

**Michigan Annual Performance Report**

**2016-2017**

**5 U60 OH008466**

## **Annual Report of Accomplishments and Outcomes, July 2016– June 2017 – Fundamental**

Michigan State University/Michigan Department of Health and Human Services (MDHHS)  
/Michigan Department of Licensing and Regulatory Affairs,  
Enhanced Program in Occupational Injury and Illness Surveillance  
Principal Investigator – Kenneth Rosenman, MD (517)353-1846 Rosenman@msu.edu  
Coordinator – Martha Stanbury, MSPH (517)284-4820 stanburym@michigan.gov

### **The primary activities of the Michigan Fundamental program were:**

- To collect annual data for occupational health indicators (OHIs)
- To conduct surveillance for work-related amputations, burns, crushing injuries, skull fractures, hospitalized injuries, and lead and other heavy metal toxicity.
- To maintain and improve infrastructure and data systems for surveillance.

## **MAJOR ACCOMPLISHMENTS AND OUTPUTS**

### **Occupational Health Indicators**

- Michigan's OHI data for 2014 were compiled and submitted to CSTE.
- The "How to Guides" for OHI's #10, #12 and Employment Demographics were updated.
- Tom Largo participated in four conference calls related to the Occupational Health Indicators pilot-tested draft a draft of a newly proposed indicator on hospitalizations for occupational eye injuries and provided feedback to authors.

### **Surveillance for work-related amputations, burns, crushing injuries, metals, skull fractures, hospitalized injuries, lead and other heavy metal toxicity. Number of reports received/confirmed 7/2016-6/2017:**

- There were 1,360 amputation reports received, of which 612 were confirmed as work-related. There were 3,416 burn reports received, of which 1,169 were confirmed as work-related. There were 3,888 skull fracture reports received, of which 318 were confirmed as work-related. There were 1,361 crushing injury reports received, of which 698 were confirmed as work-related. There were 619 hospitalized injuries reports received where worker compensation was the payer, of which 596 were confirmed unique hospitalized work-related injuries. There were 26 elevated arsenic, 24 elevated mercury and 12 elevated cadmium metals reports received for 56 individuals, including 2 children. There were 1,870 blood lead reports  $\geq 5$   $\mu\text{g}/\text{dL}$  received on 1,146 individuals.

### **Investigations**

- Amputation investigations were completed at 7 facilities. The total number of citations was 6. The total amount of fines assessed was \$28,350. Burn investigations were completed at 13 facilities; 11 facilities received 22 citations with \$29,800 in penalties. Crushing injury investigations were completed at 13 facilities; 10 facilities received 15 citations with \$32,950 in penalties. Work-related hospitalization investigations were completed at 14 facilities; 13 facilities received 41 citations with \$64,900 in penalties. Three lead investigations were completed; 2 facilities received 7 lead-related and 12 non-lead-related citations with \$7,400 in penalties (\$4,100 in penalties for lead-related violations and \$3,300 in penalties for non-lead-related violations). One referral was made for an OSHA enforcement inspection in Illinois. The facility received one lead-related and one non-lead-related citation with \$3,680 in penalties.

