g., SMTP, HTTP/SOAP, XDR, REST, FHIR), security information supported or required (e.g., digital certificate) and specific payload definitions (e.g., CCD C32 V2.5). In addition, ESI may include labels that help identify the type of recipient (e.g., medical records department).

End Point. An instance of an electronic address or ESI.

Exhibit. Collectively, a data exchange solution exhibit or a pilot activity exhibit.

Health Directory. The statewide shared service established by Michigan Health Information Network Shared Services that contains contact information on health providers, electronic addresses, end points, and ESI, as a resource for authorized users to obtain contact information and to securely exchange health information.

Health Level Seven® (HL7®). An interface standard and specifications for clinical and administrative healthcare data developed by the Health Level Seven organization and approved by the American National Standards Institute (ANSI). HL7 provides a method for disparate systems to communicate clinical and administrative information in a normalized format with acknowledgement of receipt

Health Information. Any information, including genetic information, whether oral or recorded in any form or medium, that (a) is created or received by a health provider, public health authority, employer, life insurer, school or university, or healthcare clearinghouse; and (b) relates to the past, present, or future physical or

mental health or condition of an individual; the provision of healthcare to an individual; or the past, present, or future payment for the provision of healthcare to an individual.

Health Information Network (HIN). An organization or group of organizations responsible for coordinating the exchange of protected health information in a region, state, or nationally.

Health Professional. Means (a) any individual licensed, registered, or certified under applicable Federal or State laws or regulations to provide healthcare services; (b) any person holding a nonclinical position within or associated with an organization that provides or coordinates healthcare or healthcare related services; and (c) people who contribute to the gathering, recording, processing, analysis or communication of health information. Examples include, but are not limited to, physicians, physician assistants, nurse practitioners, nurses, medical assistants, home health professionals, administrative assistants, care managers, care coordinators, receptionists and clerks.

Health Provider. Means facilities/hospitals, health professionals, health plans, caregivers, pharmacists/other qualified professionals, or any other person or organization involved in providing healthcare.

Implementation Guide (IG). The document providing technical specifications related to message content and transport of message content between a participating organization, Michigan Health Information Network Shared Services, and other Trusted Data Sharing Organizations. Data exchange solutions implementation guides are made available via URLs in exhibits.

Information Source. Any organization that provides information that is added to a Michigan Health Information Network Shared Services infrastructure service.

Integrating the Healthcare Enterprise. An initiative by healthcare professionals and industry to improve the way computer systems in healthcare share information (http://www.ihe.net/). Integrating the Healthcare Enterprise (IHE) promotes the coordinated use of established standards such as DICOM and Health Level Seven® to address specific clinical needs in support of optimal patient care. Systems developed in accordance with IHE communicate with one another better, are easier to implement, and enable care providers to use information more effectively. The Nationwide Health Information Network specifications utilize underlying IHE specifications for various services for health data exchange

Message. A mechanism for exchanging message content between the participating organization to Michigan Health Information Network Shared Services, including query and retrieve.

Message Content. Information, as further defined in an Exhibit, which is sent, received, found or used by a participating organization to or from Michigan Health Information Network Shared Services. Message content includes the message content header.

Message Header ("MSH") or Message Content Header. The Message Header segment present in every Health Level Seven® (HL7®) message type that defines the Message's source, purpose, destination, and certain syntax specifics such as delimiters (separator characters) and character sets. It is always the first segment in the HL7 message, with the only exception being HL7 batch messages.

Michigan Department of Health and Human Services (MDHHS). Principal department within the State of Michigan government, responsible for health policy, human service delivery, and the management of the state's publicly funded health and human service systems.

Michigan Health Information Network Shared Services. The health information network for the State of Michigan.

MiHIN Infrastructure Service. Certain services that are shared by numerous data exchange solutions. Michigan Health Information Network Shared Services infrastructure services include, but are not limited to, Active Care Relationship Service®, Health Directory, Statewide Consumer Directory, and MIGateway®.

MiHIN Services. The Michigan Health Information Network Shared Services (MiHIN) infrastructure services and additional services and functionality provided by MiHIN allowing the participating organizations to send, receive, find, or use information to or from MiHIN as further set forth in an exhibit.

Negative Acknowledgment (NAK or NACK). "Not acknowledged" and is used to negatively acknowledge or to reject previously received message content or to indicate some kind of error.

Notice. A message transmission that is not message content and which may include an acknowledgement of receipt or error response, such as an Acknowledged or Not Acknowledged.

Patient Data. Any data about a patient or a consumer that is electronically filed in a participating organization or participating organization participant's systems or repositories. The data may contain protected health information, personal credit information, and/or personally identifiable information.

Person Record. Any record in a Michigan Health Information Network Shared Services infrastructure service that primarily relates to a person.

Service Interruption. A party is unable to send, receive or find message content for any reason, including the failure of network equipment or software, scheduled or unscheduled maintenance, general Internet outages, and events of force majeure.

Source System. A computer system, such as an electronic health record system, at the participating organization, that sends, receives, finds or uses message content or notices.

Specifications. Specifications provide a standard set of service interfaces that enable the exchange of interoperable health information among the health information exchanges.

Transitions of Care. The movement of a patient from one setting of care (e.g., hospital, ambulatory primary care practice, ambulatory specialty care practice, long-term care, rehabilitation facility) to another setting of care and can include transfers within a healthcare organization.

Trusted Data Sharing Organization (TDSO). An organization that has signed any form of agreement with Michigan Health Information Network Shared Services for data sharing.