



Use Case Summary

Use Case Name:	MDHHS Drug and Poisoning Surveillance System (MDPSS)
Sponsor:	Michigan Department of Health and Human Services (MDHHS)
Date:	September 24, 2019

Executive Summary

This brief section highlights the purpose for the Use Case and its value. The executive summary gives a description of the Use Case's importance while highlighting expected positive impact.

Prescription drug abuse is a growing national health emergency that impacts every community in Michigan. On July 17, 2018, Sparrow Forensic Pathology Services, a division of Sparrow Hospital, released its first quarter numbers of drug-related deaths in five Michigan counties: Eaton, Ingham, Ionia, Isabella, and Shiawassee. Summarily, total overall drug-related deaths have increased 20% compared to the same time period in 2017. Further, deaths related to opioid use alone are up 17.9% from the same time last year.¹ From 1999 to 2016, the total number of overdose deaths involving any type of opioid increased more than 17 times in Michigan, from 99 to 1,689.²

In response, the Michigan Department of Health and Human Services (MDHHS) has issued a new emergency rule which requires health care providers and facilities to report prescription and illicit drug overdose and poisoning statistics. The rule is intended to help inform the public health response to the substantial increase in cases of prescription and illicit drug overdoses in Michigan. MDHHS will use reported data for planning and targeting of resources and interventions to populations and geographic locations of high-need.

To minimize reporting burdens, MDHHS and MiHIN will develop a surveillance system to collect information on prescription and illicit drug poisoning events that capitalizes on existing information feeds. The system will leverage existing Admission, Discharge, Transfer (ADT) message feeds from participating hospitals to identify events with an ICD-10 diagnosis code related to drug overdoses and poisonings. MiHIN Rhapsody will filter incoming ADT messages (A01, A03, and A04 event types) that contain any of the 2,111 identified ICD-10 codes and will route those messages to MDHHS, based on their delivery preferences.



Purpose of Use Case

- Value for All: Reduced burdens on health care providers relative to new statewide reporting requirements
- Value for All: Enable improved outcomes for Michigan residents via targeted interventions to populations and geographic locations of high-need
- Value for MDHHS: Leverage existing MiHIN infrastructure and relationships to improve public health surveillance activities
- Value for MiHIN: Expand existing ADT use case and HIN capabilities

Overview

This overview goes into more details about the Use Case.

This Use Case will improve the timeliness and quality of overdose reporting to MDPSS by:

- Streamlining the dataflow
- Decreasing the legal burden of data sharing
- Leveraging the existing statewide infrastructure to expand and scale drug and poisoning surveillance efforts.

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's EHR system sends the ADT notification to MiHIN either directly or via a trusted data-sharing organization (TDSO).

MiHIN parses the ADT notifications it receives from organizations participating in this Use Case, filters out ADT messages coming from the hospital's emergency department which contain a diagnosis code (or codes) relating to drug and poisoning overdose. These messages are then routed to MDHHS to contribute to the MDPSS data set for surveillance purposes.

This will allow public health and law enforcement officials to more easily follow trends and target specific regions for intervention and closer monitoring in high-risk areas.

This Use Case takes advantage of existing ADT feeds and the MiHIN Use Case factory legal structure to:

- Increase adoption of the Use Case
- Streamline the legal process for data sharing by offering a simpler legal package that is an addendum to the Master Use Case Agreement (MUCA)
- Increase the scope of MDPSS data sources by leveraging MiHIN's connection to over 130 hospitals statewide

Persona Story

To explain this Use Case, this section follows a persona example from start to finish.

Christy Munson (38, paralegal) has been suffering with lower back and hip pain for quite some time. After one painful incident at the gym, her doctor prescribed her Vicodin.

Christy was nervous about taking an opioid for her pain, since she had heard many horror stories about the drug and its addictive properties on the news.

Unfortunately, Christy had another concern that both her and her doctor were not aware of. She had an undiagnosed autoimmune disease that occasionally induced excruciatingly painful episodes, leading to Christy self-administering. This led Christy to take more than the recommended dosage of her prescription, resulting in an overdose for which she was rushed to the hospital.

The ADT notification generated by her admission at the hospital was sent Michigan Department of Health and Human Services (MDHHS) where it contributed to a MDPSS data brief. In other words, the data created out of her experience helped to build a stronger public health understanding of the drug overdose and poisoning epidemic.

While Christy would recover from her experience, her emergency and prescription had a great impact in her region, since the MDPSS system recognized Christy's county as a growing high-risk drug overdose area with doctors, like her own doctor.



Diagram

This diagram shows the information flow for this Use Case.

