

# Medicaid Opioid Prescribing Mapping Tool

## Methodology

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### Background

The Medicaid State Opioid Prescribing Mapping Tool is an online interactive mapping tool that presents geographic comparisons of the opioid prescribing rate at the state level. This mapping tool allows the user to see both the number and percentage of de-identified Medicaid opioid claims to better understand how this critical issue impacts states nationwide.

Opioid prescribing rates are derived using Medicaid data on prescription drugs prescribed by health care providers and reported by states to the Centers for Medicare & Medicaid Services (CMS). Medicaid is a state-federal partnership that spent approximately \$66 billion on prescription drugs in 2018. The mapping tool presents data for 2018, changes in rates from 2017 to 2018, and changes in rates from 2013 to 2018. Underlying data tables are available for each calendar year, 2013 through 2018. The mapping tool does not contain beneficiary information.

### Methods

The measures presented in this mapping tool were aggregated from the Medicaid State Drug Utilization Data<sup>1</sup> (excluding over-the-counter prescriptions). These data include state-level reports listing the number of prescription fills and amounts paid by states by National Drug Code (NDC). Data were summarized by NDC and linked to a list of NDCs classified as opioids.

A list of the opioids included in the Opioid Prescriber mapping tool are available for download.<sup>2</sup> This list is generated using the Medicare Part D Overutilization Monitoring System (OMS)<sup>3</sup>, which can change from year to year. Opioid claims for each calendar year, 2013 through 2018, are identified using the OMS opioid list updated in 2019. Long-acting opioid claims are identified using controlled substances including opioids with oral morphine milligram equivalent (MME) data made public by the Centers for Disease Control and Prevention (CDC)<sup>4</sup>.

Fee-for-service claims indicate the drug was prescribed in a Fee-For-Service (FFS) program and Managed Care claims indicates the drug was prescribed in a Manage Care Organization (MCO).

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<sup>1</sup> <https://www.medicaid.gov/medicaid/prescription-drugs/state-drug-utilization-data/index.html>

<sup>2</sup> [https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Provider-Charge-Data/Downloads/Medicaid\\_OpioidDrugList.zip](https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Provider-Charge-Data/Downloads/Medicaid_OpioidDrugList.zip)

<sup>3</sup> For additional information on Medicare Part D OMS please see <https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovContra/RxUtilization.html>

<sup>4</sup> This information is available for download on the CDC Opioid Overdose Data Resources web page at: <https://www.cdc.gov/drugoverdose/resources/data.html>

Details about the Medicaid State Drug Utilization Data collected through the Medicaid Drug Rebate Program are publicly available.<sup>5</sup>

## Metrics

- **Geographic Level (Geo\_Lvl)**: Identifies the level of geography that the data in the row has been aggregated. A value of 'National' indicates the data in the row is aggregated across all states and the District of Columbia. A value of 'State' indicates the data in the row is aggregated to the state of the prescriber.
- **Geographic Code (Geo\_Cd)**: For the state-level data, the state FIPS code that is associated with state of the prescriber. Restrictions: States are restricted to the 50 U.S. States and the District of Columbia.
- **Geographic Description (Geo\_Desc)**: Data aggregated at the National level are identified by "National". Data aggregated at the State level list the state associated with the prescriber. The values include the 50 United States and the District of Columbia.
- **Overall Claims (Tot\_Clms)**: The number of prescriptions include any prescription for which Medicaid paid a portion of the claim, as well as those prescriptions for which Medicaid paid the claim in full.
- **Opioid Claims (Tot\_Opioid\_Clms)**: The number of opioid prescriptions include any opioid prescription for which Medicaid paid a portion of the claim, as well as those opioid prescriptions for which Medicaid paid the claim in full.
- **Long-Acting Opioid Claims (LA\_Tot\_Opioid\_Clms)**: The number of long-acting opioid prescriptions include any long-acting opioid prescription for which Medicaid paid a portion of the claim, as well as those long-acting opioid prescriptions for which Medicaid paid the claim in full.
- **Opioid Prescribing Rate (Opioid\_RX\_Rate)**: The number of Opioid Claims divided by the Overall Claims and multiplied by 100.
- **Long-Acting Opioid Prescribing Rate (LA\_Opioid\_RX\_Rate)**: The number of Long-Acting Opioid Claims divided by the Opioid Claims and multiplied by 100.
- **Change in Opioid Prescribing Rates (Opioid\_RX\_Rate\_Chg)**: The percentage point difference in the opioid prescribing rate. This measure has a five year change measure and a one year change measure. For example, the five year change measure is the percentage point difference in the opioid prescribing rate from 2013 to 2018, which is calculated by subtracting the rate in 2013 from the rate in 2018. The one year change measure is the percentage point difference in the opioid prescribing rate from 2017 to 2018, which is calculated by subtracting the rate in 2017 from the rate in 2018. The change in the opioid prescribing rate is displayed as an increase, decrease, or no change. An increase reflects a percentage point difference of at least 0.10 and a decrease reflects a difference of at least -0.10.
- **Change in Long-Acting Opioid Prescribing Rates (LA\_Opioid\_RX\_Rate\_Chg)**: The percentage point difference in the long-acting opioid prescribing rate. This measure has a five year change measure and a one year change measure. For example, the five year change measure is the percentage point difference in the long-acting opioid prescribing rate from 2013 to 2018, which is calculated by subtracting the rate in 2013 from the rate in 2018. The one year change measure is the percentage point difference in the

