

A grayscale map of the Baltimore, Maryland area, showing various neighborhoods and roads. Labels include Hampstead, Reisterstown, Owings Mills, Randallstown, Pikesville, Baltimore (City), Baltimore, Ellicott City, ElkrIDGE, Brooklyn Park, Glen Burnie, Green Haven, Pasadena, and Severn. Highway markers for 145, 95, and 298 are visible.

Integrating Records Management Systems with the **ODMAP** Platform



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Visit: <http://odmap.org> Email: odmap@wb.hidta.org

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The Overdose Detection Mapping Application Program (ODMAP) is a free, Web-based, mobile-friendly platform to support reporting and surveillance of confirmed and suspected fatal and nonfatal overdoses. ODMAP allows users to integrate data collected by existing record management systems through an Application Program Interface (API). This document provides an overview of how the ODMAP API functions, considerations for determining the feasibility of using an API, guidance for defining a suspected overdose case with an API, and lessons learned from the field.

An API is a software intermediary that allows programs to interact and share data

ODMAP has a custom API that is simple to apply across disciplines. Agencies that elect to use an API for ODMAP data submission typically do so because they have records management systems (RMS) that serve as a centralized data repository for incident reports, calls for service, or electronic patient care reports (ePCRs). The API is a software intermediary that allows the submitting agency's RMS system to interact with ODMAP. Once records are identified within the agency's database, the required data fields for ODMAP are collected, converted into the appropriate format, and transmitted via the ODMAP API import.

If key responders in your community, such as law enforcement, EMS, the fire department, hospital providers, or the health department routinely document suspected overdoses in a management information system, an API may be an appropriate alternative to manual data entry.

Developing the API

The first step in developing an API is to identify where your data resides. If your agency has access to its data and technical staff members experienced with data integration, the API can be internally developed. Successful integration with the ODMAP API requires access to and understanding of the data, a modern program language, and the ability to format the data in JavaScript Object Notation (JSON).

However, if your agency does not have access to its data and instead uses an RMS vendor, you will need to ask your vendor to develop an API. Most RMS vendors are familiar with APIs. An inquiry requesting an API and the accompanying ODMAP Import API documentation can start the process. Vendors may opt to charge a one-time and/or annual fee. We encourage agencies using a vendor to include the ODMAP API in the request-for-proposal process.

It is important to note that an API is backwards compatible; therefore, ODMAP will not require agencies to update their APIs when there are new releases or updates to the ODMAP.

“Implementing the API in Davidson County (Nashville) was essential for our overdose response efforts. Entering individual suspected overdoses on phones/computers was essentially impossible for our EMS, due to the high number of incidents. Our EMS system vendor had worked with ODMAP on previous collaborations and that made our implementation easy. Once agreements were signed we were able to implement the API within a couple of weeks.”

—Trevor Henderson, Director Opioid/Overdose Response & Reduction Program, Metro Public Health Department

ODMAP Data Import Fields

The required API fields are the same as manual entry. These include the following:

1. **Date/time** of the suspected overdose
2. **Location**. Latitude/longitude are preferred for geocoding consistency; however, the API is able to accept address.
3. **Fatality Status**. Fatal or nonfatal.
4. **Naloxone administration**. Dosage quantity or unknown.

ODMAP also allows users to enter optional information including case number, victim's age, victim's sex, primary suspected drug, additional suspected drugs, whether the victim was transported to the hospital, whether the overdose was part of a multiple victim overdose incident, and the responder who administered naloxone.

The ODMAP API Import document includes a data dictionary, formatting, accepted values, and other useful information for both technical staff members and vendors.

Technical Details

The ODMAP API is a RESTful API. Most modern development languages are capable of integrating with the ODMAP API. The two most popular choices are solutions based in Microsoft.NET and Python.

How an API Works

The graphic below illustrates how an API works with an existing record management system.



Agency's suspected overdose report is created and sent to its record management system.



Suspected overdose record is stored in agency's record management system.



The API identifies and selects records in the agency's database that meet the developed definition.



Records are transmitted from the agency's record management system directly to ODMAP.