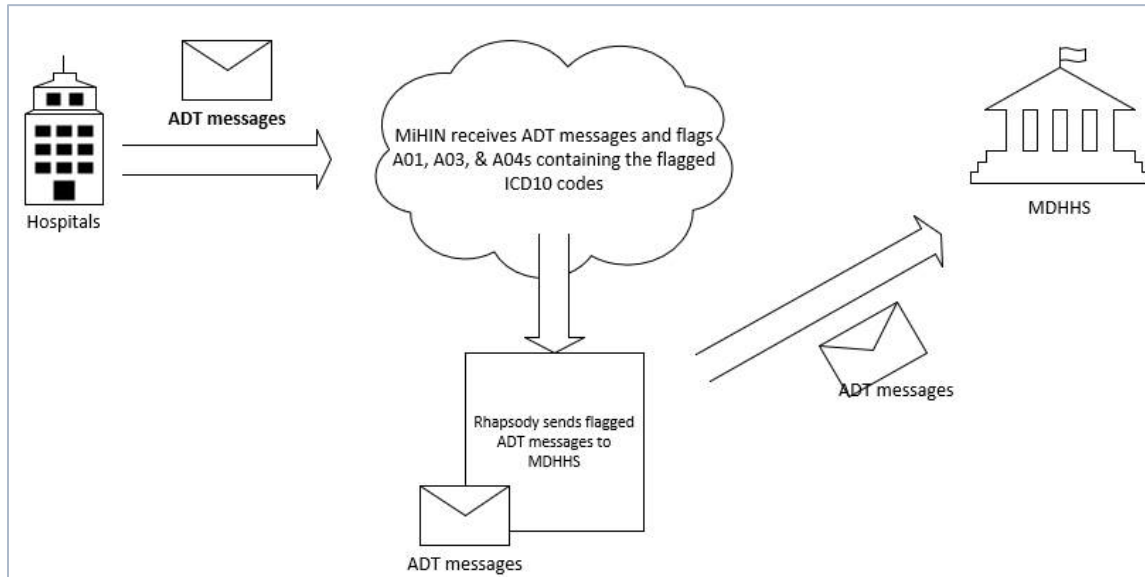


Figure 1: MDPSS Use Case Data Flow

1. A patient visits a participating hospital, which sends an ADT notification containing a diagnosis code (for prescription and illicit drug overdoses) to MiHIN, either directly or through a Trusted Data Sharing Organization (TDSO)
2. MiHIN receives this ADT and identifies that the notification was routed from a participating ADT sender. MiHIN also identifies that the notification contains a diagnosis code of interest for the MDHHS's drug poisoning surveillance system.
 - If the ADT notification does not have an applicable diagnosis code, it does not get routed to MDHHS
 - MiHIN also parses out the DG1 data that does not specifically relate to the most current national disease coding system
3. MiHIN routes the ADT notification to MDHHS's designated end-point
4. MDHHS receives the ADT notification.

Regulation

This section describes whether this Use Case is being developed in response to a federal regulation, state legislation or state level administrative rule or directive.

Legislation/Administrative Rule/Directive:

- Yes
- No
- Unknown

Meaningful Use:

- Yes
- No
- Unknown

Cost and Revenue

This section provides an estimate of the investment of time and money needed or currently secured for this Use Case.

For MiHIN, the costs associated with this Use Case include the cost of the resources and infrastructure needed to move it into production.

For hospitals, there is no negative cost associated with participating in this Use Case.

Reporting prescription and illicit drug overdoses to MDHHS is part of the emergency reporting rule.

Implementation Challenges

This section describes the challenges that may be faced to implement this Use Case.

There are few, if any, technical challenges to implementing this Use Case because it leverages existing ADT connections between hospitals, TDSOs and MiHIN. It does not impact current workflows or require any additional technical implementation for participating hospitals.

MiHIN bundles and sends all ADTs pertaining to this Use Case to MDHHS as an individual feed which is routed to a single endpoint. MiHIN directs this feed to an existing MDHHS endpoint already used for MDPSS purposes. Therefore, there are no implementation challenges to receive data on the part of MDHHS.

For MiHIN, implementation includes:

- Building a parser to only include ADT notifications from participating organizations which contain a diagnosis code (or codes) collected for this Use Case
- Setting up a new ADT feed to send those parsed messages to MDHHS.

Vendor Community Preparedness

This section addresses the vendor community preparedness to readily participate in the implementation of this Use Case.

In order to participate in the Use Case, sending and receiving data sharing organizations need to be able to generate and/or process ADT HL7 messages with ICD-10 codes. Because this Use Case leverages existing ADT transmissions, the vendor community is already prepared to participate in the implementation of this Use Case.

Support Information

This section provides known information on this support for this Use Case.

Political Support:

- Governor
- Michigan Legislature
- Health Information Technology Commission
- Michigan Department of Health and Human Services or other State of Michigan department
- CMS/ONC
- CDC
- MiHIN Board

Sponsor(s) of Use Case

This section lists the sponsor(s) of the Use Case

- Michigan Department of Health and Human Services (MDHHS)

Metrics of Use Case

This section defines the target metrics identified to track the success of the Use Case.

Success for this Use Case is tracked by the number of hospitals sending drug overdose and poisoning data through the Use Case and the number of ADTs sent to the MDHHS.

Other Information

This section is provided to give the sponsor(s) an opportunity to address any additional information regarding this Use Case that may be pertinent to assessing its potential impact.

No additional information is being submitted at this time.