Michigan Overdose Data to Action Dashboard Documentation

Contents

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Indicator Definitions

Overdose Deaths (MI)

This indicator provides estimates of the number of drug poisoning deaths among Michigan residents historically and in the most recent death data available. Historical Michigan data come from the finalized annual Michigan Resident Death Files, while the most recent year of data comes from a provisional dataset of Michigan resident deaths accessed via Electronic Death Reporting System (EDRS) data in the MiCelerity surveillance system. Data notes on the dashboard denote where provisional (preliminary) data are used. Deaths among Michigan residents are included in the estimate if the death certificate meets one of the following conditions:

- Contains an International Classification of Disease, 10th Revision (ICD-10) code for unintentional poisoning (X40-X44), intentional self-poisoning (X60-X64), assault by drug poisoning (X85), or drug poisoning of undetermined intent (Y10-Y14) in the underlying cause of death.
- Includes an ICD-10 code for poisoning by drugs, medicants, and biological substances (T36.0-T50.9) in any cause of death field.

Due to reporting lags, provisional data become available for a month or quarter six months after the end of the time-period. For example, data for Quarter 4 2022 (end date December 31, 2022) will become available in June 2023. Provisional data are subject to change as more complete data are received and death files are finalized. Rates are calculated by dividing the total number of overdose deaths occurring in a quarter by the number of Michigan residents and multiplying the result by 100,000. The MI resident population for 1999-2020 is derived from the National Center for Health Statistics (NCHS) bridged race postcensal population estimates. The MI resident population for 2021 onwards is derived from the National Center for Health Statistics (NCHS) single race postcensal population estimates.

Home Page Death Data

Overdose death data on the home page include annual count and rate estimates for Michigan as a whole, count estimates by month for the most recent three years of data, and annual rate estimates by race[*,**]. Annual preliminary projection estimates are calculated when at least four months of preliminary data are available for the most recent, incomplete year of death data.

*Race and ethnicity categorization in the NCHS population estimates changed in 2021 to no longer "bridge" individuals identifying as multi-race into a single race category. A similar change was enacted for decedents that were identified as multi-race in the Michigan resident death files in 2022. For example, prior to 2021 in the population estimates, and prior to 2022 in the death files, individuals identifying as both white and Black would be categorically assigned to either the white or Black category based on a statistical algorithm considering the proportion of white or Black individuals in the general population. Following the change, those individuals are now categorized in a multi-race category. For this reason, race and ethnicity data prior to the change and following the change is not directly comparable, and a break in the trendline denoting the change appears on the dashboard.

**While EDRS data is used on the home page "Historical Trends" visualization, the data used for the race visualization currently come from the provisional Michigan Resident Death Files, due to issues in ethnicity categorization in MiCelerity EDRS data. The provisional Michigan Resident Death Files overdose rate estimates by race may lag several months behind the total Michigan estimates from EDRS data.

Current Trends Death Data

Overdose death data on the "Current Trends" page include count and rate estimates by quarter among Michigan residents that occurred in the most recent four-year period that data is available. Geographic breakdowns are available based on the county of residence of the decedent at the time of death.

Demographic/Disparities Death Data

Overdose death data on the "Disparities and Social Determinants of Health (SDOH)" page come from the Michigan Resident Death Files and include count and rate estimates for the most recent two years of finalized death data and are available by:

- Demographic rate ratios by Pre-Paid Inpatient Health Plan (PIHP) region for most recent year of data.
- Detailed demographic subgroup rates at the state level for most recent year of data.
- Rate relative percent change by detailed demographic subgroup at the state level between most recent and prior year of data.
- Demographic rates at the county vs state level for most recent year of data.

Geographic breakdowns are based on the county of residence of the decedent at the time of death.

Percent of drug overdose deaths involving drugs of interest (heroin, cocaine, synthetic opioid, and other psychostimulant) and percent of drug overdose deaths that were intentional/self-harm related are also available by detailed demographic subgroup rates at the state level for most recent year of data. Drug involvement is determined by specific drugs appearing in any underlying or related cause of death field. The following ICD-10 codes are used to identify the specific drugs highlighted in the dashboard: Opioid (T40.0-T40.4, T40.6), Cocaine (T40.5), Heroin (T40.1), and Other Psychostimulant (T43.6). These categories are not mutually exclusive. Intentionality is determined by the ICD-10 code listed in the underlying cause of death field, with X60-X64 codes denoting an intentional/self-harm related overdose death.