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<sup>5</sup> <https://www.medicaid.gov/medicaid/prescription-drugs/medicaid-drug-rebate-program/index.html>

long-acting opioid prescribing rate from 2017 to 2018, which is calculated by subtracting the rate in 2017 from the rate in 2018. The change in the long-acting prescribing rate is displayed as an increase, decrease, or no change. An increase reflects a percentage point difference of at least 0.10 and a decrease reflects a difference of at least -0.10.

### **Data Limitations**

In order to protect the privacy of beneficiaries, suppression is applied to the Opioid Prescribing Mapping Tool data. At each aggregated geographic level, any derived opioid claim counts between 1 and 10 are suppressed (replaced with missing values). Secondary suppression is applied in cases where a single subgroup category is primary suppressed. For example, if the Fee-for-Service opioid claim count for a given state is primary suppressed but the Managed Care opioid claim count is not primary suppressed, then the Managed Care opioid claim count for that state must be secondary suppressed to prevent disclosure of the Fee-for-Service opioid claim count suppressed value. Secondary suppression prevents backing into a primary suppressed value by using the values from the other opioid claim counts such as total opioid claim count.

The information presented in this mapping tool does not indicate the quality or appropriateness of care provided by individual physicians or in a given geographic region. For instance, high opioid prescribing for beneficiaries with cancer, palliative care and end of life care may be appropriate. In addition, opioids such as Methadone, may be prescribed for pain management as well as part of drug addiction detoxification and maintenance program. The mapping tool does not distinguish the various reasons for opioid prescribing.

Finally, the number of claims reflect prescriptions that have been filled by the beneficiary. The mapping tool does not measure whether a beneficiary took the medication.

### **How to Use the Mapping Tool**

The Medicaid Opioid Prescribing Mapping Tool allows the user to explore opioid prescribing rates and changes in rates at the state level. The user can navigate around the map by clicking and dragging to a point of interest, as well as zooming in or out to adjust the state map to a larger or smaller view. Zooming in or out can be done by scrolling the mouse wheel, typing the “+” or “-” keys on the keyboard, or by clicking the “+” or “-” buttons on the mapping tool. The user can obtain more information about a particular state by clicking on the map, where a pop-up box displays opioid prescribing rates as well as the number of opioid claims and overall claims. For the maps that display rates by plan type, the user can click on the pop-up box and then move the slider bar to compare Fee-for-Service opioid prescribing rates to Managed Care opioid prescribing rates. Fee-for-Service opioid prescribing rates are shown to the left of the slider bar and Managed Care opioid prescribing rates are shown to the right of the slider bar. The web browsers that currently support the mapping tool include: Internet Explorer 9 and higher (limitations of using Internet Explorer 9 can be found here: <https://doc.arcgis.com/en/arcgis-online/reference/browsers.htm>), Edge, Firefox, Chrome, Safari, iOS Safari, Chrome for Android.

The data for the mapping tool can be downloaded here: [https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Provider-Charge-Data/Downloads/Medicaid\\_Opioid\\_Data.zip](https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Provider-Charge-Data/Downloads/Medicaid_Opioid_Data.zip)

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