## Surveillance infrastructure

- We updated our web-based occupational disease (OD) reporting system to incorporate new security protection and maintained our toll free number for phone reporting and an automated occupational disease reporting system which has been developed for the electronic medical record.
- We continued to promote and remind health care providers of the reporting requirement through our quarterly newsletter, "Project SENSOR News," which has a mailing list of approximately 3,000 of which approximately 75% are physicians.
- Dr. Rosenman and Ms. Reilly met with the Director and staff of the Workers' Compensation Agency to facilitate ongoing collaboration.
- We worked with staff at the State's Poison Control Center to ensure continued reporting of all work-related calls.
- Because of the contamination of water with lead in Flint, MSU began conducting follow-up interviews with Flint residents with blood lead levels of 5 ug/dL and greater. Between July 1, 2016 and June 30, 2017, 56 individuals were interviewed, and, because of no other confirmed sources of lead exposure, 29 homes were referred for water testing, three homes were referred for lead paint/soil hazards, and 12 were referred for both water testing and lead paint/soil hazards.
- MIOSHA Rule for Reporting Serious Injuries within 24 Hours: A procedure for coordinating with MIOSHA on their new employer reporting requirement was developed, to assist MIOSHA with the identification of employers who do not report injuries resulting in hospitalization, an amputation or the loss of an eye. MSU has been comparing the hospitalized reports received against the MIOSHA reports received. Initial results show gaps in both reports received through MIOSHA as well as through MSU. MIOSHA enforcement inspections at non-reporting facilities are being conducted to enforce the regulation; eleven companies have been selected to date for inspection.
- We were active in multi-state collaborations of occupational health surveillance:  
Dr. Rosenman continued to be the co-lead of the CSTE Occupational Health Surveillance Sub Committee.  
Ms. Stanbury continued to be involved in the process to have non-infectious, nationally notifiable diseases published in the annual MMWR surveillance summaries.  
Mr. Largo was active in planning the occupational component of the 2017 CSTE annual meeting.

## Materials Development, Publications, Presentations and Other Outreach

(All of the following materials are available at [www.oem.msu.edu](http://www.oem.msu.edu).)

- 2015 Annual Report: Tracking Silicosis and Other Work-Related Lung Diseases in Michigan. March 15, 2017.
- 2014 Annual Report on Blood Lead Levels on Adults in Michigan. July 12, 2016.
- Work-Related Crushing Injuries in Michigan: First Report (January 2013 – December 2015). May 3, 2017.
- 2015 Annual Report: Summary of Occupational Disease Reports to the Michigan Dept. of Licensing & Regulatory Affairs. August 2016.
- Work-related Amputations in Michigan, 2015. May 2017.
- Tracking Work-Related Diseases in Michigan - Data fact sheet. 3/28/17.
- Tracking Work-Related Burns in Michigan - Data Fact Sheet. 4/4/2017.
- Tracking Work-Related Crushing Injuries in Michigan – Data Fact Sheet. 5/3/2017.

- Heavy Metals Surveillance in Michigan – Data Fact Sheet. 3/30/2017.
- Tracking Work-Related Hospitalized Injuries in Michigan – Data Fact Sheet. 4/4/2017.
- Tracking Work-Related Skull Fractures in Michigan – Data Fact Sheet. 4/3/2017.
- Tracking Adult Blood Lead in Michigan – Data Fact Sheet 3/30/2017.
- Tracking Work-Related Amputations in MI – Data Fact Sheet. 3/2017.
- Work-Related Hospitalizations for Ice-Related Fall Injuries in Michigan – Hazard Alert. 1/3/2017.
- Work-Related Fatalities and Injuries from Using Ladders in Michigan – Hazard Alert. 2/29/2016.
- Work-Related Injuries and Fatalities from Forklifts – Hazard Alert. 9/16/2016.
- Work-Related Amputations and Deaths Due to Power Presses in Michigan – Hazard Alert. 3/21/2017.
- Tracking Work-Related Diseases in MI. data fact sheet updated 3/28/17.

#### Publications:

- Coates R, **Stanbury M**, Jajosky R, Thomas K, Monti M, Schleiff P, Singh, S. Introduction to the Summary of Notifiable Noninfectious Conditions and Disease Outbreaks — United States. MMWR. Vol 64, No. 55 1-4. Available at: <https://www.cdc.gov/mmwr/volumes/63/wr/pdfs/mm6355.pdf>.
- **Rosenman KD**. OSHA, Well Past its Infancy, but Still Learning How to Count Injuries and Illnesses. Am J Ind Med 2016; 59: 595–599.

#### Presentations:

- **Kica J, Rosenman KD**. Tracking 2015 Work-Related Farm Injuries in Michigan. Annual CSTE Meeting (June 2017).
- **Rosenman KD**. State-Based Surveillance & Public Health Practice: MI Hospital & ED Surveillance System. 2017 Expanding Research Partnerships: State of the Science Conference. NIOSH. Denver, Colorado, 6/21/17

#### **Potential Outcomes**

- All reports and presentations listed above contained recommendations that if implemented would reduce work-related fatalities and morbidity.