Defining a Suspected Overdose Case

API submission requires users to specify criteria for determining which patient records are identified as suspected overdoses. In the simplest scenario, the agency's RMS has an existing field for designating suspected overdoses. However, since most RMSs do not have this field, they use a combination of data fields to identify suspected overdose records. The specific fields to determine a case will vary by agency RMS. The Rhode Island Department of Health and the Maryland Institute of Emergency Medical Services System definitions are provided as examples of approaches to identifying suspected overdose records.

Maryland Case Definition

The Maryland Institute of Emergency Medical Services Systems (MIEMSS) submits suspected overdose data to ODMAP via an API. When the API was first established, patient care reports where naloxone administration was present were transmitted to ODMAP. In 2019, MIEMSS refined the definition to include additional criteria. Patient care reports were identified if patients received naloxone AND

1. EMS primary impression was an opioid overdose/substance overdose OR
2. EMS service responded "yes" to the question "Do you suspect opioid overdose?"

Source: Maryland EMS News <http://odmap.org/Content/docs/news/2020/ODMAP-in-Maryland.pdf>

Rhode Island Department of Health Case Definition

The **Rhode Island Department of Health** (RIDOH) developed case definition for the Rhode Island Emergency Medical (EMS) Information System (RI-EMSIS) to systematically identify opioid overdose-related cases.² An EMS run is considered opioid related if one of the following criteria is met:

1. Primary or secondary impression is overdose related AND naloxone is the medication-given in the drop-down.
2. Primary or secondary impression is overdose related AND terms for naloxone AND unresponsive are in the narrative.
3. Naloxone is in the medication given in the drop-down AND medication response is improved.
4. Terms for both naloxone and unresponsive are in the narrative AND medication response is undocumented.
5. Naloxone was given prior to EMS arrival AND the person who administered it is not a null value.

For consistency with CDC reporting requirements, an EMS run is excluded if it is an interfacility transfer, the patient is biologically dead on arrival, or the patient is age 10 or younger.

¹ Lasher, L., Rhodes, J., Viner-Brown, S. Identification and Description of Non-Fatal Opioid Overdoses using Rhode Island EMS Data, 2016–2018. Rhode Island Medical Journal, March 2019, 41-45. Accessed 10/29/20: <http://rimed.org/rimedicaljournal/2019/03/2019-03-41-health-lasher.pdf>



Testing and Implementing an API

Testing your API

Before you begin submitting data, you will need to test your API to ensure that it is working correctly. ODMAP has a testing environment for this purpose. During the test, you should review your data for consistency and accuracy. To gain access to the test environment, contact Aliese Alter, senior program manager, at aalter@wb.hidta.org.

API User Account

Once you have confirmed that your API is working properly, you will need to create an API user account in the system to begin submitting data. The process is the same for all user types. An account is created by submitting an electronic form on the ODMAP homepage. The API account must have an active email address.



Navigate to odmap.hidta.org and click “register as a new user.”



Enter credentials for your agency’s API user.



Example of an API user in ODMAP.



API User First Name: API

API User Last Name: SPPD

API E-mail Address:
SPPD-ODMAP@ci.stpaul.mn.us

API Duplication Check

ODMAP has processes in place to prevent duplicate records. This process is different for API and manual submissions.

The API duplicate check occurs when a new overdose submission is received through the API. The API submission considers the record a duplicate if the overdose occurs within 285 feet and within one hour before or after the incident time in an existing record. The duplicate check compares the new record against all existing records. This check is not initiated for record updates.

Manual Versus API

If a user attempts to manually enter a suspected overdose record that is the same as an existing record, the user will receive a warning stating that the system has detected a possible duplicate. The user then determines whether to proceed with the submission or cancel.



API Versus API

Some communities have multiple APIs. If two APIs submit the same record, ODMAP will accept only the first record submitted. The duplication check works in this manner to support the near real-time function of the platform.

HIPAA-Covered Entities and ODMAP

Many EMS agencies and health care providers report suspected overdose data to ODMAP. While these agencies are covered entities, subject to Health Insurance Portability and Accountability Act (HIPAA) disclosure limitations, local authorities in these jurisdictions have concluded that HIPAA disclosure exemptions apply to ODMAP reporting. There are a number of situations in which a covered entity does not require an individual's consent to disclose information, including public health activities and purposes for controlling disease, disability, or injury; to prevent or lessen a serious threat to a person or the public; or to assist law enforcement or public health in preventing a serious public threat.¹

Additional justifications used by jurisdictions for reporting overdose incidents in ODMAP include the following:

- Access to the ODMAP system is limited to authorized individuals
- ODMAP restricts the zoom so that individuals cannot view the precise location of a reported overdose.

