Tracking Work-related Amputations in Michigan

Additional Information Available at: www.oem.m/v.edv

The MSU work-related amputation surveillance system identifies many more cases each year than other traditional sources, as illustrated in the figure below.



Number of work-related amputations per year, by data source, 2006-2017

For all age groups, amputation rates are much higher for male workers than female workers. At highest risk of these injuries are males aged 20-24 years.



Amputation rates by worker age and gender, 2006-2015

Nearly all (96%) work-related amputations involve the fingers. Most finger amputations (83%) involve only the distal phalanx. The sections that are most frequently amputated are illustrated below.

24%





23%

13%

8%

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Background: In 2004, staff in the Occupational and Environmental Medicine Division within Michigan State University's College of Human Medicine began reviewing hospital records to identify patients treated for work-related amputations and referring cases meeting designated criteria to MIOSHA. MIOSHA referrals were tracked through 2005. Beginning with 2006 data, a system to track all work-related amputations treated at Michigan hospitals was established. In addition, data were obtained from the Michigan Workers' Compensation Agency to supplement the hospital-based data and provide a more complete count of work-related amputations.



Work-related amputation rates by industry, 2006-2015

Work-Related Amputation Narratives

- A 54-year-old male was cutting wood with a circular saw. His glove was grabbed by the saw, pulling his hand into the blade. He lost half of his left index, middle and ring fingers.
- A 32-year-old male was using his foot to push wood into a chipper when he slipped. His right foot went into the chipper amputating his heal. At the hospital, he subsequently had a belowknee amputation.

Leading Causes of Amputations

- 1. Saws (18%)
- 2. Presses (12%)
- 3. Pinched between objects (12%)
- 4. Struck by an object (9%)
- 5. Caught in chain/pulley/gears/belt (9%)