#### **Intermediate Outcomes**

- Referrals of worksites identified by occupational disease/injury reports to MIOSHA resulted in worksite inspections that identified hazards which, when corrected, will prevent additional work-related disease/injury.
- Increased awareness and recognition of work-related diseases and injuries by physicians improved secondary prevention activities including early diagnosis and treatment and occupational disease reporting.
- Multi-year efforts to improve surveillance systems in Michigan (e.g., obtaining more complete occupation and industry information in communicable disease surveillance system) and nationally (e.g. efforts to capture occupation and industry in electronic health records), while not yet completed, will ultimately result in better surveillance data which will prompt prevention.

## **Annual Report of Accomplishments and Outcomes, July 2016 – June 2017 – Work-Related Asthma (WRA), Silicosis and Other Occupational Lung Diseases (OLD)**

Michigan State University (MSU)/Michigan Department of Health & Human Services (DHHS)/Michigan Department of Licensing and Regulatory Affairs (LARA)  
Enhanced Program in Occupational Injury and Illness Surveillance  
Principal Investigator – Kenneth Rosenman, MD (517) 353-1846 rosenman@msu.edu  
Coordinator – Mary Jo Reilly, MS (517) 353-4979 reilly@msu.edu

### **Primary activities of the WRA, Silicosis and OLD program were:**

- To conduct surveillance for WRA, silicosis, and expand surveillance for other work-related lung diseases, including asbestosis, hypersensitivity pneumonitis, hard metal lung disease, the minor pneumoconioses, and other emerging lung diseases.
- To conduct prevention activity through workplace investigations and the development and dissemination of educational material based on the findings of our surveillance and collective surveillance states' data and experience.

### **MAJOR ACCOMPLISHMENTS AND OUTPUTS**

#### **Case Ascertainment**

- 432 reports were received, with 60 confirmed WRA, 3 confirmed Silicosis and 310 confirmed with other work-related lung disease (14 Asbestosis, 219 Chemical Pneumonitis/Irritation, and 77 others such as hard metal lung disease, metal fume fever, COPD and smoke inhalation), 31 still being followed up and the remaining 28 determined to not be a work-related lung disease.
- We completed the 2016 annual NIOSH B Reader Survey of Michigan B Readers. Of the 5 B Readers in the state who read chest x-rays for pneumoconioses, a total of 2,639 chest x-rays were reviewed; 4% had any pleural or parenchymal changes.
- Laboratory IgE reports continue to be mostly for latex, although in this reporting period we received one report for isocyanate exposure testing.
- Quarterly reminders to the 134 MI hospitals to report occupational diseases from 2016 and 2017, as required by law. Quarterly reporting resulted in timelier patient follow-up and MIOSHA referrals for enforcement inspections. 2015 MI in- and out-patient files from the MI Health and Hospital Association were used to verify reporting; hospitalizations not reported were followed up to collect records on missed cases.
- Six of the 163 non-reporting Occupational Health Clinics were audited by MIOSHA to enforce the MI Occupational Disease Reporting Law in the first half of 2017.
- The MSU Surveillance Center's direct access to the TOXICALL Poison Control Center data has significantly increased the Surveillance Center's capacity for more timely identification and follow up on OLD cases.

#### **Investigations:**

Four MIOSHA inspections were completed for WRA and one for silicosis. Co-worker questionnaires were completed for 2 of the 4 WRA inspections: 12 of 26 (46%) co-workers interviewed reported daily or weekly chest tightness, shortness of breath, wheezing or the onset of asthma since beginning to work at the company, and were advised to see a doctor.

#### **Materials Developed, Publications, Presentations and Other Outreach Materials:**

Program Publications available at [www.oem.msu.edu](http://www.oem.msu.edu)

- 2015 Annual Report Tracking WRA in MI. 12/19/16.
- Tracking WRA in MI. 2-page data fact sheet updated 3/28/17.

