



# MCOHS

## Midwest Center for Occupational Health and Safety A NIOSH EDUCATION AND RESEARCH CENTER

Working to **prevent work-related injuries and illnesses** and train Occupational Health and Safety (OHS) professionals through **EDUCATION, RESEARCH, and OUTREACH**



**6**

**Training Programs**

in injury prevention, nursing, medicine, occupational hygiene, epidemiology, and safety



**400+**

**Graduates**

in Masters and Doctoral degree programs in public health



**3,000+**

**Learners**

per year in online and in-person Continuing Education courses

**THE UPPER MIDWEST REGION IS ESPECIALLY BURDENED BY WORKPLACE ILLNESS AND INJURIES.**

Dangerous occupations and extreme weather conditions present a serious risk to workers in our region.

Work-related injury rates in agriculture, mining, oil and gas, construction, retail, transportation, and utilities are **consistently higher in our region** than the national average.

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SCHOOL OF  
**PUBLIC HEALTH**  
UNIVERSITY OF MINNESOTA

# ACADEMIC TRAINING PROGRAMS



## Occupational and Environmental Epidemiology (OEE)

The OEE program provides cutting edge doctoral-level training in the epidemiology of **diseases related to the working or natural environment**. Graduates address emerging and re-emerging occupational health problems of working people in the United States and globally.



## Occupational and Environmental Health Nursing (OEHN)

The OEHN training program prepares future leaders dedicated to the **health and safety of workers, their families, and the community**. Graduates work in business, industry, health care, public health, research and academia to promote health and prevent injuries.



## Occupational and Environmental Medicine (OEM)

OEM is a Residency Training Program that **trains physicians who will improve the health and safety of workers** and be able to practice in a wide range of venues including government agencies, corporate health departments, clinical practice, or academia.



## Occupational Hygiene (OH)

Graduates of the OH program protect the workforce by focusing on the **anticipation, recognition, evaluation and control of potential workplace hazards** from chemical, physical and biological agents, and the potential health threats to the community and the environment.



## Occupational Injury Prevention (OIP)

The OIP program uses an advanced interdisciplinary academic and research training model to **prevent and control occupational injuries**. Graduates work in a wide variety of sectors to prevent workplace injuries, reducing the physical, mental, and economic impact.



## Occupational Safety (OS)

The OS training program builds on a rigorous Master of Environmental Health and Safety (MEHS) training at the University of Minnesota Duluth with courses, seminars, and field work to prepare occupational safety professionals to address work-related injury and illness.

## OUR ALUMNI



## LEADERS IN THE FIELD. PROTECTING THE WORKFORCE.

Our graduates are employed in leadership positions in a variety of industries including healthcare, manufacturing, State and Federal government, education, emergency management, agriculture and food production, mining, transportation, community and non-profit leadership, and private industry. In a recent alumni survey, **95% of respondents reported securing employment** upon graduation, using skills they gained in our programs.

# RESEARCH TO PRACTICE



Our faculty and students are actively engaged in **multidisciplinary research** to address existing and emerging issues in worker health and safety and implement **innovative strategies** to respond to the unique and diverse needs of our region.



## SURVEILLANCE OF TICK-BORNE DISEASE RISK

Jake Cassens, a doctoral trainee in the OEE program, is integrating cutting edge laboratory methods for tick-borne diseases to improve surveillance of tick-borne disease risk for people who work in tick infested environments. The occurrence of tick borne diseases, like Lyme Disease, ehrlichiosis, anaplasmosis, and Powassan Virus, is increasing in many areas of the U.S. and particularly in the Upper Midwest. This research will aid with prevention efforts in working populations and the general public.

## SLEEP INSUFFICIENCY IN THE FIRE SERVICE

Dr. Nick Blonien, 2023 graduate of the OEM residency program, is working to educate Minnesota firefighters on the importance of sleep hygiene and the impact of inadequate sleep on health and safety. Sleep disorders create a significant occupational health and safety risk and are widely underdiagnosed across the fire service. Sleep deprivation can lead to much higher risk of injury, as well as physical or mental illness. Dr. Blonien shared this information with firefighters through an article with MnFIRE.



## INVESTIGATION AND RESPONSE TO A SANITARY SEWER EXPLOSION

OH student Caylin Crawford joined the investigation and response following a petrochemical contamination that caused an explosion in a sanitary sewer near the University of Minnesota campus. Caylin assisted with determining the source of the contamination, monitoring sewer gas levels, responding to odor complaints, and updating recommendations for the safety of the community and responders. Caylin's work on this complex problem will help other agencies be better prepared to prevent, detect, and respond to sewer-related incidents in the future.



