

Work-Related Injuries in Youths

Children have always worked and their work in agriculture goes back to ancient times. With the industrial revolution in the 1800's children began working long hours in mines and manufacturing facilities.¹ Figure 1 shows a picture from around 1910 of young boys working at a glass works company in Indiana at 9:00 o'clock at night.²

Figure 1.

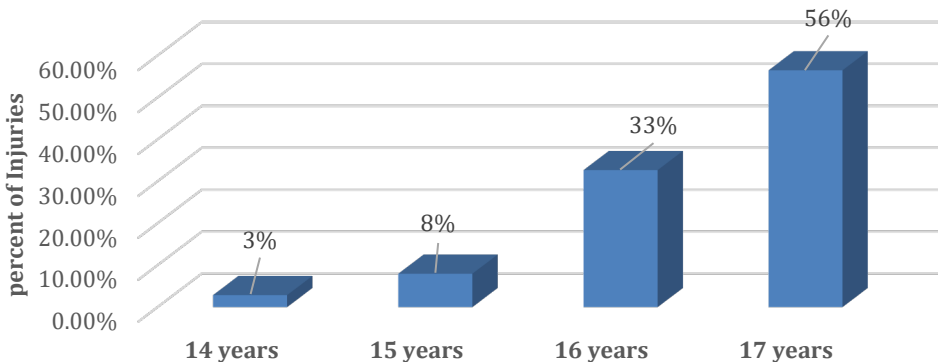


(Photographer Lewis W. Hine, Child Labor in the United States 1908-1912)

Prior to the Federal Fair Labor Standards Act of 1938, attempts to limit child labor beginning in the early 1900's were ruled unconstitutional. Current Federal rules on child labor limit the number of hours of work and the type of work that those under 18 years of age can do.³ Companies are exempt from Federal rules if the youth is working in a company that has less than \$500,000 in gross sales, is a family business, and for certain types of work (e.g., actors or performers, newspaper delivery). The law has strict provisions on hazardous work that 16- and 17- year-olds cannot do and even stricter restrictions on 14- and 15-year-olds. In addition to the Federal regulations, Michigan has its own youth employment law. The Michigan Youth Employment Standards Act has fewer exemptions (e.g., covers all employers regardless of company size) and requires that youth obtain a work permit.⁴

The issue of where youth in Michigan work received new emphasis based on a recent report that we released on 14-17 year olds injured at work in Michigan from 2018-2023.⁵ Most of work-related injuries summarized in the report were identified on the review of hospital and emergency department records. For the six-year period there were 2,723 work-related injuries, about 450/year. About half of the work-related injuries occurred in 17-year-olds but 11% occurred in 14- and 15-year-olds (Figure 2).

Figure 2. Percentage of 2,723 Work-Related Fatal and Non-Fatal Teen Injuries by Age Group, Michigan, 2018-2023

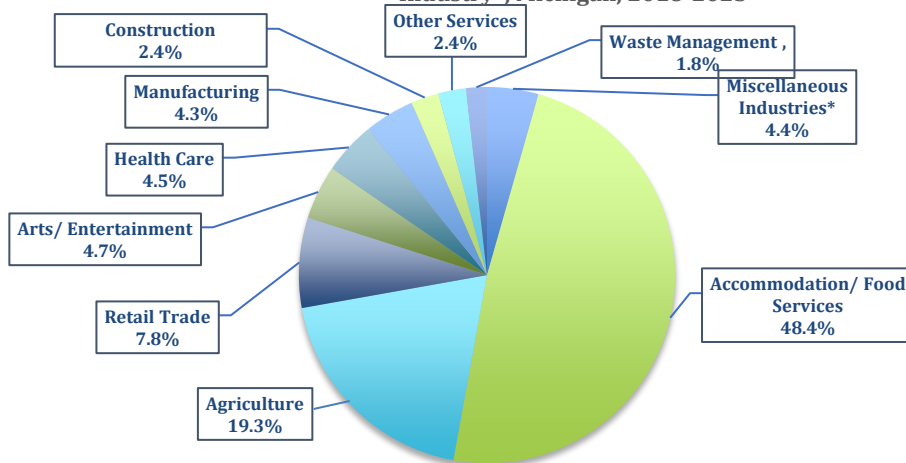


It is likely that some of these youths were performing hazardous tasks that youths are not allowed to do; two examples from our report, one of a fatality and one of an injury, appeared to have occurred while doing a prohibited task:

- Occupations in roofing operations and all work on or about a roof are prohibited:
 1. A 15-year-old male died when he was electrocuted. The decedent was working on a roof of a warehouse when he contacted high voltage electrical lines.
- Operations involving circular saws, band saws, guillotine shears, chain saws, reciprocating saws, woodchippers, and abrasive cutting discs are prohibited:
 1. A 17-year-old male working in manufacturing, was using a saw to debur a metal part when his glove got caught in the saw, pulling, and causing an amputation of two of his fingers.