- 2015 Annual Report on Silicosis & Other Lung Diseases in MI. 3/15/17.
- Tracking Work-Related Lung Diseases in MI. data fact sheet updated 3/29/17.
- Tracking Asbestos-Related Lung Disease in MI. data fact sheet updated 3/28/17.
- *P.S. News* – Quarterly distributed to 3,000+ health professionals:  
**Fall 2016**, *Work-Related Asthma from Exposure to Cannabis sativa (Marijuana & Hemp)*;  
**Winter 2016-2017**, *Overview of Workers' Compensation: Trends, Issues & Roles of Physicians*;  
**Spring 2017**, *Prevalence in Michigan of Cigarette Smoking, COPD & Asthma by Occupation and Industry*;  
**Summer 2017**, *Occupational Asthma & Wood Dust*.
- Hazard Alert: Prevent WRA from Isocyanate Exposure in SPF- Spray Polyurethane Foam Applications for Insulation in the Construction Industry, 5/2/17.
- Michigan Workforce, 2015: Potential Exposure to Acrylic Acid, Chromium or Chromium Compounds, Diethanolamine and Ethylene Oxide 11/4/16.
- *Cleaning Agents: What You Need to Know!* - brochure updated
- *Bleach: What You Need to Know!* – new brochure

### Scientific Publications:

- Pechter E, **Rosenman KD**. Occupational health risks associated with use of environmental surface disinfectants in health care. *Am J Infect Control* 2016 (Letter)  
<http://dx.doi.org/10.1016/j.ajic.2016.08.020>.
- Schleiff PL, Mazurek JM, **Reilly MJ**, **Rosenman KD**, et al. Surveillance for Silicosis — Michigan and New Jersey, 2003–2011. *MMWR* 2016; 63;73–78.

### Presentations:

- **Rosenman KD**. Overview of Occupational and Environmental Lung Disease. University of Michigan Pulmonary Division Conference, Ann Arbor, 9/2/16
- **Rosenman KD**. Work-Related Asthma, MI Occup Health Conf, Traverse City, MI, 9/23/16
- **Rosenman KD**. Cleaning Products and Allergies, Ann Sci Mtg MSMS, Novi, MI, 10/28/16
- **Rosenman KD**. Silicosis, Western MI Industrial Hygiene Soc, Grand Rapids, MI, 11/1/16

### Other Outreach:

Work-Related Injury & Illness educational display booth exhibited at 5 conferences: MAFP Ann Conf. 7/10/16 Bay City. 104 attendees; UM 34<sup>th</sup> Internal Med. Conf., 7/29/16, Mackinac Island. 168 attendees; UM 29<sup>th</sup> Ann. Cardiology Update, 8/19/16, Mackinac Island. 101 attendees; MOEMA 2016 Conf, 9/16, Traverse City. 70 attendees; 2017 MI Safety Conference, 4/11/17, Novi. 2500+ attendees.

### Social media:

- We maintained accounts on Facebook (26 posts July 2016 - June 2017) and Twitter (32 tweets/retweets July 2016 - June 2017).
- We revised and updated our web site and occupational disease reporting portal.

### Other Administrative and Related Outreach Activity:

- Ms. Reilly: Advisory Board for Michigan's Environmental Tracking Network.
- 84 new and 14 updated items were submitted to the NIOSH Clearinghouse.
- Dr. Rosenman and Ms. Reilly: MI Asthma Advisory Committee (MAAC) & Steering Committee for the Asthma Initiative of MI (AIM).