Specific Drug Death Data

Overdose death data, stratified by the specific drug related to the cause of death, are available on the "Specific Drug Trends" page from 2016 to the most recent year of data available and come from the Michigan Resident Death Files. This page contains finalized death data for prior years, and provisional death data for the most recent year available on the dashboard. Specific drugs are determined to be related to the cause of death if they appear in any underlying or related cause of death field. The following ICD-10 codes are used to identify the specific drugs highlighted in the dashboard: All Drugs (X60-X64, Y10-Y14, X40-X44, X85), Opioid (T40.0-T40.4, T40.6), Cocaine (T40.5), Heroin (T40.1), Other Psychostimulant (T43.6), Synthetic Opioids (T40.4), Poly-Drug (defined as a death having at least two related causes of death with different drug codes (ex. heroin and synthetic opioids, or cocaine and heroin). Categories are not mutually exclusive; a single death can appear in the data for multiple specific drug categories.

Overdose Deaths (U.S.)

This indicator provides estimates of the number of drug poisoning deaths among U.S. residents historically and in the most recent death data available. U.S. data are obtained from the CDC Wonder database (Wonder.cdc.gov/). Finalized data come from the "Underlying Cause of Death" data page, while the most recent year of provisional data comes from the "Multiple cause of Death (Provisional)" data page. Deaths among U.S. residents are included if the certificate contains an International Classification of Disease, 10th Revision (ICD-10) code for unintentional poisoning (X40-X44), intentional self-poisoning (X60-X64), assault by drug poisoning (X85), or drug poisoning of undetermined intent (Y10-Y14) in the underlying cause of death.

Due to reporting lags, provisional data become available for a month six months after the end of the time-period. For example, data for December 2022 (end date December 31, 2022) will become available in June 2023. Provisional data are subject to change as more complete data are received and death estimates are finalized. Rates are calculated by dividing the total number of overdose deaths occurring in a quarter by the number of U.S. residents and multiplying the result by 100,000. The U.S. resident population for 1999-2020 is derived from the National Center for Health Statistics (NCHS) bridged race postcensal population estimates. The U.S. resident population for 2021 onwards is derived from the National Center for Health Statistics (NCHS) single race postcensal population estimates.

Overdose Emergency Health Care Visits*

This indicator provides an estimate of the number of emergency health care visit admissions (including emergency department visits and inpatient emergency hospitalizations) for drug poisonings historically and in the most recent health care visit data available. These data come from the Michigan Inpatient and Outpatient Databases (MIDB/MODB), datasets collected by the Michigan Health and Hospital Association (MHA) and used by the Michigan Department of Health and Human Services (MDHHS) for public health surveillance. The MODB and MIDB contain discharge summaries, including International Classification of Disease, 10th Revision, Clinical Modification (ICD-10-CM) diagnosis codes, for emergency department and hospitalization discharges going back to 2018. Discharge summaries are abstracted by health care professionals at health care facilities and submitted to the MHA on a quarterly basis. Emergency health care visits are eligible for inclusion if the discharge diagnosis summary includes one or more ICD-10-CM codes for an initial visit for drug poisoning (T36-T50 with a fifth or sixth character of 1-4 and a seventh character of "A" or missing). Follow-up and sequelae visits, as well as visits related to adverse effects and underdosing of substances, are excluded.

Quarterly data typically become available to MDHHS six months after the end of a quarter. Emergency health care visit data in the Michigan Overdose Data to Action (MODA) dashboard are updated on a quarterly basis approximately six months after the end of a quarter (this lag may vary depending on when data becomes available from MHA. For example, data for Quarter 4 2022 (end date December 31, 2022) will become available in June 2023). Data are considered provisional and subject to change as revised data are released. Most hospitals in Michigan (>95%) report their data to MHA; two small hospitals (in Oakland and Montcalm Counties) do not report inpatient data and one small hospital (in Montcalm County) and one large hospital system (in Washtenaw County) does not report outpatient data.

Home Page Emergency Health Care Visit Data

Overdose emergency health care visit data on the home page include count estimates for Michigan by month for the most recent three years of data, including preliminary estimates for the most recent year of data available.

Current Trends Emergency Health Care Visit Data

Overdose emergency health care visit data on the "Current Trends" page include count and rate estimates by quarter among Michigan residents that occurred in the most recent four-year period that data is available. Geographic breakdowns are available based on the county of residence of the decedent at the time of the health care event. Quarterly rates are calculated by dividing the total number of overdose emergency health care visits occurring in a quarter by the number of Michigan residents in the selected geographic area and multiplying the result by 100,000. The Michigan resident population is derived from the most recent vintage of the NCHS single race postcensal population estimates.

