

Occupational Health, Chronic Diseases

Minnesota Department of Health, Health Promotion and Chronic Disease

Saint Paul, Minnesota

Assignment Description

The CSTE Epidemiology fellow will reside in the Chronic Disease and Environmental Epidemiology (CDEE) section of the Health Promotion and Chronic Disease (HPCD) Division at the Minnesota Department of Health. The CDEE section houses the Minnesota Cancer Reporting System (MCRS), the Center for Occupational Health and Safety (COHS), and the Environmental Epidemiology Unit. The HPCD division works to reduce the burden of suffering and death from chronic disease in Minnesota, by providing leadership in the prevention of chronic diseases and injuries, conducting public health surveillance, and developing, implementing, evaluating and supporting public health interventions. <http://www.health.state.mn.us/divs/hpcd/>

Day-to-Day Activities

The candidate will have the opportunity to participate in a variety of section activities, primarily within the Center for Occupational Health and Safety and the MDH Asthma Program. Activities will include: data collection, management, and analysis, report writing, factsheet and web language development, assist in responding to requests from the public, as well as participate in collaborations with other governmental departments, non-profit organizations, educational institutions, health care institutions, and employers. Day to day activities will vary to some degree based upon special requests, but the primary activity will be centered around the fellow's assigned projects.

Day to day activities include:

- participate in the collection, analysis, and interpretation of Minnesota data for 22 specified occupational health indicators using existing data systems based on criteria established by CSTE (2015);
- aid in further refinement and break down of the 22 occupational health indicators to provide descriptive epidemiological results and identify at risk occupational and demographic groups;
- identify, develop, and evaluate new surveillance approaches for indicators of occupational health in Minnesota;
- identify and maintain relationships with agencies, organizations, groups, and individuals who can provide and/or utilize appropriate surveillance data;
- develop and implement strategies to disseminate and publish surveillance results, their interpretations, implications, and conclusions
- develop new communications strategies for occupational health and safety, including for example, a periodic newsletter; and
- develop articles for the NIOSH eNews electronic newsletter

Potential Projects

Surveillance Occupational Health Surveillance Activity

The Minnesota Department of Health annually participates in the Behavioral Risk Factor Surveillance System (BRFSS). Beginning in survey year 2013 Minnesota BRFSS began collecting the industry and occupational optional module developed by NIOSH and CSTE. In survey year 2015 the Asthma Call Back Survey (ACBS) was added to the Minnesota BRFSS. These two sources of data will be used to create measures of health and health behaviors by occupational and industrial groupings. Currently four years of BRFSS data are available to investigate the trends in health and health behaviors. This includes investigation of work-related asthma, one of the most common respiratory diseases associated with workplace exposures.

- The fellow will use methodology developed by the Wisconsin CDC Asthma Program to create counts of work related asthma.
- The fellow will create measures of health and health behaviors by occupational and industrial groupings.
- The fellow will use published literature and state and national reports to evaluate the findings.
- The fellow will produce two manuscripts to be either submitted to scientific journals or for presentation on the MDH website.

Surveillance Occupational Health Surveillance Evaluation Evaluation

The Fellow will have the opportunity to evaluate the impact the transition from ICD-9CM to ICD-10CM has had upon several surveillance measures used to track injuries and illnesses related to work.

- The fellow will use data from the Minnesota Hospital Discharge database, specifically years 2013, 2014, and 2015.
- Using the established definitions for work-related injury and illness the fellow will evaluate the impact of coding changes on these measures. The fellow will investigate the impact at the large group level as well as at the sub grouping level.
- A report detailing the findings will be generated and shared within the health department as well as with our partners at the Minnesota Department of Labor and the Minnesota Safety council.

Major Project Work-Related Asthma

Work-related asthma. The Fellow will have an opportunity to work with an experienced asthma epidemiologist in examining BRFSS, ACBS and other sources of asthma surveillance to characterize the impact of work-related asthma across the state. The Fellow will have an opportunity to work with Asthma and COHS staff and other stakeholders to develop and implement a strategic plan for work-related asthma.

- The fellow will synthesize the data and information currently available describing the impact of work-related asthma in Minnesota.
- The fellow will identify knowledge and information gaps regarding work-related asthma in Minnesota.
- The fellow will identify potential stakeholders and collaborators to develop and implement a state plan to address work-related asthma in Minnesota and the identified information gaps.

Preparedness Role

CDEE is currently engaged in planning activities with the MDH Office of Emergency Preparedness to develop plans for long-term surveillance activities as part of the State All-Hazards Emergency Response Plan. The candidate will participate in the emergency planning activities and discussions related to occupational, environmental, and chronic disease surveillance. All CDEE staff are expected to complete a series of training classes (live or web-based) related to emergency preparedness. Many opportunities will exist for a Fellow to actively participate in a wide range of emergency preparedness activities and planning.

- The fellow will participate in table top exercises with the long term surveillance annex in identifying the role occupational and environmental epidemiology would fill in an emergency.
- The fellow will identify trainings and materials that would aid in preparing CDEE staff, specifically the Center for Occupational Safety and Health, in properly executing assigned duties during an emergency.
- The fellow will work with the long term annex staff in development of a table top exercise that focuses on workers or occurs in an occupational setting.

Additional Activities

Youth entering the workforce are at increased risk of injury. The Minnesota Student Survey – a state-wide survey of 9th and 11th grade students conducted every three years, provides a significant data set of behavioral (including working for pay), academic, and health indicators for Minnesota adolescents. The Center currently has 4 cycles of the MN student survey available.

- The Fellow would use the dataset to conduct analyses to address issues of importance to adolescent work safety, including: health, health behaviors, non-work activities, and social support.
- The Fellow would be able to use the 4 survey cycles to evaluate trends in health and health behaviors in working and non-working youth using volunteer work as a comparison activity.

The Center currently has sixteen years of workers' compensation data to describe counts rates and trends of total injury, burns, and amputations. These analyses describe a small portion of the work related injury and illness occurring in Minnesota annually.

- The fellow would complete a descriptive epidemiological analysis of the available workers' compensation data; identifying the most common types of injury as well as cause.
- The fellow would synthesize the finding into a report that would be shared with our partners.
- The fellow would work with our partners and stakeholders to identify and develop programs and interventions to reduce workplace injury.

Mentors

Primary Adrienne Landsteiner PhD, MPH, BS

Epidemiologist

Secondary Wendy Brunner PhD, MS

Epidemiologist Supervisor