Final Progress Report

Minnesota Occupational Health and Safety Surveillance Program

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List of Terms and Abbreviations

CDC	Centers for Disease Control
CFOI	Census of Fatal Occupational Injuries
CSTE	Council of State and Territorial Epidemiologists
DLI	Minnesota Department of Labor and Industry
ER	Emergency Room
MDH	Minnesota Department of Health
MN OSHA	Minnesota Occupational Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health
OHIs	Occupational Health Indicators
SOII	Survey of Occupational Injuries and Illnesses
WRA	Work-Related Asthma

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Abstract

The primary purpose of the Minnesota Occupational Health and Safety Surveillance Program was to enhance the capacity of the Minnesota Department of Health (MDH) to promote occupational health and safety through surveillance and dissemination of at least 19 Occupational Health Indicators (OHIs). These OHIs were previously developed and evaluated by the Council of State and Territorial Epidemiologists (CSTE) in collaboration with the National Institute for Occupational Safety and Health (NIOSH). Beyond the core surveillance activities, additional Program objectives included an evaluation of an occupational disease reporting system for Minnesota, collaboration on a work-related asthma survey of cosmetologists, updating an occupational health and safety curriculum targeted to rural teens, conducting a survey of Minnesota high schools to determine whether school curricula included concepts of occupational health and safety, evaluating statewide student survey data to determine how working students compare to non-working students, and estimating the rates and costs of serious agricultural injuries in Minnesota. The projects reinforced existing relationships and established new relationships with various partners interested in addressing occupational safety and health.

The Minnesota Occupational Health Surveillance Program completed 22 OHIs for the years 2000-2012, as data allowed. A new MDH website was developed for the presentation and dissemination of the OHIs, indicating rates and trends, methods, and interpretation.

While agricultural fatalities are well-documented, non-fatal injuries are generally excluded from existing surveillance programs. To better document these injuries, a surveillance method was developed to identify rates, trends, and costs of agriculturally-related injury. This research was a collaborative effort with the University of Minnesota. The findings provided support for an ongoing interagency collaboration to create and develop an agricultural safety program.

To determine the feasibility of implementing a 70-year old Minnesota statute requiring occupational disease reporting, a literature review and a survey of state reporting systems

was conducted. A report of the findings and recommendations was posted on the Program website, providing policy makers with feasible options to enhance surveillance of occupationally-related disease in Minnesota.

There has been an ongoing collaboration with the MDH Asthma Program to address the identification and prevention of work-related asthma. In addition to developing web pages on WRA, the two programs collaborated on a Health Alert regarding hair-straightening products as well as a survey of cosmetologists regarding health and safety behaviors and training, as well as health status. The survey findings will be used to support efforts to provide greater training and safety information for this industry.

The *Work Safe Work Smart* curriculum, developed and evaluated with prior NIOSH funding, was updated and reposted on the Program website. Available at no cost for download. An online survey of Minnesota high schools was conducted to determine whether any concepts of occupational health and safety were included in their curricula. The Minnesota Student Survey was used to investigate health and behavior outcomes among working youth. The findings from these surveys are being used to continue these investigations and pursue a working group to address how best to provide appropriate training to working youth.

Significant (Key) Findings

- Occupational health surveillance has been firmly established at MDH with the annual completion of the OHIs; 22 OHIs have been compiled with accompanying narrative and trend analysis and are now readily available on the MDH Center for Occupational Health and Safety website.
- Agriculture ranks as one of Minnesota's most hazardous industries. While agricultural fatalities are well-documented, non-fatal injuries are largely excluded from existing surveillance systems. Consequently, a methodology was developed to utilize hospitalization and ER data to identify agricultural injuries in Minnesota. This approach identified an annual average of 2,000 injuries related to agriculture that required medical attention. Costs of these injuries were also estimated.
- Relationships and collaborations were developed with a variety of state and academic partners. External partners included the Minnesota Department of Labor, Minnesota OSHA, the University of Minnesota School of Public Health (NIOSH-funded ERC and Ag Centers), and the Health Partners Research Foundation. Intra-agency partners included the Asthma Program, Heart Disease and Stroke Program, Infectious Disease Epidemiology, Prevention and Control Division, the Health Statistics Unit, and the Environmental Health adult blood lead surveillance program.
- Program staff served as members for the MDH Asthma Program's WRA advisory panel. The two programs partnered to conduct and analyze a survey of 1,900 licensed cosmetologists; the survey asked about health and safety behaviors, available training, and respiratory health status.
- A survey and literature review was completed examining the feasibility of implementing an occupational disease reporting system. The investigation was summarized in a report with recommendations on how occupational disease reporting could be pursued in Minnesota. The report was distributed to agency management and posted on the Program website.
- The *Work Safe Work Smart* occupational health and safety curriculum was updated in 2012 by the original curriculum developer. This curriculum had been developed and evaluated with previous NIOSH support (1997-2003). The updated curriculum was re-posted on the Program website and is available without cost to any user.
- A survey of Minnesota high schools was conducted to ascertain to what degree, if any, occupational safety and health was included in any course curriculum. The survey indicated that very few schools have included these topics and that there are a variety of barriers to inclusion of occupational health and safety in schools.
- Data from a statewide survey of high school students conducted every three years was analyzed to compare health outcomes and behaviors, academic performance, and other characteristics among working and non-working or volunteering youth.