Overdose emergency health care visit data on the "Disparities and Social Determinants of Health (SDOH)" page come from the MIDB/MODB and include count and rate estimates for the most recent two years of health care visit data and are available by:

- Demographic rate ratios by PIHP region for most recent year of data.
- Detailed demographic subgroup rates at the state level for most recent year of data.
- Rate relative percent change by detailed demographic subgroup at the state level between most recent and prior year of data
- Demographic rates at the county vs. state level for most recent year of data.

Geographic breakdowns are based on the county of residence of the decedent at the time of the health care event.

Percent of drug overdose emergency health care visits involving drugs of interest (heroin, cocaine, synthetic opioid, and other psychostimulant) and percent of drug overdose emergency health care visits that were intentional/self-harm related are also available by detailed demographic subgroup rates at the state level for most recent year of data. Drug involvement is determined by specific drugs appearing in any primary or secondary diagnosis field. The following ICD-10-CM codes are used to identify the specific drugs highlighted in the dashboard: Opioid (T40.0-T40.4, T40.6), Cocaine (T40.5), Heroin (T40.1), and Other Psychostimulant (T43.6), limited to initial visits for drug poisonings. These categories are not mutually exclusive. Intentional/self-harm related overdose emergency health care visits are identified if the ICD-10-CM code has a 6th digit of "2."

Data Note

*This indicator was previously known as "Overdose Emergency Department Visits." The underlying data for this indicator has not changed from what was previously shown on the dashboard, but the indicator name has changed to more accurately describe the data, which includes inpatient emergency hospitalizations that did not seek care in an emergency department.

Probable Opioid Overdose Emergency Medical Service (EMS) Responses

This indicator provides an estimate of the number of emergency medical service (EMS) responses for probable opioid poisonings occurring in Michigan by quarter that occurred in the most recent four-year period that data is available. These data come from the Michigan Emergency Medical Services Information System (MiEMSIS), the EMS documentation system for all EMS agencies in Michigan. To learn more about MiEMSIS, visit MDHHS's MiEMSIS web page.

EMS probable opioid overdoses are identified in MiEMSIS data through a likelihood formula that considers EMS provider impression, chief complaint, narrative, respiratory rate, Glasgow Coma Scale, medications administered (includes naloxone administration), and procedures performed during the response and creates a composite score. EMS responses are classified as probable overdoses if the score exceeds a minimum threshold score or if the patient improved after being administered naloxone. Due to the substantial percent of EMS probable opioid overdoses with missing information on patient residence (24.3% of 2020 records), data are classified by the county of occurrence and not restricted to Michigan residents. Quarterly estimates are updated roughly two weeks after the end of each quarter. For example, data for Quarter 4 2022 (end date December 31, 2022) will become available in mid-January 2023. Data are considered provisional and subject to change as more complete data are received. Quarterly rates are not calculated due to the inclusion of non-Michigan residents.

Opioid Prescription Dispensations

This indicator represents the number of prescription opioid analgesic pills (units) dispensed to Michigan residents prescribed by Michigan prescribers. Analgesics include drugs used to treat pain. Prescription drugs containing partial opioid agonists used to treat opioid use disorder (e.g., Suboxone) are excluded from this indicator. Medications prescribed by out-of-state health care providers are also excluded.

This indicator is based on data from the Michigan Automated Prescription System (MAPS). Board of Pharmacy Administrative Rule 338.3162b states all pharmacies, dispensing practitioners, and veterinarians who dispense schedules 2-5 controlled substances are required to electronically report this prescription data to MAPS daily. Reporting exemptions include controlled substances administered to patients who are inpatient and controlled substances that are dispensed by a physician at a medical institution for a maximum of 48 hours. The data are aggregated by quarter and updated roughly 30 days after the end of each quarter. Rates are based on the patient county of residence and are calculated by dividing the number of opioid units dispensed during the quarter by the number of county residents (based on NCHS single race postcensal population estimates) and multiplying by 100,000.

This indicator previously was displayed on its own dashboard page, but it is now incorporated into the "Current Trends" dashboard page.

Social Disparities Data

Social disparities data on the "Disparities and SDOH" data page are data indicators included in the Centers for Disease Control and Prevention's (CDC) Social Vulnerability Index (SVI) that capture social characteristics of communities that may make them more vulnerable to adverse health outcomes. All data indicators in this section come from the American Community Survey and were accessed at the ZIP Code Tabulation Area via the Census Application Programming Interface (API). For more information on the data indicators and how they were calculated, reference the CDC SVI documentation.

