

# Annual Report

Nebraska Occupational Safety and Health Surveillance Program (Fundamental-Plus)

Nebraska Department of Health and Human Services (NDHHS)

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## Project Overview

The goal of the Nebraska Occupational Safety and Health Surveillance Program (NEOHS) is to reduce the incidence of occupational injury and illness and improve the health and safety of Nebraska workers. The aims of the project are to: collect, analyze, and interpret occupational health and safety data; conduct surveillance and investigations of occupational poisonings; build partnerships and collaborations with stakeholders; disseminate findings; and maintain an advisory committee.

## Major Accomplishments, Outputs, and Outcomes

### **Collection of Occupational Health Indicator Data**

The NEOHS Program operates an occupational health surveillance system that tracks occupational health indicators, which are specific measures describing work-related injuries, illnesses, hazards, and exposures. We collected 23 occupational health indicators representing 150 measures for year 2014, and these data were submitted on-time to NIOSH and CSTE.

*Potential outcome: Nebraska's Occupational Health Indicator Database now has data encompassing years 2000-2014. Sending occupational health indicator data to NIOSH and sharing findings with partners improves national surveillance systems and increases stakeholder knowledge about the status and trends of worker health and safety in Nebraska and in the U.S.*

### **Collaborating with NIOSH to Study Enteric Diseases and Occupational Exposures**

The NEOHS Program enhanced its collaboration with NIOSH to study occupational animal exposures among cases of cryptosporidiosis and campylobacteriosis. NEOHS and NDHHS staff provided assistance to NIOSH in the analysis planning, interpretation of findings, and manuscript drafting. Several cases of enteric diseases with occupational animal exposures were identified and described. A manuscript describing the findings was submitted to CDC's MMWR publication.

*Potential Outcome: Collaboration between NEOHS and NIOSH strengthens occupational health capacity. When published, findings and recommendations from the joint study have the potential to add new information about occupational animal exposures and can influence worker prevention strategies.*

### **Enhancing Surveillance of Pesticide Illness and Injury**

Nebraska is one of 13 states participating in the NIOSH Pesticide Injury and Illness Surveillance Program. Pesticide illness case data for year 2011 were included in a CDC Morbidity and Mortality Weekly Report (MMWR) publication. The program participated in a NIOSH-lead multi-state project to study pesticide illnesses due to total release foggers, and Nebraska's data were included in a draft manuscript planned to be submitted for publication in 2017. We also responded to two additional

pesticide-related data requests for information about glyphosate and chlorpyrifos. Surveillance data on occupational chlorpyrifos exposures were used in an official response to citizen organizations by the Nebraska Office of the Governor.

*Intermediate outcome: Nebraska's participation in the SENSOR-Pesticides Program improves this multi-state surveillance system by providing unique health surveillance data that increases knowledge about occupational pesticide poisonings in the United States.*

*Intermediate outcome: The inclusion of pesticide surveillance data in the Nebraska Governor's response to an information request demonstrates the value of this data for inter-governmental agencies to communicate and educate the public about occupational risks of pesticide exposures in the state.*

### **Tracking and Responding to Elevated Lead Exposures in Adults**

The NEOHS Program conducts surveillance of adult blood lead levels. We received approximately 3,500 adult lead reports from physicians and laboratories from July 2016 to June 2017. Staff initiated more than 200 public health investigations for elevated blood lead levels and worked with attending health care providers to share medical management guidelines. Educational and prevention information was provided to 224 adults with elevated blood lead levels.

*Potential outcome: Most lead exposures among adults are work-related. Investigating adult elevated lead levels identified sources of exposure and at-risk family members. Providing prevention recommendations to clinicians and lead-exposed workers results in an increased awareness of workplace risks and prevention information.*

### **Increasing Occupational Health Knowledgebase and Skillsets for Public Health Students**

Nebraska's application to co-host two interns was successfully funded through the Occupational Health Intern Program (OHIP). Two interns received occupational health and safety orientation and dedicated training in surveillance. The NEOHS Program also hosted a Masters of Public Health student for completion of a service learning project. The student received one-on-one training in occupational health surveillance, data interpretation, and conducted lead poisoning follow-back investigations which incorporated worker and physician interviews. Staff also conducted three guest lectures to public health students about pesticides and occupational health surveillance.