Readers are encouraged to consult the Legislative Analysis and Public Policy Association (LAPPA) guidance document, which discusses the application of HIPAA and the Health and Human Services (HHS) Privacy Rule to ODMAP, for additional information.

https://www.cossapresources.org/Content/Documents/Articles/ODMAP_Data_Privacy_Guidance_Document.pdf

¹ The Legislative Analysis and Public Policy Association, ODMAP, and Protected Health Information Under HIPAA: Guidance Document. March 2020, available at <https://legislativeanalysis.org/wp-content/uploads/2020/03/ODMAP-Data-Privacy-Guidance.pdf>.

“When developing a protocol around ODMAP, SPPD wanted to ensure that overdose information was being entered not only in real time, but with consistent, clean data. The API code guarantees accuracy and leaves little room for human error. Having ODMAP automated leaves more time for providing resources to non-fatal overdose victims and responding efficiently to spike alerts.”

—Alyssa Arcand, Analyst, Saint Paul Police Department—Community Outreach and Stabilization Unit, St. Paul, Minnesota

Lessons Learned

Columbus, Ohio, ODMAP Data Integration Project

In 2018 **Columbus Public Health** (CPH) received an BJA COAP grant to support implementation of a single overdose surveillance system for Franklin County, Ohio. In the first two years of the project, CPH focused on implementing an ODMAP API for the county's fire/EMS districts. CPH started with the five largest fire districts, both because they respond to 90 percent of suspected overdoses in Franklin County and because of their familiarity with ODMAP. The CPH Data Integration manager engaged each of the districts to explain the project and to understand how they enter and collect suspected overdose data, including the frequency of data entry, the data elements used track overdoses, and RMS vendor/contact information. With permission from each fire/EMS agency, follow-up conversations were conducted with each jurisdiction's RMS vendors to discuss the project, address technical questions, and discuss costs. CPH worked directly with RMS vendors to reduce work for the overburdened fire/EMS jurisdictions.

Each jurisdiction had its own protocol for approval; some were able to obtain approval quickly, while others required board approval. On average, it took eight months between the first contact with an RMS vendor to go live with ODMAP, with the shortest timeline about four months and the longest ten months. By September 2020, 11 agencies were participating in the API, and one is in the process of being finalized. CPH is currently working to build out both public-facing and internal dashboards with the data from the ODMAP API and other sources. The lessons learned from the CPH fall into two categories:

(1) communication and engagement and (2) API and cost considerations.



Communication and Engagement

- **Identify your champions and use them to educate and engage stakeholders.** In Franklin County, several fire personnel (chief and lieutenant) became champions for ODMAP. The presentations at fire chief meetings and personal outreach were essential for engaging stakeholders.

- **Be knowledgeable about ODMAP to address stakeholder questions and head off concerns.** The CPH project managers had a strong understanding about ODMAP and were able to address jurisdictions' concerns to keep the process moving forward. CPH was also able to alleviate stakeholder HIPAA concerns by educating stakeholders on the ways in which ODMAP limits data access and how HIPAA exceptions apply.
- **The process takes time**—Keep communicating and answering questions. There is a large gap between initial conversations about ODMAP data sharing and executing the ODMAP memorandum of understanding. Some jurisdictions experienced changes in leadership or other organization changes that stalled the process. Regular communication with jurisdictions and RMS vendors was important to keep the project moving forward.



