

Michigan State University
Division of Occupational & Environmental Medicine
909 Wilson Road
West Fee Hall, Room 117
East Lansing, MI 48824
www.oem.msu.edu



Working Youth: Occupational Injuries among Michigan's Teens

INTRODUCTION

Working youth represent an especially vulnerable population. They experience injuries on the job, often during their first job. This document summarizes the 1,501 injuries among teens age 14-17 years old, in Michigan, from 2014 to 2017, including five teens who died on the job.

FATAL INJURIES

There were five teens who died during 2015 to 2017 while working. None died in 2014.

In 2015:

A 17 year old high school co-op student was working at a hog farm as a farm hand. Approximately one hour after she arrived for work, she was found unresponsive. There were no witnesses. Atmospheric testing from the day of the incident found elevated levels of carbon monoxide and hydrogen cyanide possibly coming from a steam generator used for high pressure power washing. The steam generator was located in the area where the deceased was discovered. The steam generator was in use at the time of the incident.

A 14 year old female farm worker was working on a family dairy farm when she became entangled in an elevator conveyor's chain and sprocket. The decedent was throwing hay bales from a horse-teamed trailer onto a steel table which would gravity-slide the bales onto the elevator to carry the bales up to the loft of a barn. The 20-25 foot long elevator conveyor's chain and sprocket was powered by a Case International tractor's power take off (PTO) shaft. The PTO knuckle that was coupled to the chain and sprocket drive of the elevator's conveyor had been guarded with a 3-4 foot long, 8" diameter section of drain pipe. The elevator conveyor's chain and sprocket were unguarded. According to witnesses, the decedent had overthrown a hay bale and it had to be placed onto the conveyor. The decedent jumped down from the trailer, and walked around to the side where the tractor's PTO and conveyor's chain and sprocket were located. While aligning the bale onto the elevator, her dress and eventually her hair became entangled in the conveyor's chain and sprocket. She then became entangled in the PTO shaft. A family member turned off the tractor. Other family members unsuccessfully attempted to free her and called for emergency response. Emergency response arrived and she was declared dead at the scene.

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FATAL INJURIES, CONTINUED

In 2016:

An 18 year old male and a 15 year old male, both painters, died when their pickup truck rear-ended a semi-trailer. The 18 year old decedent was driving to a jobsite with his passenger in the front seat. The incident occurred in the left turn lane of a 5-lane roadway with a posted speed limit of 65 mph. The semi-tractor trailer had originally been traveling northbound and had merged into the left turn lane, coming to a near or complete stop while waiting to make a left turn. The pickup truck veered into the left turn lane at a high rate of speed

and struck the rear of the trailer. Both decedents were wearing their seatbelts/shoulder harnesses. The pickup truck airbags deployed.

In 2017:

A 17 year old farm worker died from a self-inflicted injury.

A 17 year old retail sales associate died from a gunshot wound during a robbery.

“...teens are twice as likely to be injured at work than are adult workers.”

NIOSH [2015]. Youth@Work-talking safety: a safety and health curriculum for young workers. DHHS Pub. No. 2015-142.



NON-FATAL INJURIES

A 16 year old male was hospitalized overnight after an assault in the parking lot at the fast food restaurant where he worked. He fell against a car.

A 17 year old male was hospitalized 14 days after he slipped and fell at the car wash where he worked. He got caught in the track with the chain that pulled cars through the car wash.

A 17 year old male was hospitalized overnight after he was kicked in the head by a farm animal at the farm where he worked.

A 15 year old female grain storage worker was hospitalized three nights for a crushing injury after her leg was caught in an auger.

A 16 year old male outdoor entertainment center worker slipped and fell while mopping. He sustained a concussion from hitting his head from the fall.

A 17 year old construction worker was hospitalized for two weeks. He sustained a serious crushing injury when he slipped and fell and was run over by a bulldozer.

A 17 year old fast food worker sustained burns to his shoulder and face when he opened a pressure fryer that contained boiling oil.

A 15 year old dairy farm worker experienced pain and burning skin when she mixed bleach with an acid-based cleaner, producing chlorine gas.

A 15 year old female sustained a burn when a heavy duty degreaser splashed into her eye. She was using the degreaser at the fast food restaurant where she worked.

A 16 year old pool cleaner experienced throat irritation when he inhaled the fumes from a container of muriatic acid.

A 15 year old male farm worker sustained 3rd degree burns when a chemical containing potassium hydroxide splashed on his leg. His exposed skin quickly reddened and turned black. He was treated in the burn unit of a local hospital.