Percent of Pharmacies Participating in the Naloxone Standing Order

This indicator represents the percentage of licensed pharmacies located in Michigan that are registered to dispense naloxone under the MDHHS standing order policy. Naloxone is a medication that can rapidly reverse an opioid overdose and may be formulated as an auto-injectable (e.g., Evizo®) or a nasal-spray (e.g., Narcan®). The MDHHS standing order policy allows a pharmacist to dispense Naloxone without an individual prescription and without identifying a particular patient. Data are provided for the most recent calendar year quarter one month after the end of the quarter. For example, data for January through March will be updated in April. Pharmacies with suspended licenses and pharmacies that exclusively operate online are excluded. Data are aggregated by the county of the pharmacy store location.

Syringe Service Program Data

Syringe Service Program (SSP) data are based on data collected in the Syringe Service Program Utilization Platform (SUP), the database that collects utilization and encounter data from syringe service program (SSP) partners in real time. Data are aggregated by quarter and updated roughly 30 days after the end of each quarter. SSPs provide a wide range of harm reduction services to individuals who use drugs including distributing sterile syringes and providing naloxone, hepatitis C and HIV testing, certain vaccinations, recovery coaching and substance use disorder treatment referral, basic wound care, and access to safer sex education and supplies.

Syringe Service Program Sites

This indicator represents the number of MDHHS-funded syringe service program (SSP) site locations. A single organization may administer multiple site locations.

Syringe Service Program Encounters

This indicator represents the number of primary and secondary client encounters at MDHHS-funded SSP locations. A primary encounter is defined as a single occurrence where an individual directly participates in a service offered by an SSP location. (A single client may receive services on multiple occurrences, each occurrence is defined as an encounter.) A secondary encounter is defined as a single occurrence where an individual indirectly participates in a service offered by an SSP location through a primary client (primary client received services on their behalf).

Naloxone/Narcan Distributed by Location Type

This indicator represents the percentage of injectable and nasal naloxone kits distributed by MDHHS-funded SSPs based on location type. SSP locations are defined as SSP sites where harm reduction and syringe services are provided to participants on a regular basis. It may include brick and mortar locations and mobile unit routes. Delivery is defined as naloxone distribution ordered through an SSP, where the SSP supplies naloxone to an individual at a location convenient for and specified by the participant. This may include front door drop off or scheduling an appointment to meet at a participant-identified location. Mail-based naloxone distribution is defined as any naloxone shipped through a mail service, either through a third-party or directly by the SSP. Vending machine distribution is defined as naloxone distributed through a vending machine, newspaper box, or at a location where naloxone is available without requirement to engage with another person, such as a local business having naloxone supplied by an SSP available in a window or at a front desk.

Race of SSP Participants Served

This indicator represents the percentage of participants served by MDHHS-funded SSPs by race. Race is self-reported by participants and disclosure of race is not a requirement for participants to receive SSP services. As such, percentages are based on the number of participants reporting race and exclude participants with no race specified. Currently, participants may select only one race. Race is collected on primary participants only and was complete for 35% of the participants receiving services in 2022.

Gender Identity of SSP Participants Served

This indicator represents the percentage of participants served by MDHHS-funded SSPs by gender identity. Gender identity is self-reported by participants and disclosure of gender identity is not a requirement for participants to receive SSP services. As such, percentages are based on the number of participants reporting gender identity and exclude participants with no gender identity specified. Men are defined as SSP participants that identify as men, regardless of sex assigned at birth. Women are identified as SSP participants that identify as women, regardless of sex assigned at birth. Nonbinary/Other is defined as SSP participants that identify as nonbinary or another gender identity that is not listed on the client intake form. Gender identity is collected on primary participants only and was complete for 35% of the participants receiving services in 2022.

Age of SSP Participants Served

This indicator represents the percentage of participants served by MDHHS-funded SSPs by age. Age is calculated using participant birth year and the year services were received. Birth year is self-reported by participants and disclosure of birth year is not a requirement for participants to receive SSP services. As such, percentages of participants served in each age group are based on the number of participants reporting birth year and exclude participants with no birth year specified. The indicator is based on data collected in the SUP. Data are aggregated by quarter and updated roughly 30 days after the end of each

quarter. Birth year is collected on primary participants only and was complete for 34% of the participants receiving services in 2022.

Substances Used within Last 30 Days

This indicator represents the percentage of participants served by MDHHS-funded SSPs that reported using a specific substance in the 30 days before completing a client intake form. Substance use is self-reported by participants and disclosure of substances used within 30 days of completing the client intake form is not a requirement for participants to receive SSP services. As such, percentages are based on the number of participants reporting any substances used within 30 days of completing the client intake form and exclude participants with no reported substance use during that timeframe. Participants may report multiple substances used. Substances used in the last 30 days is collected on primary participants only and was complete for 13% of the participants receiving services in 2022.

