

Michigan Drug Poisoning (Overdose) Deaths

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Abstract

The Michigan Environmental Public Health Tracking Program (MiTracking) created a dataset that includes deaths with an underlying cause of drug poisoning for Michigan residents from 1999 through the most recent year available. Drug poisoning is often referred to as drug overdose. The data include the following measures:

1. Number of deaths due to drug poisoning.
2. Crude rate of drug poisoning deaths per 100,000 population.
3. Age-adjusted rate of drug poisoning deaths per 100,000 population.

Data are aggregated by year of death, county of residence, sex and age group.

This dataset is updated annually.

MiTracking obtained these data through a data sharing agreement with the Michigan Department of Health and Human Services Division for Vital Records and Health Statistics (MDHHS DVRHS).

All users are recommended to read and fully comprehend the metadata prior to data use. To access these data, visit the [MiTracking Data Portal](#).

Purpose

MiTracking developed this dataset to provide summary information on the number, characteristics and distribution of drug overdose deaths among Michigan residents. The data are helpful for public health professionals, researchers and the public.

Supplemental Information

The Michigan Resident Death File includes deaths of all Michigan residents, including deaths that occur both in- and out-of-state. The death certificate reports the geocoded address, giving the county of residence. Unsuccessfully geocoded addresses are not assigned to any county but are still included in the total statewide count.

Keywords

Overdose; overdose deaths; overdose mortality; drug overdose; drug overdose deaths; drug overdose mortality; drug poisoning; drug poisoning deaths; drug poisoning mortality.

Bounding Coordinates

Geographically, all cases in this dataset occurred for residents of Michigan. This means that all cases were for residents within the latitude/longitude coordinates listed below:

- West Bounding Coordinate: -90.41813399999995.
- East Bounding Coordinate: -82.418394000000006.
- North Bounding Coordinate: 48.189534000000002.
- South Bounding Coordinate: 41.696088000000003.

Other Information on Data

- Level of Geographic Detail: Statewide and County.
- Currentness Reference (when data were last updated): 03/13/2024.
- Frequency at which the data are updated: Annually.
- Data Status: Complete.

Completeness Report

Deaths with an unknown or missing value for county of residence, sex or age were excluded from the corresponding category, but included in the total. The sum of deaths within each category may be less than the total.

Data Processing Description

Data Source: DVRHS provided the Michigan Resident Death Files for years 1999 through the most recent year available.

Inclusion Criteria: All deaths of Michigan residents included had an underlying cause of death ICD-10 code of X40-X44 (unintentional poisoning), X60-X64 (suicide poisoning), X85 (homicide poisoning) or Y10-Y14 (poisoning of undetermined intent).

Data Calculations:

- Counts of deaths were aggregated by year of death, county of residence, sex and age group (Groups: 0-14, 15-24, 25-34, 35-44, 45-54, 55-64, and 65+).
- To calculate crude and age-adjusted rates, bridged-race population denominators were obtained from National Center for Health Statistics. For years 2010-2021, Vintage 2020 postcensal population estimates were used.¹ For years 2004-2009, July 1, 2000-July 1, 2009 revised bridged-race intercensal population estimates were used (released 10/26/2012).² The release of postcensal population estimates ceased with the release of the Vintage 2020 estimates. Data for the year 2021 use the 2020 population estimate for the denominator.
- Direct age-standardization using the 2000 Standard United States Population as the reference population was used to calculate age-adjusted rates.
- Crude and age-adjusted rates are presented per 100,000 population per year.

- Data management and all analyses were performed using SAS Version 9.4 (©2002-2012, SAS Institute Inc.).

Access Constraints

There are no access constraints for data available through the MiTracking Data Portal. Where applicable, restricted data will only be released to users after a written request detailing the purpose of the request, intended use for the data and specifics on the security and privacy measures to be taken to safeguard patient privacy and prevent unauthorized access to or use of the data. For more information contact the Michigan Overdose Data to Action (MODA) team at MDHHS-MODASurveillance@michigan.gov.

Use Constraints

All users are recommended to read and fully comprehend the metadata prior to data use. Efforts have been made to ensure the accuracy of the data. These data are supplied by MDHHS DVRHS for submission to the MiTracking Program for the purposes of compiling, integrating and disseminating environmental hazard, exposure and health effects data. MDHHS specifically disclaims responsibility for any analyses, interpretations or conclusions made by those who access this information.

These data remain the property of the MDHHS DVRHS. They cannot be used for commercial purposes and shall not be used to engage in any method, act or practice which constitutes the solicitation or advertisement of goods, services or real estate to Michigan consumers.

Data users are prohibited from attempting to learn the identity of any person included in the data and from linking these data with any other data for the purpose of matching records to identify individuals.

Differences in rates over time or by area may reflect real changes, differences in reporting and classifying of overdose deaths, or both. Rates at the state and/or county level will not show the true drug overdose burden at a more local level (e.g., neighborhood) and are not geographically resolved enough to be linked with many types of environmental data. Data aggregated at the county level are based on the decedent's county of residence, not necessarily where the death occurred.

For violent and unexpected deaths, and deaths without medical attendance within the last 48 hours, a medical examiner must investigate the cause and manner of death. In most cases, the cause of death for overdose deaths must be certified by a medical examiner in the state of Michigan. However, differences in standards of practice between medical examiner jurisdictions may result in a differential classification of deaths due to drug overdose or other causes.

Data Limitations:

MiTracking and its data partners have applied appropriate cell suppression rules imposed by the data providers and/or using guidance from the Centers for Disease Control and Prevention (CDC). Even at the county level it can be expected that the measures generated will often be based upon numbers too small to report or present without violating state and federal privacy guidelines and regulations. Staff have adhered to the cell suppression rules by suppressing all counts greater than 0 and less than 6 (the corresponding rates based on these small counts have also been suppressed). [Complementary \(or secondary\) suppression](#) of other counts and rates has also been completed to prevent any back calculation of primary-suppressed cells. For some data, it was necessary to increase cell sizes by combining data across time (e.g., years) and geographic areas (statewide instead of county-level data).

Security Handling Description

If data are distributed, the use constraints specified in this metadata apply to all recipients of the data.

Distribution Liability

The MiTracking Program is maintained, managed and operated by the Environmental Health Bureau (EHB) within MDHHS. In preparation of these data, every effort has been made to offer the most current, correct, complete and clearly expressed information possible. Nevertheless, some errors in the data may exist. In particular, MDHHS disclaims any responsibility for source data, compilation and typographical errors and accuracy of the information that may be contained in these data.

These data do not represent the official legal version of source documents or data used to compile these data. MDHHS further reserves the right to make changes to these data at any time without notice.

It is strongly recommended that careful attention be paid to the contents of the metadata file associated with these data to evaluate dataset limitations, restrictions or intended uses. MDHHS shall not be held liable for improper or incorrect use of the data described and/or contained herein.

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MDHHS shall not be liable, without limitations, for any direct, indirect, special, incidental, compensatory or consequential damages, or third-party claims, resulting from the use or

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The sale or resale of the data, or any portions thereof, is prohibited unless with the express written permission of MDHHS DVRHS. All rights reserved. These data may not be used for commercial purposes without first obtaining written permission from the DVRHS.

If errors or otherwise inappropriate information is brought to our attention, a reasonable effort will be made to fix or remove it. Such concerns should be addressed to the MiTracking Program.

Custom Order Process

For more information or access to unrestricted or public use Michigan-specific mortality data, please contact the [Division for Vital Records and Health Statistics](#), Michigan Department of Health and Human Services, 333 South Grand Ave., Lansing, Michigan, 48933.

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References

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