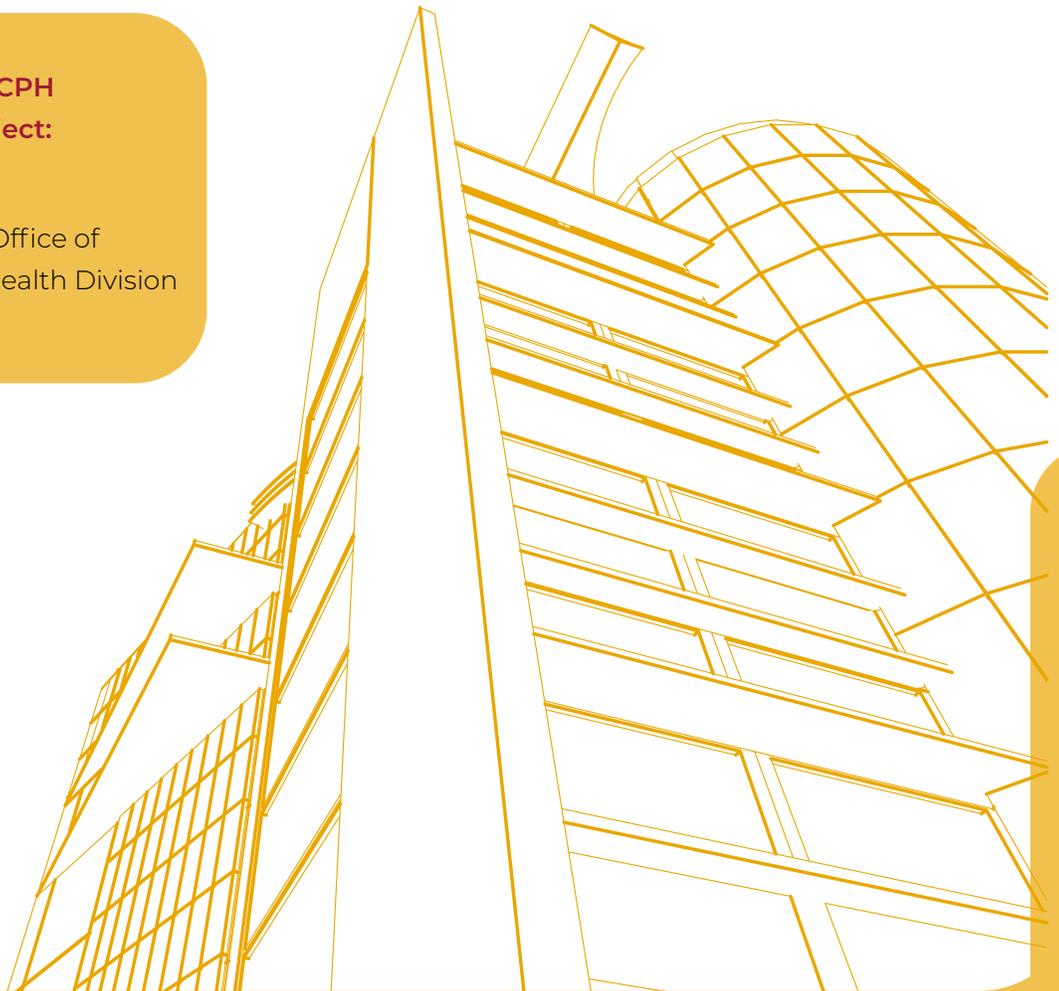
API

API and Cost Considerations

- **Leverage other communities' experience for better bargaining power with RMS vendors.** The costs for an API can vary widely by vendor. Reach out to other jurisdictions that have an ODMAP API or have the same vendor to learn costs to help your negotiations. If multiple jurisdictions/agencies are using the same vendor, you may be able to negotiate a group rate.
- **Fully investigate which agencies should be reporting before moving forward with an API.** Initially, CPH had planned to implement an API with local police agencies and fire/EMS; however, discussions revealed that police agencies in some areas are required to call fire/EMS to scenes involving suspected overdoses. Therefore, it was not necessary to include local police in the API in those areas.
- **Have a plan for the yearly maintenance fee for the API.** CPH used COAP grant funds to pay for the RMS set up fees and initial maintenance costs but was careful to work with jurisdictions to make maintenance plans beyond the grant period.
- **Include back-filling suspected overdose data into your API set-up.** CPH asked several vendors to include data from the prior year at no additional cost, which has helped give them a better sense of overdose trends.
- **Manual entry may be more cost effective for some agencies.** For smaller fire/EMS jurisdictions that respond to only a few overdoses a month, implementing an API was not cost-effective. CPH determined that manual entry was the best option for these agencies/jurisdictions.

For more information on the CPH ODMAP Data Integration Project:

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