Substances Injected Daily

This indicator represents the percentage of participants served by MDHHS-funded SSPs that reported injecting a specific substance daily upon completing a client intake form. Injection behaviors are self-reported by participants and disclosure of substances injected upon completing the client intake form is not a requirement for participants to receive SSP services. As such, percentages are based on the number of participants reporting daily injection of any substance and exclude participants with no reported daily injection use. Participants may report multiple substances injected daily. Substances injected daily is collected on primary participants only and was complete for 13% of the participants receiving services in 2022.

Syringes Distributed

This indicator represents the number of sterile syringes distributed by MDHHS-funded SSPs. This includes sterile syringes distributed by SSPs that are recorded by individual participant and by aggregated across multiple participants.

Overdoses Reversed

This indicator represents the number of opioid overdoses that were reversed with naloxone kits distributed by MDHHS-funded SSPs. This number includes both overdoses experienced by the participant and overdoses that the participant witnessed since their last encounter with an SSP. Overdoses reversed is self-reported by participants and disclosure is not a requirement for participants to receive SSP services. Overdoses reversed since last encounter is collected on primary participants that interact with SSP staff only and does not include encounters where participants receive naloxone without the requirement to engage with another person, such as newspaper boxes or vending machines, or where the participant did not have a subsequent primary encounter.

Test Strips Distributed

This indicator represents the number of Fentanyl or Xylazine test strips distributed by MDHHS-funded SSPs. Fentanyl test strips are used to detect the presence of Fentanyl in a substance. Xylazine test strips are used to detect the presence of Xylazine in a substance. This metric includes the amount of test strips distributed by SSPs that are recorded by individual participant and by aggregate across multiple participants.

SSP Participants

This indicator represents the number of unique participants that received services from MDHHS-funded SSPs based on a generated participant identifier. Participant identifiers are generated at the first primary encounter with SSP staff. Participants that do not interact with SSP staff, for example if they receive

services only from vending machines or newspaper boxes, would not have a participant identifier and are not included in this count. Additionally, services that are recorded in aggregate, or across multiple participants, do not have attached participant identifiers and are not included in this count. In 2023, 74% of encounters were recorded with a participant identifier.

Naloxone Portal Kit Orders

This indicator represents the number of naloxone kits ordered through the online MDHHS Naloxone Portal. The MDHHS Naloxone Portal was launched in January 2020 to help supply naloxone to organizations such as jails, law enforcement, first responders, and community-based organizations. While there are no restrictions on the state of the organization, all requestors, as of February 2021, have been located in Michigan. Data are aggregated by calendar year and by the type of agency that submitted the request. Data are updated quarterly roughly 30 days after the end of the quarter.

Publicly Funded Substance Use Disorder Treatment Episode Data

The following indicators related to publicly-funded substance use disorder (SUD) treatment episodes are based on data collected in the Behavioral Health – Treatment Episode Data Set (BH-TEDS). Data are aggregated by year and updated roughly 45 days after the end of each year. Only SUD treatment admissions for a patient that indicated a drug as their primary substance use problem are included in the following indicators. Treatment episodes with alcohol listed as the primary substance use problem and episodes for mental health disorders without co-occurring SUD treatment are excluded. Each of the below indicators can be stratified by the following groups on the dashboard: Statewide, Age Group, Corrections-Related Status, Education, Employment Status, Ethnicity, Gender Identity, Housing Status, PIHP Region, Primary Substance Use Problem, Race, Sex Assigned at Birth, Treatment Type, Urbanicity, and Veteran Status.

Number of SUD Treatment Episodes

This indicator represents the number of publicly funded treatment episodes for substance use disorder among Michigan residents. A treatment episode is defined as an event in which an individual is admitted to a licensed, publicly funded treatment program for substance use disorder. Treatment episodes include both inpatient/residential and outpatient SUD treatment. A treatment episode lasts until the patient is formally discharged from treatment or transitions to a new licensed SUD provider. A treatment episode may consist of multiple unique visits.

Percent of Treatment Episodes

The percent of treatment episodes represents the number of treatment episodes among a group divided by the total number of treatment episodes among all groups and multiplied by 100.

Median Time to Treatment

This indicator represents the median number of days from the first contact requesting a service to the first billable, publicly funded treatment session for substance use disorder (SUD) among Michigan residents. In statistics, a median is the number that lies directly in the middle of a series of numbers sorted by value.

Median Age at First Use

Median age at first use is based on the self-reported age at which the patient reported starting to use their primary substance of use. A median is the number that lies directly in the middle of a series of numbers sorted by value.

Percent Primarily Injecting

Percent primarily injecting is calculated as the number of patients who self-report primarily injecting their primary substance of use divided by the total number of patients and multiplied by 100, calculated within each group.