## Special Projects:

- **Outreach to Abrasive Blasting Companies in MI:** Our most recent abrasive blasting survey in 2016 found 35% of abrasive blasting companies using silica, in contrast to 89% using silica in 1995. Educational materials, including information on the new OSHA silica standard and an offer to provide free “B” reader chest x-ray interpretations for silicosis were sent to Michigan’s abrasive blasting companies. The Abrasive Blasting Snapshot <http://www.oem.msu.edu/images/resources/2016AbrasiveBlastingSummary.pdf> was also shared in a NIOSH eNews bullet.
- **Trend Data on WRA:** We examined WRA trend data from 1988 to 2015 (2015 Annual Report on Tracking WRA in MI). Highlights: a 33% decrease in the overall rate of WRA In MI; a 49% decrease in the percentage of WRA cases in manufacturing; a 370% increase in the WRA cases exposed to cleaning agents along with a 66% decrease of WRA cases exposed to isocyanates; and a 32% increase in the percentage of non-cigarette smokers. In response to the 370% increase of cleaning agent cases we updated our cleaning agent brochure and created a brochure on safe use of bleach.
- **Survey of the Community Health Centers in MI:** The 42 Community Health Centers in MI were surveyed about the frequency, nature and magnitude of work-related conditions seen in the clinics. Results revealed that while a significant portion of patients seen at CHCs work, not all work-related medical encounters are billed for workers’ compensation. Next step is developing outreach materials for CHCs and their patients.

## Potential Outcomes:

All reports and presentations listed above contain recommendations that if implemented would reduce the burden of work-related lung diseases.

## Intermediate Outcomes:

- The 5 MIOSHA Enforcement inspections benefitted employees exposed to asthma and other lung-disease-causing agents: 1) Health and safety violations must be corrected, which led to an overall safer and healthier work environment. 2) Letters to the 12 symptomatic individuals identified through the co-worker interviews directed these individuals to a physician for follow-up for their breathing symptoms.
- There were over 2,900 attendees at the 5 conferences where we exhibited the occupational and environmental display booth. Attendees had the opportunity to learn more about WRA and other work-related disease, and take home literature on these topics as well as speak with a staff member from our office.

## End Outcomes:

- There has been a decrease in the number of individuals in MI with WRA caused by isocyanates (since 1994), metal-working fluids (since 1992) and all low molecular weight agents combined (since 2000). The MI Surveillance program was instituted in 1988 and has spent considerable effort in enforcement and educational outreach to companies, physicians and employees to address WRA caused by these substances.
- There has been a 370% increase in cleaning agent-related WRA cases in MI since 1988. Outreach and publications have been increased since 2003 to address this issue. Our updated cleaning agent brochure and new brochure on working safely with bleach support this end outcome.
- The number of cases of silicosis in Michigan has been decreasing since 1991. The MI Surveillance program began in 1988 and has spent considerable effort in outreach to companies, physicians and employees in addressing silicosis, through both enforcement investigations as well as through educational media.

## **Annual Report of Accomplishments and Outcomes, July 2016 – June 2017 – *Pesticides Illnesses and Injuries***

Michigan State University/Michigan Dept. of Health and Human Services/Michigan Dept. of Licensing and Regulatory Affairs

Enhanced Program in Occupational Injury and Illness Surveillance

Principal Investigator – Kenneth Rosenman, MD (517) 353-1846 Rosenman@msu.edu

Coordinator – Abby Schwartz, MPH (517) 284-4814 schwartza@michigan.gov

### **The primary activities of the Michigan Pesticides Illness and Injury program were:**

- To conduct surveillance for acute pesticide-related illness and injury.
- To conduct prevention activity through referrals for workplace investigations and the development and dissemination of educational materials.

## **MAJOR ACCOMPLISHMENTS AND OUTPUTS**

### **Case Ascertainment**

From July 1, 2016 through June 30, 2017, there were 97 work-related case reports received with 65 cases confirmed. There were 2,196 environmental pesticide reports received with 301 confirmed cases.

### **Investigations**

A farmworker in his 20s was working on an organic farm, walking down the road between hutches, when the farm next door sprayed a mixture of pesticides that blew in his face. He had waved at the sprayer, who waved back, but then continued to spray. He developed a burning feeling in his lungs, itchy throat, and high blood pressure. He also felt disoriented. He went to an urgent care center. He continued to have difficulty breathing for several days. The Michigan Department of Health and Human Services (MDHHS) referred this to the Michigan Department of Agriculture and Rural Development (MDARD). MDARD investigated and issued a warning letter to the applicator service for causing drift, not providing customer information and not having a written drift plan.

