API Guidance

Integrating Records Management Systems with the ODMAP Platform

October 2024

ODMAP

OVERDOSE DETECTION
MAPPING APPLICATION PROGRAM

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 (RMS) 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 an RMS that serves 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.

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 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.

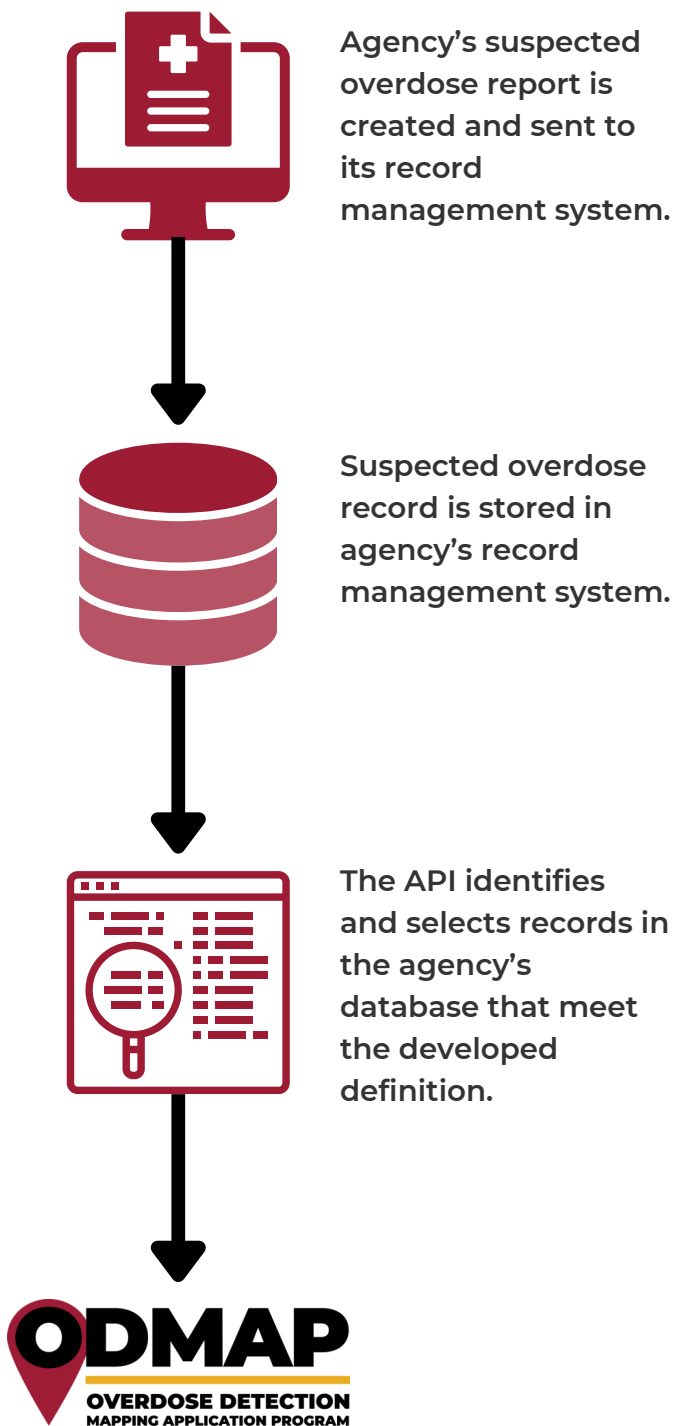> ▶ ODMAP Application Programming Interface Intro Video

Technical Details

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

A technical document with code examples is available to agencies upon request.

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.

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

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 addresses.

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

API Agency Checklist

To help agencies interested in setting up an API with ODMAP, we have developed a ODMAP API Set-up Checklist. This checklist will walk you through the API set up process from beginning to end, however, please note that parts of this process may depend on your RMS vendor.

Prior to developing an API, you will need to determine if you will be using an internal data system or if you will be connecting through your RMS vendor. For this process, we will refer to the two types as an internal API and an external API.

Internal - your agency owns a copy of its data and would like to set up the API between your agency and ODMAP.

External - through your Record Management System Vendor – your agency will authorize your local RMS vendor to set up an API with ODMAP and push your data to ODMAP.