Percent Primarily Smoking

Percent primarily smoking is calculated as the number of patients who self-report primarily smoking their primary substance of use divided by the total number of patients and multiplied by 100, calculated within each group.

Percent with a Co-Occurring Mental Health Condition

Percent with a co-occurring mental health condition is calculated as the number of patients who received a mental health diagnosis upon admission divided by the total number of patients and multiplied by 100, calculated within each group.

Buprenorphine Prescription Dispensations

This indicator represents the number of prescription buprenorphine units dispensed to Michigan residents prescribed by Michigan prescribers. This indicator is based on data from the Michigan Automated Prescription System (MAPS). Board of Pharmacy Administrative Rule 338.3162b states all pharmacies, dispensing practitioners, and veterinarians who dispense schedules 2-5 controlled substances are required to electronically report this prescription data to MAPS daily. Reporting exemptions include controlled substances administered to patients who are inpatient and controlled substances that are dispensed by a physician at a medical institution for a maximum of 48 hours. The data are aggregated by quarter and updated roughly 30 days after the end of each quarter. The data excludes: medications containing buprenorphine commonly used to treat pain (Belbuca, Buprenex, Butrans), medications dispensed to patients with an unknown state, and medications prescribed by an out-of-state provider.

The data are aggregated by quarter and updated roughly 30 days after the end of each quarter. Rates are based on the patient county of residence and are calculated by dividing the total number of buprenorphine units dispensed during the quarter by the number of county residents and multiplying by 1,000.

Michigan Substance Use Vulnerability Index

For detailed information regarding the Michigan Substance Use Vulnerability Index (MI-SUVI) development and methodology, please see the MI-SUVI documentation, available online in the Michigan Substance Use Vulnerability Index Documentation (PDF).

Statistical Notes

Calculation of Rates

A rate measures the frequency an event that occurs in a defined population over a specified period. Rates are useful for comparing event frequency in different locations, at different times, or among different groups of people because they account for differences in the size of the underlying population.

Rates are calculated by taking the number of events, such as emergency health care visits or deaths among people that live in a specific area and dividing by the total number of people that live in the specific area, and then multiplying the result by 100,000.

Rate Ratios, included in the "Disparities and Social Determinants of Health" data page, are calculated by dividing the rate in the group of interest (rate calculated as described above) by the rate in a comparison group.

Rate Projections

For the most recent year of preliminary death data in which a complete year of data (<12 months of data) is not yet available, annual overdose rate projections are calculated for the Home Page for Michigan and by race. A projection is calculated when at least four months of preliminary overdose death data are available, but less than 12 months of data are available. The projected count estimate is calculated by assessing the proportion of total annual deaths that occurred in the timeframe of data available in the preliminary dataset over the past three years of finalized data, averaging these three proportions, and dividing the preliminary count by the average proportion. For example, if preliminary 2023 death data is available through May 2023, the proportion of overdose deaths that occurred between January and May out of the total final count of overdose deaths is calculated for 2020, 2021, and 2022. These three proportions are averaged, and the January-May 2023 preliminary overdose death count is divided by the average proportion from 2020-2023. This count estimate is then divided by the most recent Michigan resident population estimate and multiplied by 100,000 to create the annual rate projection estimate.
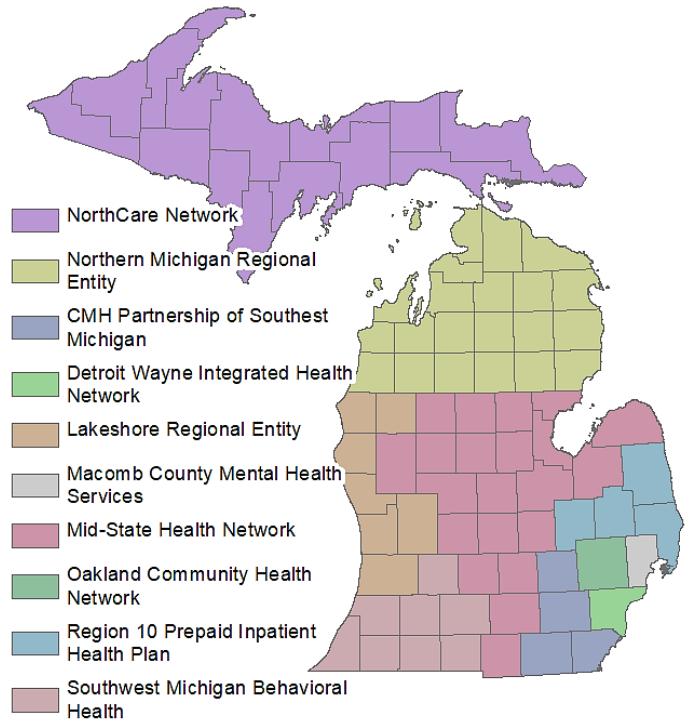
Data Suppression

Data representing people (e.g., overdose deaths, overdose emergency health care visits, probable opioid overdose EMS response) are suppressed at the county level when the number of events is between one and five to protect the confidentiality of individuals. Additionally, rates are suppressed when the numerator is between one and five to preserve statistical stability.