A driver in his 50s for a porta-john rental company got a cleaning solution in his eye when he was taking the disinfectant that had been put in an unmarked jug out of his truck. There was no eye wash kit in his truck. His eye was painful and he went to an emergency department where he was diagnosed with a corneal burn. This incident was referred to the Michigan Occupational Safety and Health Administration (MIOSHA).

A suggestion was forwarded to the Environmental Protection Agency (EPA) to have aerosol cans include a small straw for directing the spray.

## **Materials Development, Publications, Presentations, and Other Outreach**

### Outreach and Presentations

- Staff sent follow-up information in July 2016 to migrant health clinics and other migrant service providers. Initial information about pesticide illnesses and injury reporting was sent in the spring.
- The project coordinator attended the annual winter SENSOR-Pesticides meeting.

- Staff attended meetings of the Migrant Health Network at the Michigan Primary Care Association to discuss pesticides and migrant worker exposures.
- Michigan’s pesticides project coordinator continued to chair the SENSOR-Pesticides “coding committee” and actively participated with other committee members in making revisions to the Standardized Variable Document.
- Ms. Schwartz continued to be a member of the MDARD Pesticide Advisory Committee (PAC). She represents the pesticide illness and injury surveillance program and presents an update on cases and activities at each quarterly meeting. Dr. Rosenman joined the PAC this past years as the representative in the medical or health science profession experienced in the toxicology of pesticides.
- The project coordinator worked with the Michigan Poison Control Center and the MDHHS Communication Director to revise material from the American Association of Poison Control Centers for MDHHS to send out a press release and post on social media for Poison Prevention Week in March 2017.
- The project coordinator worked with the MDHHS communications team to prepare a press release for Healthy and Safe Swimming week.
- The project coordinator worked with migrant health clinics to revise a reporting tool developed by the Migrant Clinicians Network, revising it down to one page.
- Staff met with Farmworker Legal Services to talk about improving outreach for reporting from farmworkers and clinicians.
- The project coordinator presented information about the surveillance program and how and why to report pesticide exposures to about 50 migrant outreach workers.
- Staff sent information about reporting known or suspected pesticide related illnesses and injuries and the revised reporting form to all migrant health clinics in Michigan.
- Information about reporting was sent to the Michigan State Medical Society for inclusion in their weekly newsletter.

### Surveillance Summaries

- Occupational Pesticide-Related Illnesses and Injuries in Michigan, 2015 - Data Fact Sheet. 11/2016
- Occupational Pesticide-Related Illnesses and Injuries in Michigan, 2016 - Data Fact Sheet. 05/2017
- Pesticide Illness and Injury Surveillance in Michigan 2014. 12/2016

### Publications

- Calvert G, Beckman J, Prado J, Bojes H, **Schwartz A**, Mulay P, Leinenkugel K, Higgins S, Lackovic M, Waltz J, Stover D, Moraga-McHaley S. Acute Occupational Pesticide-Related Illness and Injury – United States, 2007-2011. MMWR / October 14, 2016 / Vol. 63 / No. 55
- Namuland G, Monti M, Mulay P, Higgins S, Lackovic M, **Schwartz A**, Prado J, Waltz J, Mitchell Y, Calvert G. Acute Nonoccupational Pesticide-Related Illness and Injury – United States, 2007-2011. MMWR / October 14, 2016 / Vol. 63 / No. 55
- Liu R, Alarcon W, Calvert G, Beckman J, Bojes H, Cummings K, Graham L, Higgins S, Lackovic M, Mulay P, Prado J, **Schwartz A**, Stover D, Waltz J, Evans E. Acute Illness and Injuries Related to Total Release Foggers --- 10 States, 2007-2015. Submitted to MMWR.

**Potential Outcomes**

All reports and presentations listed above contained recommendations that if implemented would reduce work related fatalities and morbidity.