## FINANCIAL BURDEN OF WORK-RELATED INJURY AMONG OLDER WORKERS

Work-related injuries can be severe and costly for aging workers. Older workers often delay retirement for financial reasons, continuing to work in full-time or physically demanding jobs. Matt McFalls, a doctoral student in the OIP program, used data from Medicare claims and the National Health and Retirement Study to estimate the incidence of work-related injuries among aged Medicare enrollees, how workers' compensation affects out-of-pocket health care costs, and how retirement barriers affect the risk of occupational injury.



## MASK AND FIT TESTING RESOURCES FOR PUBLIC HEALTH OFFICIALS AND EMPLOYERS

Responding to a significant gap in availability of respiratory protection resources for employers, OEHN student Shari Crocker developed a comprehensive program to help companies be prepared and ensure proper protection for their employees. The program included an explanation of various respirators, detailed training for fit testing, and resources for obtaining proper equipment. This training was presented to local public health officials and county governments with the goal that they may serve as a preparedness resource for local companies.



## WORKERS COMPENSATION COVERAGE FOR AGRICULTURAL WORKERS

Disparity in workers' compensation impacts vulnerable and high-risk work populations, particularly in agriculture. Dr. Katie Schofield, OS program director, collaborated with researchers at the University of Nebraska Medical Center and the National Farm Medicine Center to publish a peer-reviewed article discussing the complex issues facing agricultural workers and the workers' compensation system in light of the COVID-19 pandemic.



# OUTREACH & CONTINUING EDUCATION

MCOHS faculty, staff and students are actively engaged in outreach activities that have a positive impact on worker safety and health, including reaching **underserved and underrepresented groups**, creating and sharing **resources**, **building partnerships**, meeting a **regional or local need**, and **evaluating the impact** of these activities.



## PARTNERSHIP WITH EAST PHILLIPS NEIGHBORHOOD INSTITUTE

In our ongoing partnership with this diverse community, we provide resources, support, and expertise to help inform and protect the community. In Fall 2023, MCOHS students, staff, and faculty constructed Corsi-Rosenthal air filters that were provided free of charge to the community.



## DRIVEN TO DISCOVER AT THE MINNESOTA STATE FAIR

MCOHS is partnering with the American Industrial Hygiene Association to bring outreach activities to the Minnesota State Fair. Occupational Hygiene student Caylin Crawford will lead this effort to engage with fairgoers at the University of Minnesota Driven to Discover Research Facility.



## SUSAN GOODWIN GERBERICH RESEARCH SYMPOSIUM

Renamed in 2024 in honor of the legacy of Dr. Susan Goodwin Gerberich, this annual event formerly known as the NORA Symposium brings researchers, students, and community members together to discuss an emerging health and safety topic. The event also features a student research poster session.



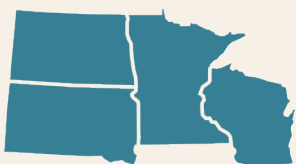
Watch virtual poster presentations by MCOHS students and pilot project recipients.



The **MCOHS Continuing Education** program has a variety of health and safety training offerings including **in-person** and **online** courses, monthly **webinars**, and **continuing education credits** for professionals.

## REGIONAL, NATIONAL, AND GLOBAL IMPACT

Through research projects, community engagement, internships and employment, MCOHS students, faculty, and alumni have had a **far-reaching and significant impact** in promoting public health and reducing worker injuries and illness. **A small sampling...**



3M  
Cargill  
Fond du Lac Band  
General Mills  
Hennepin Co  
Jennie-O  
Mayo Clinics  
Medtronic  
Metro Transit  
Minneapolis Police  
MN Dept of Health  
MN Dept of Labor  
MN Fire Dept Assn  
Sanford Health  
Target  
U.S. Steel  
WI Public Health  
Xcel Energy

Amazon  
CDC  
Delta Airlines  
ExxonMobil  
FAA  
Ford Motor Co  
Fort Knox  
General Electric  
Homeland Security  
Intel  
NASA  
NIH / NIOSH  
Pfizer  
US Armed Forces  
US Dept of Energy  
US Immigration  
Veterans Affairs  
World Bank

Emirates Airline  
ERM China  
Family Health International  
Shell - Nigeria  
Taiwan Labor Affairs  
United Nations  
USAID - Ethiopia  
Winnipeg Health Authority  
World Health Org

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