DATA SUMMARY: OCCUPATIONAL INJURIES AMONG TEENS IN MICHIGAN, 2014-2017

Figure 1. Percent of Work-Related Teen Injuries by Age

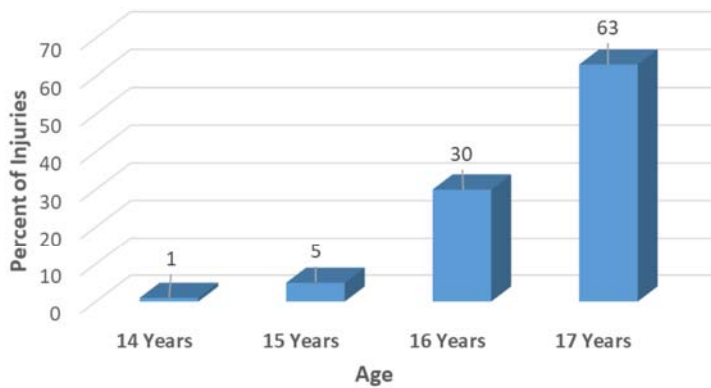


Figure 2. Percent of Work-Related Teen Injuries by Gender

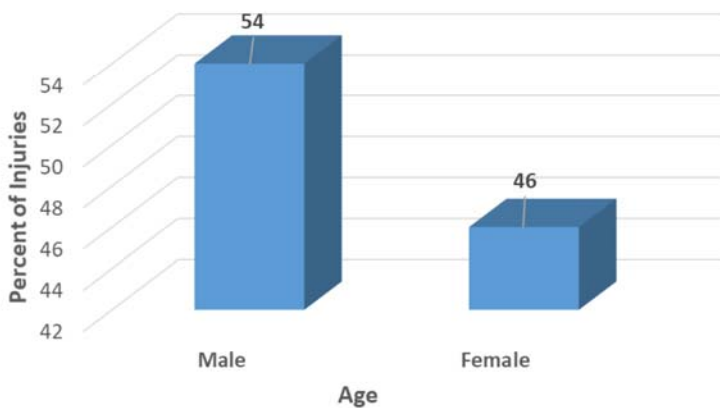
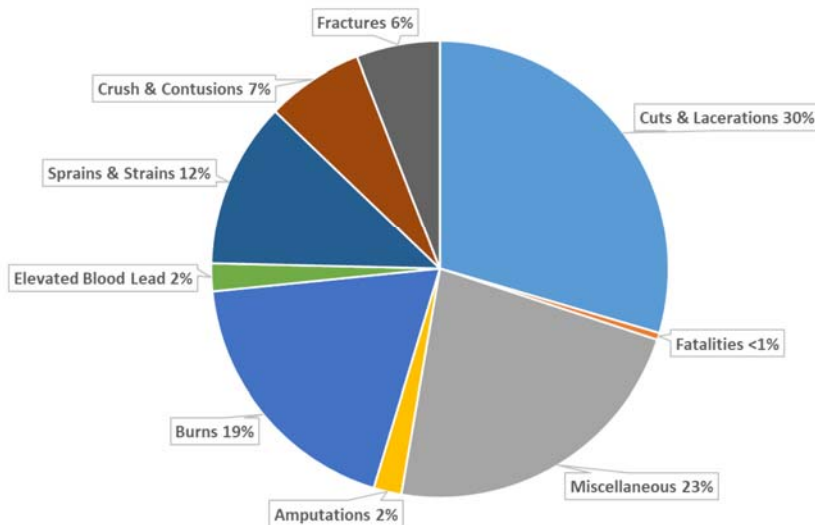


Figure 3. Percent of Work-Related Teen Injuries by Nature of Injury



DATA SUMMARY

The figures in this report are based on teens aged 14-17 years, in Michigan, who were injured during 2014-2017. Data on teen injuries was reported from multiple sources including hospitals, health care providers, the Poison Control Center, and the Workers' Compensation Agency.

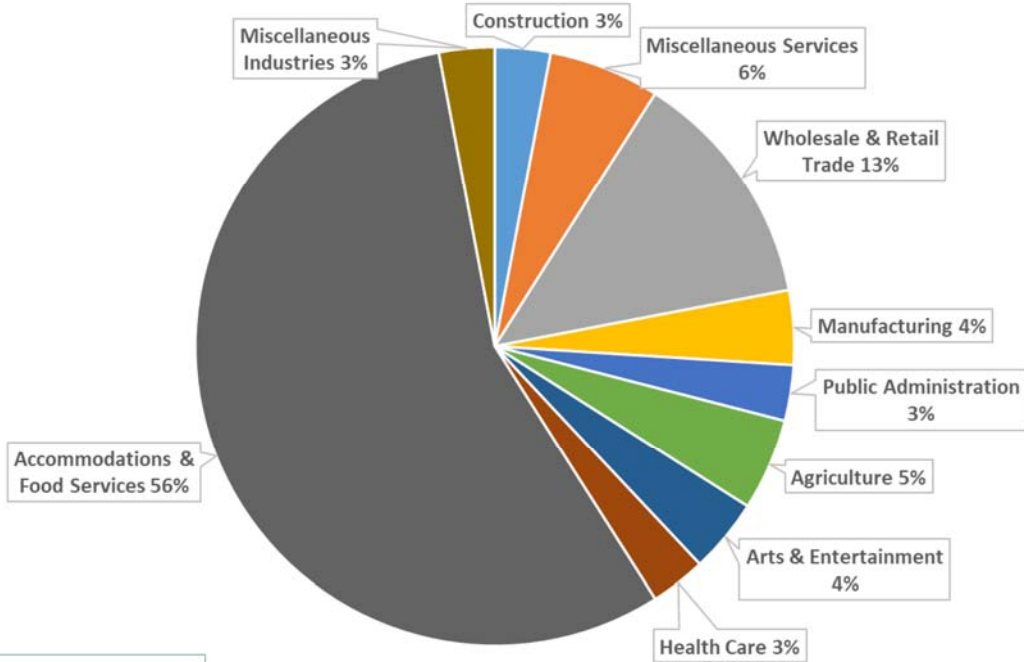
Most of the teens were 17 years of age (63%) and a greater percentage were male (54%).