Internal API

1. Identify your internal IT point(s) of contact and share the API checklist and technical document.
2. Connect your internal IT point(s) of contact with the ODMAP team and have a meeting to discuss logistics and answer any questions, if needed.
3. Ask the ODMAP team for access to the test environment.
4. Identify which account you would like the API to be set up under, this can be a current user, or you can create a "dummy" user that will be used only for the API.
   a. This account is no different than a standard user account, you register an API account the same way any user would register.
   b. **Share this information with your IT team.**
5. Start pushing data over to ODMAP and review data points on the National Map. If there are any error codes or questions, please contact the ODMAP Program Manager.

External API

1. Identify your RMS vendor point of contact. You can also include your internal IT team as part of the process.
2. Reach out to your point of contact and let them know you are interested in setting up an API with ODMAP.
   a. Ask them if they have created an API with ODMAP before.
   b. If yes, then proceed to next step.
   c. If no, connect the ODMAP Program Manager with the point of contact and they will have a brief meeting about the process and logistics.
3. Work with the RMS vendor to create an overdose data definition that will be used to trigger case information that will be sent to ODMAP (See section below).
4. Identify which account you would like the API to be set up under, this can be a current user, or you can create a "dummy" user that will be used only for the API.
   a. If you need to make a new user, make one as soon as you give the RMS vendor the okay to start setting up the API.
   b. **Share the login credentials for the user with your RMS vendor, they cannot create the API without this information.**
5. Start pushing data over to ODMAP.
6. Monitor data being submitted to make sure it is mapping correctly and matching your data definition.

Defining a Suspected Overdose Case

API submissions require users to specify criteria that will be used to determine 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 (MIEMSS) definitions are provided as examples of approaches to identifying suspected overdose records.

Maryland Case Definition

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) and the "Enhanced State Opioid Overdose Surveillance programs' cooperative" agreement from the Centers for Disease Control and Prevention (CDC) funded the development of a case definition which is to systematically identify opioid overdose-related cases for nonfatal opioid overdose–related EMS runs, which supports states in improving surveillance, including better use of EMS data systems for rapid surveillance of drug overdoses. EMS representatives from their advisory board provided input on the Rhode Island Emergency Medical Services Information System (RI-EMSIS) fields that are used in the case definition for opioid overdose–related EMS runs. The board helped identify the primary and secondary impression codes that are incorporated into the case definition.

Based on the input, they defined an EMS run as nonfatal opioid overdose–related if it met 1 of 5 criteria:

1. The primary or secondary impression is overdose related AND naloxone is in the dropdown field for medication given
2. The primary or secondary impression is overdose related AND terms for both naloxone AND unresponsive are in the narrative report
3. Naloxone is in the dropdown field for medication given AND medication response is improved
4. The terms for both naloxone and unresponsive are in the narrative report AND medication response is undocumented (excludes values of no change or worse)
5. Naloxone was given before EMS arrival AND who administered it is not a null value

Source:
Benjamin D. Hallowell et al. *Using Emergency Medical Services Data to Monitor Nonfatal Opioid Overdoses in Real Time: Development, Validation, and Use of a Case Definition, Rhode Island, 2018.* Public Health Reports, 2021, 40-46.

Is An API For You?

FAQ's

Why is an API beneficial?

The API allows for direct, automated data integration by connecting with the agency or state's RMS software to ODMAP. An API is a software intermediary that allows programs to interact with each other to share data. Using API allows agencies to contribute data without manual processing.

How do I know if setting up an API is the best option?

For smaller fire/EMS jurisdictions that respond to only a few overdoses a month, implementing an API was not cost-effective. Manual entry may be more cost effective for some agencies that report fewer amounts of cases monthly. APIs are effective for reporting large amounts of overdose cases per month. Due to an API being an automatic record management system, it will automatically push the cases reported to ODMAP without having to manually enter each case.

What is the cost for setting up an API?

There is no cost associated with using ODMAP or setting up the API. However, if your API is being set up through a vendor, costs could vary.

