

MICHIGAN



MICHIGAN STATE UNIVERSITY: Prevention of work-related injuries & illnesses through research & investigation

WORK-RELATED ROADWAY COLLISIONS: PREVENTION STRATEGIES FOR EMPLOYERS

Motor vehicle collisions (MVCs) are *the* leading cause of a work-related death in Michigan. For the years 2001-2017, 424 individuals have died in a work-related motor vehicle crash. In 2017, 29 Michigan workers died and 2,514 individuals were injured in a work-related MVC.

Preventing work-related roadway crashes requires strategies that combine traffic safety principles and sound safety management practices. Although an employer cannot control roadway conditions, an employer can promote safe driving behavior by establishing and implementing a road safety program, identifying hazards drivers encounter, understanding the factors that

contribute to crashes, providing safety information, and setting and enforcing driver safety policies. An effective road safety program can greatly reduce injury and fatality risks to the employee and to the company's bottom line. Employers are also at risk of potential liability when their workers are involved in an MVC, if the individual(s) injured or killed are members of the general public.



EXAMPLES OF WORK-RELATED INJURIES AND FATALITIES FROM MOTOR VEHICLE COLLISIONS IN MICHIGAN

- A male truck driver in his 30s died when the truck he was driving veered off the highway causing his load of pipe to shift, break through the rear headache rack, enter the semi cab, and strike him. Based upon the lack of either braking upon leaving the roadway or attempts at corrective steering, the police department's opinion was that the driver was distracted or fell asleep at the wheel.
- A female attorney in her 30s was driving her vehicle westbound on a wet, two-lane roadway during a heavy rain. The vehicle crossed the centerline and struck an eastbound vehicle head-on. The responding police report indicated potential contributory factors for entry into the eastbound lane: hydroplaning resulting in loss of control, and tire failure resulting in loss of control or swerving in an attempt to avoid an oncoming vehicle.
- A male truck driver in his 50s died when the raised roll-off bed of his waste hauling truck struck a pedestrian bridge overpass. Responding police found that use of a paper clip bypassed a safety device; the paper clip had been placed on a switch contact point for the hoist/steel bed.
- A male computer analyst in his 40s died when the car he was driving struck debris that had spilled onto the highway from a vehicle where the driver had become fatigued/distracted and struck the median. The victim's vehicle struck the debris and then an oncoming vehicle struck his vehicle.
- A male purchasing director in his 30s died when he rear-ended a county salt truck that was applying salt to the road with his car. His blood alcohol level was .30 %.
- A male truck driver in his 30s died when a train hit his truck. The decedent approached a railroad crossing that had neither lights nor gates. He noticed that his truck was too far forward. As he was trying to back his truck up, the trailer jack-knifed and he was unable to straighten it in time to back up. He tried to pull forward across the tracks. The train hit his truck and dragged the truck about 100 yards down the track.
- A female heavy equipment operator in her 30s died when the dump truck she was driving left the roadway due to a front tire blowout and overturned.

PREVENTING INJURIES AND FATALITIES FROM WORK-RELATED COLLISIONS

- **Establish a Road Safety Program.** Include the following elements:
 - **Management Commitment/Employee Involvement:** Provide the resources necessary, be open to employee ideas for risk elimination/minimization, assign key person.
 - **Check Regulations:** Examples: NHTSA Federal Motor Vehicle Safety Standards, State Motor Vehicle Codes, US/State Department of Transportation, Fair Labor Standard Act.
 - **Develop Overview/Policy Statement:** Policy should cover employees' responsibilities when they drive any company, personal, or rental vehicle while on-the-job.
 - **Roles and Responsibilities:** Broadly indicate supervisory responsibilities and identify/assign specific road safety responsibilities to job titles. Examples: How will supervisors observe and assess drivers? How often will the driver reviews occur? What documentation is necessary?
 - **Hazard Inventory/Risk Assessment:** Utilize employees familiar with or who are likely to encounter road/driving hazards or who have had near-misses in the past to help identify hazards and assess risks. Prioritize hazards based on frequency and potential severity.
 - **Journey Management:** Consider route, driving schedules and weather issues
 - **Road Safety Policies & Safe Work Procedures:** Create clear, comprehensive and enforceable safety policies and safe work procedures and communicate them to all employees. At a minimum, require: mandatory seat belt use, no cell phone use while driving (including conducting business, talking with coworkers/supervisors, etc.), no alcohol/drug use, fatigue management, crash reporting, obeying posted speed limits, ergonomics (mirror and seat adjustment, breaks, etc.).
 - **Establish Driver Selection Criteria and Regular Driver Review Process:** Create consistent driver standards, verify past work history/safety records, conduct background checks, and maintain workers' driving performance records.
 - **Driver Agreements:** Establish a contract with all employees who drive for work purposes and require employee signature acknowledging awareness and understanding of the organization's road safety policies and procedures.
 - **Discipline:** What driver actions will result in disciplinary actions? What disciplinary steps will the company take? If driving privileges are revoked, what steps are necessary before driving privileges are returned?
 - **Driver Education and Training:** At a minimum, include these topics: defensive, distracted, fatigued driving, characteristics of aggressive driving, alcohol/drug use policies, vehicle maintenance procedures, necessary emergency equipment, incident reporting.
 - **Vehicle Preparedness (Selection, Inspection and Maintenance):** What criteria will be used to ensure vehicles are capable of performing intended work? What conditions or defects render a vehicle inoperable? How will this be documented?
 - **Incident Reporting, Investigation and Follow-up:** Which motor vehicle incidents should be reported? How and to whom do drivers report? Who will receive and review investigation reports? Who is responsible to ensure corrective actions are implemented?
 - **Program evaluation:** Select an evaluation leader to coordinate an evaluation team to review and develop evaluation metrics.

Resources

- Road Safety at Work:
<http://roadsafetyatwork.ca/>
- OSHA Resources
 - * Motor Vehicle Safety:
<https://www.osha.gov/SLTC/motorvehicle/safety/>
 - * OSHA/National Highway Traffic Safety Administration (NHTSA)/Network of Employers for Traffic Safety (NETS):
<https://www.osha.gov/Publications/motorvehicleguide.html>
- Federal Motor Carrier Safety Administration
<https://www.fmcsa.dot.gov/regulations>
- Bureau of Labor Statistics – Workplace Injuries, Illnesses and Fatalities.
<https://www.bls.gov/iif/>
- CDC – Motor Vehicle Safety at Work.
<https://www.cdc.gov/niosh/motorvehicle/resources/crashdata/facts.html>

DID YOU KNOW?

- Motor vehicle crashes are the third leading cause of a work-related death in Construction, following struck-by incidents and falls.
- In 2013, MVCs cost U.S. employers \$25 billion (including health fringe benefits and other costs).
 - Cost per fatality: \$671,000
 - Cost per non-fatal injury: \$65,000
- Vehicle occupant in single- or multiple-vehicle collision on public roadway:
 - Median lost work days: 11
 - Percentage of events with 31 or more lost workdays: 31%