Cuts and lacerations accounted for the majority of the injuries to teens (30%), followed by burns (19%), sprains and strains (12%), crushes or contusions (7%) and fractures (6%).



DATA SUMMARY: OCCUPATIONAL INJURIES AMONG TEENS IN MICHIGAN, 2014-2017, CONTINUED

Figure 4. Percent of Work-Related Teen Injuries by Industry

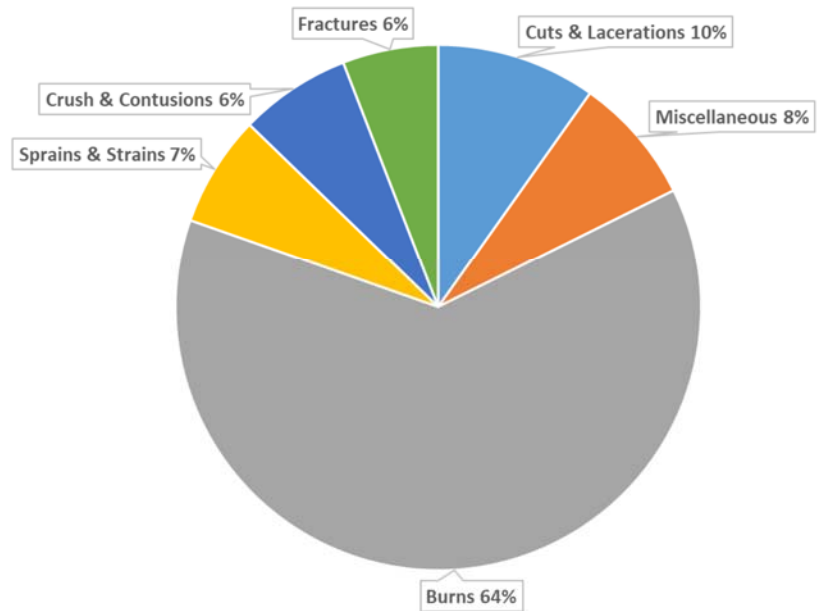


DATA SUMMARY

Accommodations and Food Services accounted for the largest percentage of young worker injuries (56%), followed by Wholesale & Retail Trade (13%), and Agriculture (5%). Manufacturing and Arts & Entertainment each accounted for 4% of the industries where the young workers were injured.

Within Accommodations and Food Services, burns accounted for the majority of injuries (64%).

Figure 5. Percent of Work-Related Teen Injuries by Nature of Injury in Accommodations & Food Services



RESOURCES TO HELP PREVENT OCCUPATIONAL INJURIES AND DEATH AMONG TEEN WORKERS

There are a number of resources available to help educate teens, parents and employers keep teen workers safe on the job.

Following safe work practices should be made a condition of youth employment.

These are just some of the resources available.



“Health and safety education is key to preventing injury among working teens, and it provides them with important job and life skills they need, now and in the future.”

NIOSH [2015]. Youth@Work-talking safety: a safety and health curriculum for young workers. DHHS Pub. No. 2015-142.

RESOURCES

NIOSH Hazard Alert-Preventing Deaths, Injuries, and Illnesses of Young Workers:

<https://www.cdc.gov/niosh/docs/2003-128/pdfs/2003128FS.pdf>

Youth in Agriculture eTool:

<https://www.osha.gov/SLTC/youth/agriculture/index.html>

Young Worker Safety in Restaurants eTool:

<https://www.osha.gov/SLTC/youth/restaurant/index.html>

Youth at Work. Talking Safety. A Safety & Health Curriculum for Young Workers. Michigan Edition

https://www.cdc.gov/niosh/talkingsafety/states/mi/2015-142/pdfs/Talking_Safety_MI.pdf