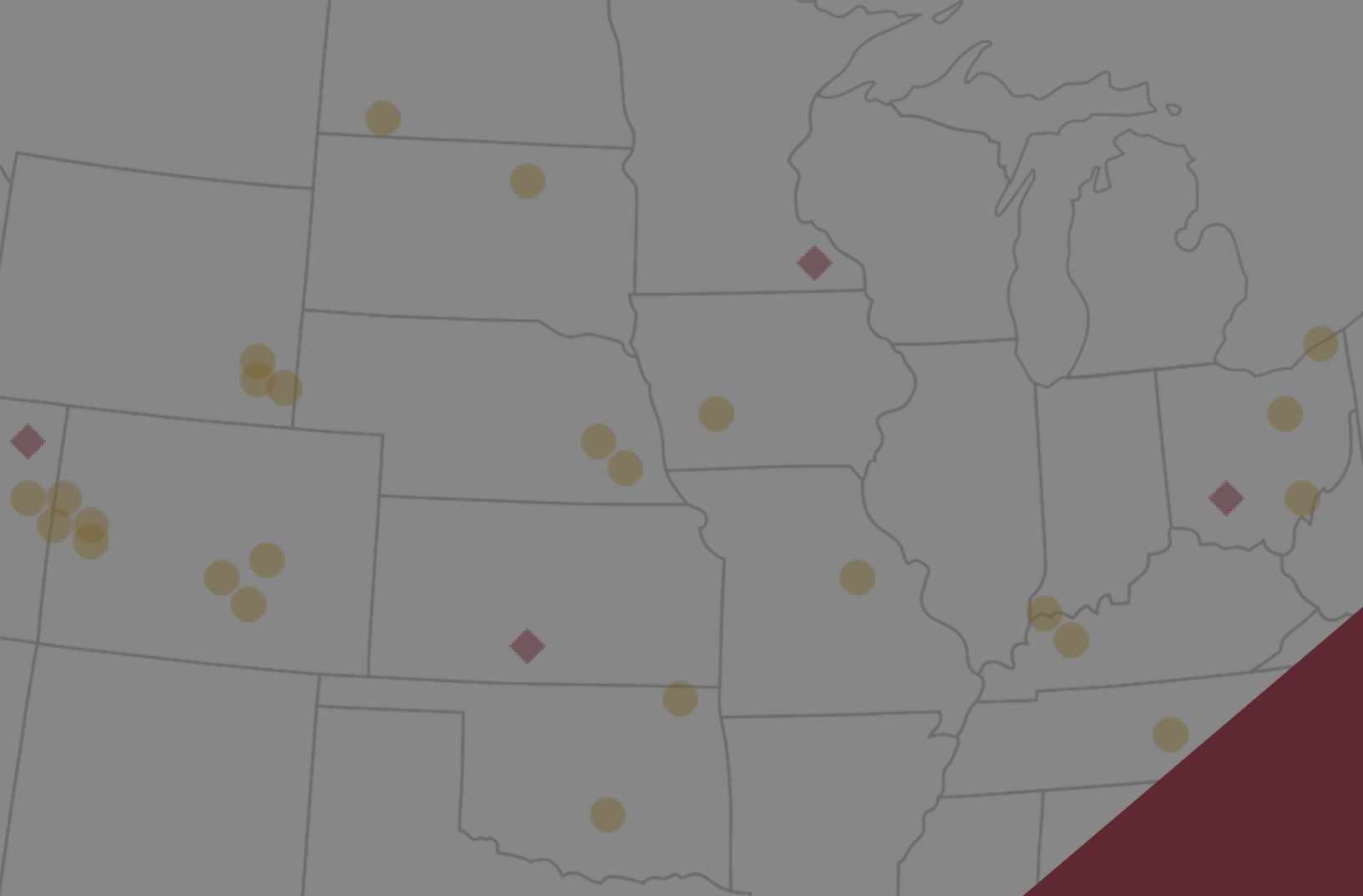## How much will an API cost when using a vendor?

RMS vendors may charge a fee to create an API, but 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.

How long does it take to set up an API?

The development process can take between 2-6 weeks to get into production. The ODMAP team provides technical assistance throughout the entire process.

How do others navigate future costs through RMS vendors?

Have a plan for the yearly maintenance fee for the API. Others who utilize APIs through ODMAP collect grant funds to pay for the RMS set up fees and initial maintenance costs.

Visit odmap.org for more information

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