Geographic Breakdowns

Prepaid Inpatient Health Plan (PIHP) Regions

A Prepaid Inpatient Health Plan (PIHP) is an organization that is responsible for managing behavioral health and development disabilities services, including substance use disorder treatment, for Michigan residents enrolled in Medicaid. Each PIHP manages services for individuals living in their service area. The map to the right shows which counties are in each of the ten Michigan PIHP regions.

Legend:
- NorthCare Network
- Northern Michigan Regional Entity
- CMH Partnership of Southest Michigan
- Detroit Wayne Integrated Health Network
- Lakeshore Regional Entity
- Macomb County Mental Health Services
- Mid-State Health Network
- Oakland Community Health Network
- Region 10 Prepaid Inpatient Health Plan
- Southwest Michigan Behavioral Health

**PIHP Regions**

5-Region

This classification divides Michigan counties into five broad regions within the state: the Upper Peninsula, and within the Lower Peninsula: the Northeast, Northwest, Southeast, and Southwest.

Legend:
- Northeast
- Northwest
- Southeast
- Southwest
- Upper Peninsula
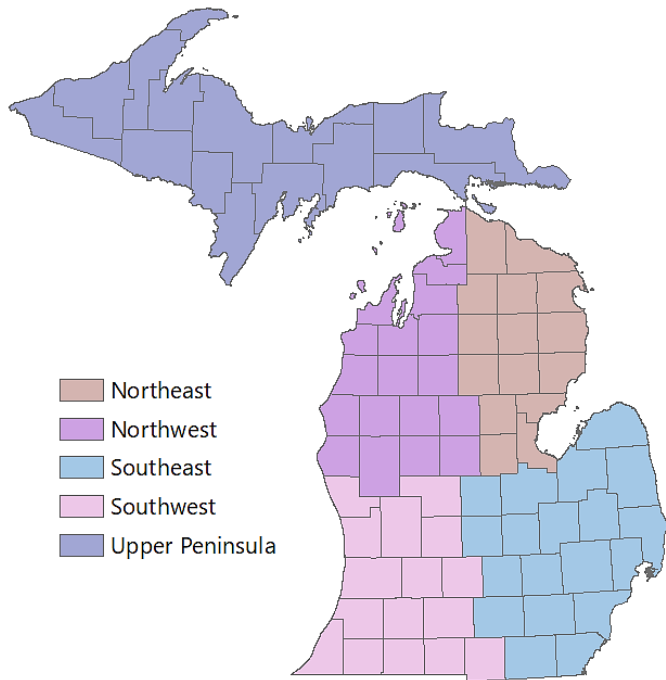
5-Region Categorization

Emergency Preparedness Region

This classification is used by the MDHHS Bureau of EMS, Trauma, and Preparedness for emergency planning and response purposes. Counties within Michigan are grouped into eight emergency preparedness regions.
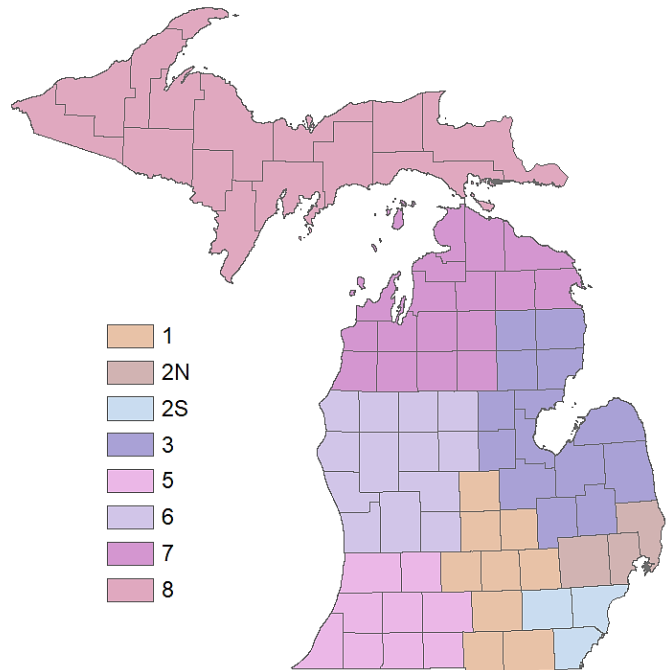