*Potential Outcome: By hosting and training students, the NEOHS Program increased occupational health skillsets and knowledgebase for three graduate-level public health students. These activities have the potential to increase the number of skilled occupational health researchers and practitioners.*

### **Collaborating with Partners to Study Musculoskeletal Disorders Among Meatpacking Workers**

NEOHS collaborated with two occupational health interns and a worker advocacy organization to examine musculoskeletal disorders among meatpacking workers. The project included a worker survey, focus groups, and measurement of hand strength tests among five workers. The project found injury rates among surveyed meatpacking workers were as high as 63%, and approximately 40% of workers surveyed had symptoms consistent with carpal tunnel syndrome. Out of five participants tested for hand strength, all showed reduced work capacity for grip strength and wrist-strength extension tests.

*Intermediate Outcome: The meatpacking worker project resulted in improved knowledge of the causes and conditions of workplace injuries among this high-risk population. Hosting focus*

*groups allowed workers to share worker health experiences, and five workers received direct intervention by providing the results of their work capacity measurement testing.*

### **Assessing Worksite Wellness, Health, and Safety in Nebraska**

NEOHS collaborated with internal agency programs to complete and summarize Nebraska’s 2016 Worksite Wellness Survey. The NEOHS program added questions to the survey about worksite safety policies. We found that only 59% of worksites have a policy that requires employees to wear a seatbelt while driving or riding in a vehicle. Additionally, half of worksites (55%) have a workplace safety committee. The survey results and report were disseminated to stakeholders and posted on the NDHHS website.

*Potential Outcome: Collaboration with the Nebraska Worksite Wellness Survey resulted in enhanced integration of worker health and safety surveillance into worksite wellness activities. The survey results provide new information about the prevalence of workplace safety policies and if used, findings can result in improved work practices and policies.*

### **Publications, Presentations, and Reports**

#### **Peer-Reviewed Publications**

Alarcon WA. Elevated Blood Lead Levels Among Employed Adults — United States, 1994–2013. MMWR Morb Mortal Wkly Rep 2016;63:59–65. DOI: <http://dx.doi.org/10.15585/mmwr.mm6355a5>.

Calvert GM, Beckman J, Prado JB, et al. Acute Occupational Pesticide-Related Illness and Injury — United States, 2007–2011. MMWR Morb Mortal Wkly Rep 2016;63:11–16. DOI: <http://dx.doi.org/10.15585/mmwr.mm6355a3>.

#### **Other Publications and Presentations**

##### *Presentations and Lectures*

<b>Date</b>	<b>Title</b>	<b>Event</b>
9/9/2016	Pesticides: Health Effects, Exposures, and Use (Lecture)	UNMC MPH Course
9/29/2016	Working in Occupational Health: Lessons from Nebraska Newbie	2016 WestON Annual Meeting, Denver, CO
2/8/2017	Pesticides: Health Effects, Exposures, and Use (Lecture)	UNMC MPH Course
4/25/2017	Environmental and Occupational Health Epidemiology (Lecture)	Doane University Public Health Course
6/5/2017	Off the Road Again: Agricultural Injuries in Nebraska Related to All-Terrain Vehicles, 2012-2014	2017 CSTE Annual Conference, Boise, ID

##### *Publications and Reports*

<b>Date</b>	<b>Type</b>	<b>Title</b>
Mar 2016	Data Report	2016 Nebraska Worksite Wellness Survey
Mar 2016	Newsletter	Worksite Safety Practices in Nebraska Worksites
Apr 2016	Newsletter	NIOSH Health Hazard Evaluations: Free Resource for Nebraska Worksites
Oct 2016	Newsletter	NIOSH eNews: Nebraska Releases Occupational Health Data Report