

MICHIGAN DRUG POISONING (OVERDOSE) DEATHS

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Abstract

The Michigan Public Health Tracking Program (MiTracking) has created a dataset that includes deaths with an underlying cause listed as 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 three measures: (1) the number of deaths due to drug poisoning, (2) the crude rate of drug poisoning deaths per 100,000 population, and (3) the 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.

Purpose

MiTracking developed this dataset to provide public health professionals, researchers, and the general public with summary information on the number, characteristics, and distribution of drug overdose deaths among Michigan residents. The data are used to calculate drug overdose death measures for (1) the number of deaths due to drug poisoning, (2) the crude rate of drug poisoning deaths per 100,000 population, and (3) the age-adjusted rate of drug poisoning deaths per 100,000 population.

Supplemental Information

Records from the Michigan Resident Death File are provided under a data sharing agreement to the MiTracking program by the Michigan Department of Health and Human Services Division for Vital Records & Health Statistics. The Michigan Resident Death File includes deaths of all Michigan residents, including deaths that occur both in- and out-of-state. The county of residence is based on the geocoded address reported on the death certificate. Addresses which could not be successfully geocoded 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 within the State of Michigan. This means that all cases fit 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): 07/21/2023

Frequency at which the data are updated: Annually

Data Status: Complete

Completeness Report

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

Data Processing Description

Data Source: The dataset was created from the Michigan Resident Death Files, provided by the Division of Vital Records and Health Statistics for years 1999 through the most recent year available.

Inclusion Criteria: All deaths of Michigan residents with an underlying cause of death ICD-10-CM code of X40-X44 (unintentional), X60-X64 (intentional), X85 (assault), or Y10-Y14 (undetermined intent) were included. Deaths of out-of-state residents were excluded. Deaths with an unknown or missing value of county of residence, sex, or age were excluded from the corresponding category, but included in the total. Therefore, the sum of deaths within each category may be less than the total.

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 Michigan Environmental Public Health Tracking program public portal.

Use Constraints

It is recommended that all users 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 Michigan Department of Health and Human Services Division of Vital Records and Health Statistics for submission to the Michigan Environmental Public Health Tracking 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, 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, increased 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 is 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.

The Michigan Environmental Public Health Tracking Program and its data partners have applied appropriate cell suppression rules imposed by the data providers and/or using

guidance from the 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 Michigan Public Health Tracking Network is maintained, managed, and operated by the Division of Environmental Health (DEH) 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.

MDHHS makes no warranties or representations whatsoever regarding the quality, content, condition, functionality, performance, completeness, accuracy, compilation, fitness, or adequacy of the data. By using the data, you assume all risk associated with the acquisition, use, management, and disposition of data in your information system, including any risks to your computers, software, or data being damaged by any virus, software, or any other file that might be transmitted or activated during the data exchange of these data.

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

misuse of the acquired data, even if MDHHS has been advised of the possibility of such potential damages or loss. Format compatibility is the user's responsibility.

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Use of the data with other data shall not terminate, void, or otherwise contradict this statement of liability.

The sale or resale of the data, or any portions thereof, is prohibited unless with the express written permission of MDHHS and the Division for Vital Records and Health Statistics (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 Michigan Tracking Program via email or telephone (See Contact Information below).

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.

Contact Information

Michigan Department of Health and Human Services
Division of Environmental Health - MiTracking
P.O. Box 30037
Lansing, MI 48909
PHONE: 800-648-6942
MDHHS-MiTracking@michigan.gov

References

1. National Center for Health Statistics. Vintage 2020 postcensal estimates of the resident population of the United States (April 1, 2010, July 1, 2010-July 1, 2020), by year, county, single-year of age (0, 1, 2, ..., 85 years and over), bridged race, Hispanic origin, and sex. Prepared under a collaborative arrangement with the U.S. Census Bureau.

Available from: [/nchs/nvss/bridged_race.htm](https://www.cdc.gov/nchs/nvss/bridged_race.htm) as of September 22, 2021, following release by the U.S. Census Bureau of the unbridged Vintage 2020 postcensal estimates by 5-year age group on June 17, 2021.

2. National Center for Health Statistics. Intercensal estimates of the resident population of the United States for July 1, 2000-July 1, 2009, by year, county, single-year of age (0, 1, 2, .., 85 years and over), bridged race, Hispanic origin, and sex. Prepared under a collaborative arrangement with the U.S. Census Bureau. Available from: https://www.cdc.gov/nchs/nvss/bridged_race.htm as of October 26, 2012, following release by the U.S. Census Bureau of the revised unbridged intercensal estimates by 5-year age group on October 9, 2012.