**Intermediate Outcomes**

Exposure stories provided in the Pesticide Advisory Committee quarterly reports were used by MDARD and MSU when training pesticide applicators.

Data were used by the EPA during pesticide re-registration evaluations.

**End outcomes**

Changes in EPA labeling requirements based on information from the surveillance system will lead to safer use of pesticide products.

Increased awareness of pesticide hazards and safe handling will lead to reduced injury and illness from pesticide use.

## **Annual Report of Accomplishments and Outcomes, July 2016 – June 2017 – *Acute Traumatic Work-Related Deaths***

Michigan State University/Michigan Dept. of Health and Human Services/Michigan Dept. of Licensing and Regulatory Affairs, Enhanced Program in Occupational Injury and Illness Surveillance

Principal Investigator – Kenneth Rosenman, MD (517) 353-1846 Rosenman@msu.edu

Coordinator – Debra A. Chester, (517) 432-1008 debra.chester@ht.msu.edu

### **The primary activities of the Michigan Acute Traumatic Work-Related Death program were:**

- To conduct surveillance for acute traumatic work-related deaths,
- To identify the root cause(s) of the death
- To conduct prevention activity through workplace investigations and the development and dissemination of educational material.

## **MAJOR ACCOMPLISHMENTS AND OUTPUTS**

### **Case Ascertainment**

There were 205 work-related fatality reports received, with 164 confirmed.

### **Investigations**

There were ten MIFACE site visits performed.

### **Materials Development, Publications, Presentations and Other Outreach**

1. Program Publications available at [www.oem.msu.edu](http://www.oem.msu.edu)
  - a. Tracking Acute Work-Related Deaths in Michigan – A 2-page summary sheet highlighting key elements of the 2015 Work Related Deaths
  - b. Fifty MIFACE Summaries of MIOSHA Investigations. The Summaries were written for educational purposes and have been used by MIOSHA in training programs and distributed to employers during MIOSHA injury/illness investigations. Employers utilize the summaries in employee training programs and “tailgate talks”.
  - c. Two MIFACE Investigation Reports
  - d. Three Hazard Alerts: Work-Related Amputations and Deaths Due To Power Presses In Michigan, Work-Related Injuries and Fatalities From Forklifts, Work-Related Hospitalizations From Ice-Related Fall Injuries In Michigan
2. Presentations
  - a. Michigan Industrial Hygiene Society Fall Conference. October 2016
  - b. Western Michigan University. November 2016
  - c. Construction Association of Michigan Safety Leadership Conference. Dec. 2016
  - d. University of Michigan, Industrial Hygiene Masters’ program. December 2016
  - e. MIOSHA Consultation, Education and Training Activity to Agricultural Workers and Employers. Topics included: MIFACE Agricultural Update, New MIOSHA Recordkeeping Requirements, Respirator Selection and Use, and Hazard Communication Label and Safety Data Sheet Changes.
    - i. Clarksville, January 10, 2017
    - ii. Bad Axe, January 8 and March 2, 2017
    - iii. Benton Harbor, January 24 and March 16, 2017

