

# MICHIGAN TRAUMATIC WORK-RELATED DEATHS (FATALITIES)

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## **Abstract**

A traumatic work-related injury is defined as any wound or damage to the body resulting from acute exposure to energy, such as heat or electricity; impact from a crash or fall; or from the absence of such essentials as heat or oxygen, caused by a specific event or incident within a single workday or shift. Deaths, sometimes called fatalities, resulting from these injuries are considered work-related traumatic deaths if they are work-related and/or occur at work. The primary cause of traumatic work-related deaths in Michigan are motor vehicle crashes, followed by falls, homicides, being struck-by objects such as falling trees, falling loads from trucks or rigging, or being pinned under a vehicle or machines such as tractors, cranes, robots, or forklifts.

Work-related traumatic fatality data include these indicators:

- Number of deaths by 5-year periods
- Age at time of death
- Gender
- Industry in which the individual had worked
- Cause of death (e.g., electrocution, struck by motor vehicle)
- County in which the fatal injury occurred

Data from the Michigan Fatality Assessment and Control Evaluation (MIFACE) research program were used to create this dataset. MIFACE is funded by the National Institute for Occupational Safety and Health (NIOSH), and is a joint research project of Michigan State University (MSU) College of Human Medicine's Occupational and Environmental Medicine (OEM) Division and the Michigan Department of Licensing and Regulatory Affairs (LARA).

## **Purpose**

On the average, 2-3 workers die each week in Michigan of a work-related injury. United States law gives all workers the right to work in a workplace where, at the end of the day, they can go home safe and sound. When rules, regulations and best industry practices are not followed, injury and death are more likely to occur. Prevention of future work-related fatalities can be accomplished if we learn from the tragedies that have occurred and the information about these deaths.

This dataset was created to learn how often traumatic work-related deaths occur for various groups of people (for example, construction workers or males) in Michigan. MIFACE data made available on the MiTracking portal will provide public health professionals, researchers, other Tracking grantees, and the general public with aggregate information on traumatic work-related deaths in the State of Michigan.

## **Supplemental Information**

In 2001, the MSU OEM Division received funding from the Michigan Occupational Safety and Health Administration (MIOSHA) Consultation, Education and Training division to track all work-related deaths

in Michigan. In 2004, MSU OEM began to receive funding from NIOSH and currently is one of seven states with a MIFACE program.

“At work” includes a traumatic injury occurring on the employer's premises and the person was there to work; or off the employer's premises and the person was there to work; or the event or exposure was related to the person's work or status as an employee. The “employer's premises” include buildings, grounds, parking lots, and other facilities and property used in the conduct of business. Deaths in volunteers and prison inmates who are exposed to the same work hazards and perform the same duties or functions as paid employees are considered work-related. Incidents involving family members of all ages, including spouses, teenagers, or seniors performing work on a farm are considered work-related.

“Work” is defined as duties, activities, or tasks that produce a product or result; that are done in exchange for money, goods, services, profit, or benefit; and, that are legal activities in the United States. The definition of work includes not only work for pay, but also work performed by volunteers or Good Samaritans; off-duty police officers; participants in a sporting event where there is a prize or tickets sold; former workers returning to their worksite for a work-related reason; or inmates, if they are performing tasks outside of the premises of the establishment in which they are incarcerated/institutionalized.

Excluded from these data are individuals who die while at work from diseases, such as a heart attack or stroke, unless a traumatic injury contributed to the death; individuals commuting to/from work; volunteers not working for a non-profit; students; and homemakers.

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**Keywords**

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Fatalities, work, occupational health, occupations, work-related, MSU, MIFACE, traumatic death

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**Bounding Coordinates**

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West Bounding Coordinate: -90.41813399999995

East Bounding Coordinate: -82.418394000000006

North Bounding Coordinate: 48.189534000000002

South Bounding Coordinate: 41.696088000000003

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**Other Information on Data**

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**Level of Geographic Detail:** County

**Currentness Reference** (when data were last updated): 8/4/2017

**Frequency at which the data are updated:** Every two years

**Data Status:** Complete

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**Completeness Report**

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Data are complete as of August 4, 2017.

Included in this dataset are open wounds, intracranial and internal injuries, heatstroke, hypothermia, asphyxiation, acute poisonings resulting from exposures limited to the worker's shift, suicides and homicides that occur at work, and work injuries listed as underlying or contributory causes of death.

Data do not include:

- Michigan workers who die from an injury that occurred in another state
- Workplace deaths caused by stress or heart attack or a medical condition unrelated to an acute exposure
- Firefighters sustaining a heart attack after fighting a fire unless upon autopsy a direct link was established that the firefighting was the cause of the heart attack
- Injuries and deaths while commuting to and from the individual's usual place of work
- Children killed while attending school
- Homemaker (i.e. stay-at-home parent) deaths
- Visitors/customers killed while at a business
- Individuals who die while performing work (e.g. roofing) at their own residence

Limitations of these data:

- Not all work-related deaths in Michigan may be identified.
- For individuals who sustain the injury in Michigan but die from the work-related injury in another state, source documents may not be available for appropriate coding of industry and incident type.
- For work-related injuries, which occurred years ago but the medical examiner indicated that complications of the work-related injury were the underlying cause of death, the year of injury, county of injury, industry and incident type may not be available.
- Source documents may not specify an industry classification, just a general industry classification. For example, it is determined that an individual who worked in Agriculture sustained a work-related death, but it is unknown which industry sector within Agriculture the individual worked.
- Differences in rates over time or by area may reflect differences or changes in diagnostic techniques and criteria and in the coding of injuries.

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### ***Data Processing Description***

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MIFACE utilizes multiple sources to identify work-related fatalities in Michigan: MIOSHA, death certificates, newspapers, medical examiners, police/fire/emergency medical technician (EMT) departments, Workers' Compensation Agency, MSU Extension, Michigan Farm Bureau, Federal Agencies (Mine Safety and Health Administration [MSHA], National Transportation Safety Board [NTSB], etc.), internet searches, and Michigan citizens reporting a work-related death.

For a case to be included in this dataset, the fatal injury must have occurred in Michigan. Source documents for each death are requested and reviewed to determine if the death is work-related. Source documents include reports from agencies that investigated the death or provided emergency services when the event occurred, a death certificate, a medical examiner report and, when appropriate, a MIOSHA fatality investigation narrative. For each death determined to be work-related, information regarding the incident is extracted from the source documents and entered into a database. A North

American Industry Classification System (NAICS) code and an occupation are assigned based on source documentation.

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**Access Constraints**

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There are no access constraints for data available through the Michigan Environmental Public Health Tracking public portal.

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**Use Constraints**

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It is recommended that all users read and fully comprehend metadata prior to data use.

These data cannot be used for commercial purposes and shall not be used to engage in any method, act, or practice to conduct the solicitation or advertisement of goods, services, or real estate to Michigan consumers without first obtaining written permission from the MSU OEM.

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 or entities (such as places of work).

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**Security Handling Description**

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

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**Distribution Liability**

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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, but without limiting anything here, MDHHS disclaims any responsibility for source data, compilation, typographical errors, and accuracy of the information that may be contained in these data.

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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 (See Contact Information below).

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#### ***Custom Order Process***

For access to unrestricted or public use Michigan-specific data, please see: [www.oem.msu.edu](http://www.oem.msu.edu) or call 517-353-1846.

For access to restricted or secure data, please contact the Michigan Tracking Program.

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