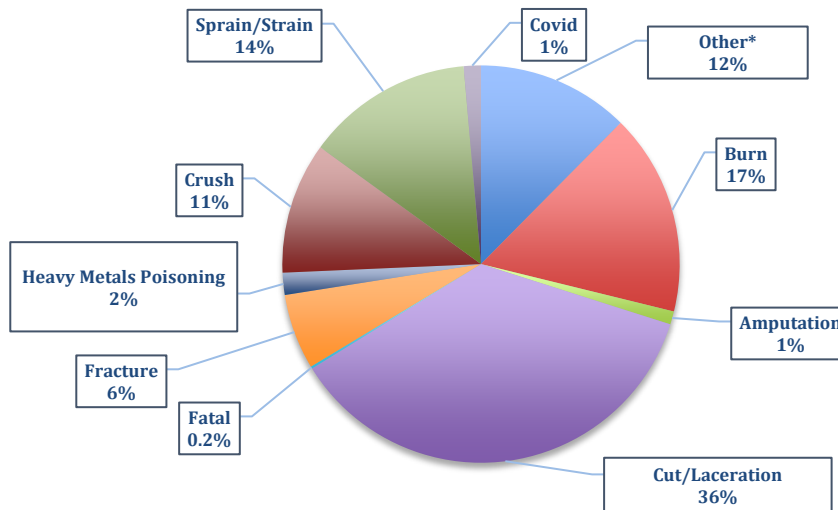
Figure 3 shows the industries where the work-related injuries occurred. Some were in industries with multiple restrictions on the work that youths can do; 2.4 % in construction, and 4.3% in manufacturing. The most common industry where a youth had a work-related injury was Accommodations/Food Services (48.4%). There are restrictions in this industry on the tasks that can be performed by youths, for example, youths are prohibited from working on power-driven bakery machines and are prohibited from operating power-driven meat processing machines including meat and other food slicers in retail establishments such as grocery stores, restaurants, and delis.

Figure 3. Percentage of 838 Work-Related Fatal and Non-Fatal Teen Injuries by Industry*, Michigan, 2018-2023



The types of work-related injuries that occurred among youth are shown in Figure 4. Cuts and lacerations were the most common injury type, accounting for 36% of the cases, followed by burns (17%) and sprains/strains (14%).

Figure 4. Percentage of 2,723 Work-Related Fatal and Non-Fatal Teen Injuries by Type of Injury, Michigan, 2018-2023



*Other injuries included respiratory disorders, injuries to the eye, skin, digestive system and abdomen, exposure to hazardous chemicals and concussions.

Clinicians should remember that medical records are used not only to document the medical care a patient receives. Medical records have an important role in public health to identify preventable injuries and illnesses. Any information available about the details of the injury, what the person was doing, and where they were when the injury occurred are important and should be recorded in the medical history. Recording this detailed information allows the initiation of meaningful public health action to prevent similar injuries/illnesses from occurring in the future. If you treat a youth where the circumstances appear particularly egregious, and you want to be sure public health action is initiated, please contact Dr. Rosenman, rosenman@msu.edu.

Resources:

There are multiple resources available to help educate youths, parents, and employers on how to keep young workers safe on the job:

OSHA: Youth Worker Safety in Restaurants ETool. <https://www.osha.gov/SLTC/youth/restaurant/index.html>

Extreme Safety: Youth Worker Safety Restaurant/Fast Food Industry. chrome-extension://efaidnbmninnibpcajpcgclclefindmkaj/https://www.michigan.gov/-/media/Project/Websites/leo/Documents/MIOSHA/Fact-Sheets/CET/Fact_CET163.pdf?rev=9d1266494f4f466181ad0ca9941eb861

PASSES: Parents for Student Safety Employment Standards. <https://www.passesedge.com/main.html>

OSHA: Young Workers, You Have Rights! <https://www.osha.gov/youngworkers/index.html>

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- Michigan Labor and Economic Opportunity. The Youth Employment Standards Act Public Act 90 of 1978, as amended. Frequently Asked Questions (FAQs). https://www.michigan.gov/leo/-/media/Project/Websites/leo/Folder11/YESA_FAQS.pdf
- Lin Z, Reilly MJ, Rosenman KD. Working Youth: Occupational Injuries among Michigan Teens, 2018-2023. <https://oem.msu.edu/images/resources/TeenInjuries/WorkingYouthReport.pdf>.

*Project

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In this issue: V36n2: Work-Related Injuries in Youths

*PS Remember to report all cases of occupational disease!

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