- iv. New Era, January 30, 2017
  - v. Wayne, February 8, 2017
  - vi. Hart, February 14 and April 5, 2017
  - vii. Monroe, February 15, 2017
  - viii. Washtenaw County Fairgrounds, February 16, 2017
  - ix. Charlotte, March 15 and April 19, 2017
  - f. Wayne State University. March 2017
  - g. Grand Valley University. March 2017
  - h. Michigan Safety Conference. April 2017
3. Other Outreach
- a. Worker Memorial Day Activities
    - i. Press release prepared and distributed May 2, 2017. Press Release highlighted in print and internet publications
  - b. Conference Display Booth
    - i. Michigan Safety Conference, Novi, MI. April 11-12, 2017
    - ii. MIFACE Brochures distributed at all presentations listed above
  - c. MIFACE Work-Related Fatality Case Summary Pages on MSU OEM website
    - i. A case summary for each confirmed work-related fatality in 2015 (identified in 2016), 2016 and 2017 was posted on the MIFACE webpage.
      - <http://www.oem.msu.edu/index.php/work-related-injuries/work-related-fatalities/2015-michigan-work-related-deaths>
      - <http://www.oem.msu.edu/index.php/work-related-injuries/work-related-fatalities/2016-michigan-work-related-deaths>
      - <http://www.oem.msu.edu/index.php/work-related-injuries/work-related-fatalities/2017-michigan-work-related-deaths>
  - d. MIFACE sent the link of a MIFACE Summary of MIOSHA Investigation to MIOSHA. MIOSHA added a link to the MIFACE Summary on the MIOSHA Annual Fatality Information page. On the MIOSHA Annual Fatality page: "When available, [MIFACE](#) Summaries of MIOSHA Inspections will be included at the end of the description."
    - [http://www.michigan.gov/documents/lara/lara\\_miosha\\_fatalities\\_2015\\_514368\\_7.htm](http://www.michigan.gov/documents/lara/lara_miosha_fatalities_2015_514368_7.htm)
    - [http://www.michigan.gov/documents/lara/lara\\_miosha\\_fatalities\\_2016\\_548131\\_7.htm](http://www.michigan.gov/documents/lara/lara_miosha_fatalities_2016_548131_7.htm)

### **Special Projects**

1. AgrAbility. Collaboration to extend agricultural safety information to farmers utilizing AgrAbility services.
2. Michigan Safety Conference Board Member since 2013. Responsibilities included agenda development, speaker procurement and follow-up.
3. Collaboration with National Truckers Association (NTA). MIFACE is coordinating the placement of State and NIOSH FACE truck related work-related fatality reports placed on a *Safety Issues* webpage on the NTA website. <http://www.nationaltruckers.com/blog>

### **Potential Outcomes:**

All reports and presentations listed above contained recommendations that if implemented would reduce work-related fatalities and morbidity.

### **Intermediate Outcomes:**

- Methylene Chloride: MIFACE was instrumental in raising awareness about the health and safety risks inherent in the consumer and commercial use of methylene chloride in the bathtub refinishing industry. Several initiatives occurred during this reporting period regarding the health and safety of users of methylene chloride.
  - Two federal agencies have begun to address the methylene chloride hazards in commercial/consumer uses:
    - In January 2017, EPA submitted a Notice of Proposed Rulemaking (NPRM) to prohibit the manufacture (including import), processing, and distribution in commerce of methylene chloride for consumer and most types of commercial paint and coating removal under section 6 of the Toxic Substances Control Act (TSCA). Also included in the NPRM, EPA proposed to prohibit the use of methylene chloride in specific commercial uses; to require manufacturers (including importers), processors, and distributors, except for retailers, of methylene chloride for any use to provide downstream notification of these prohibitions throughout the supply chain; and to require recordkeeping. Upon request of the Halogenated Solvents Industry Alliance,
    - In June 2017, the Consumer Product Safety Commission voted to amend the Statement of Interpretation and Enforcement Policy Regarding Labeling of Household Products Containing Methylene Chloride to address the acute hazards from inhalation of methylene chloride vapors in addition to the chronic hazards addressed by the current Policy Statement.
  - Dr. Rosenman and Ms. Chester were members of a committee convened to discuss a proposal to develop a new ASTM Safety Standard for paint strippers containing methylene chloride.
  - A safety consultant from the United Kingdom emailed and requested permission to use the MIFACE digital story about the death of a bathtub refinisher as a part of a Safety Training for a small training organization, to highlight the hazards of Methylene Chloride. The trainer “thought it would be a “real-life awakening” to those Painters who could be required as part of their normal daily work processes to be involved in the removal of surface coatings using products based on this potentially very dangerous chemical.”

### **End Outcomes:**

Since 2001, the number of work-related fatalities has decreased from 174 in 2001 to a projected 138 work-related fatalities in 2015; a reduction of 21%. However, the number of deaths in 2016 was 159.