Emergency Preparedness Regions

Urbanicity

The urbanicity categories are based on the [National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties](). The NCHS scheme classifies counties into six levels of urbanicity: large central metro, medium metro, small metro, large fringe metro, micropolitan, and noncore. For ease of interpretation, these categories were combined into three levels: Urban (large central metro, medium metro, small metro), Suburban (large fringe metro), and Rural (micropolitan, noncore).
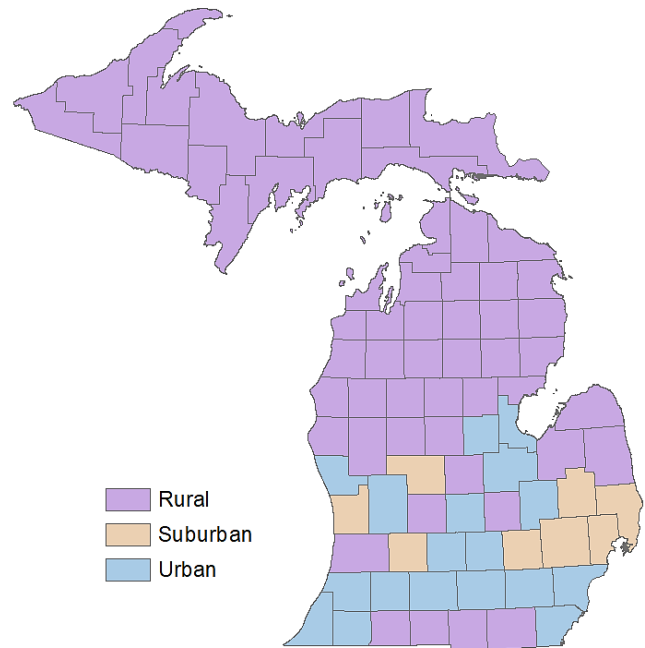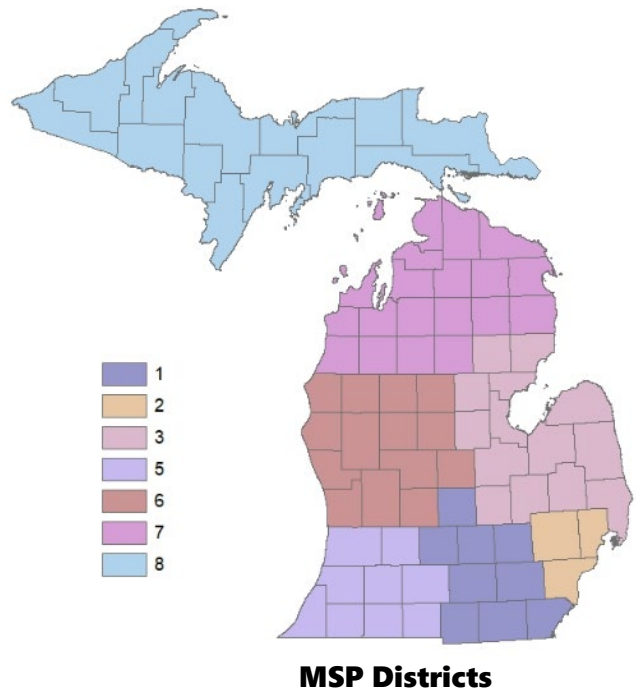

Urbanicity Categorizations

Michigan State Police (MSP) Districts

This classification divides Michigan counties into seven districts within the state.

MSP Districts

MDHHS Nondiscrimination Statement

The Michigan Department of Health and Human Services (MDHHS) does not discriminate against any individual or group on the basis of race, national origin, color, sex, disability, religion, age, height, weight, familial status, partisan considerations, or genetic information. Sex-based discrimination includes, but is not limited to, discrimination based on sexual orientation, gender identity, gender expression, sex characteristics, and pregnancy.

MODA Commitment to Health Equity

The Michigan Overdose Data to Action (MODA) team recognizes that the overdose epidemic has not affected all populations and communities equally. Historical policies, rooted in racism and classism, have driven the inequities in fatal overdoses, access to treatment, and incarceration rates that we see today. Prejudice and systemic racism continue to fuel these inequities. Addressing the substance use crisis cannot be done at the individual level alone; societal and structural barriers and discrimination must be acknowledged and addressed to create equitable change. To that end, the MODA team is committed to using data to address injustice in Michigan.