These analyses suggest that there are both positive and negative aspects of working for pay while in school.

- Two graduate student interns from the University Of Minnesota School Of Public Health gained valuable field experience working on the survey of high schools and analyzing the student survey data. These efforts will lead to several publications and other opportunities for the Program, including collaborations with other agencies and institutions.

Translation of Findings

- The OHI methodology was utilized to develop indicators of the rates, trends, and costs of agriculturally-related injury in Minnesota. These new indicators of agriculturally-related injury provide a much needed surveillance tool based on existing data sources for more completely documenting serious, but non-fatal injuries in this industry.
- The findings from the report, *Feasibility of an Occupational Disease Reporting System,* provide specific recommendations to enhance occupational health reporting for conditions of particular importance to Minnesota. The report also describes the resources and commitments necessary to fully implement occupational disease reporting in Minnesota.

Outcomes/Impact

- The OHI data have facilitated the creation of working groups and collaborations surrounding several specific areas of concern including agriculture, lead, and work-related respiratory disease.
- The continued collaboration between the MDH Occupational Health and Safety Program and the MN DLI led to the award of funds by the U.S. Bureau of Labor Statistics to investigate the undercount present in the Survey of Occupational Injuries and Illnesses. Further collaborations are focused on agricultural safety.
- Internal and external Program collaborations have increased awareness of workplace health and safety surveillance issues and priorities among state agencies and academia, identified research and training opportunities, and contributed to the professional development of current and future health and safety professionals in Minnesota.
- The survey of cosmetologists completed with the MDH Asthma Program identified a need for improved health and safety training among individuals in this industry.
- The survey of high schools documented the general absence of occupational safety and health in school curricula and identified many barriers to inclusion. These findings will be useful in promoting awareness among school administrators and teachers and exploring how occupational health can be included in health curricula.

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Success Story

Elevated Regional Mesothelioma Rates Lead to Occupational Studies

Taconite (iron ore) processing plant in northeast Minnesota along the northern shore of Lake Superior

The Challenge: In 1997 epidemiologists at the Minnesota Department of Health (MDH) identified an elevation in the incidence of mesothelioma among male Minnesotans in the northeast region of the state. Subsequent analyses with additional years of data confirmed a two-fold excess of mesothelioma among males compared to the statewide average. There was no excess among females. Although this rare cancer is caused almost exclusively by asbestos exposure, this finding renewed long-standing concerns over the potential health implications of exposure to mineral fibers from taconite (iron ore) mining and processing in northeast Minnesota. MDH's challenge was determining to what extent mesothelioma was associated with asbestos exposure or taconite mining in this region.

The Response: Epidemiologists from the Minnesota cancer registry and the MDH Center for Occupational Health and Safety began an investigation of the elevation in mesothelioma by linking the state cancer registry with personnel records available for two large industries in northeast Minnesota: a ceiling tile manufacturing plant and the taconite mining industry. The linkage studies identified mesothelioma cases in both industries. While a previous study had already identified a high risk of asbestos-related exposure and lung disease (including mesothelioma) among the ceiling tile workers, mesothelioma had not been previously reported among taconite miners. A review of job histories of the

miners with mesothelioma, along with miner interviews and expert panel judgments, identified commercial asbestos exposure on the job as the likely cause of most of the mesothelioma cases (where sufficient work history was available). However, this limited study did not assess exposure to taconite dust, and public concerns increased as many additional cases of mesothelioma among miners were identified.

The Impact: With the information provided by the preliminary investigations by the Minnesota Department of Health, state funding ($5 million) was allocated to University of Minnesota School of Public Health – a NIOSH-funded ERC and Agricultural Center – for the support of five concurrent studies of taconite miners. These studies include an assessment of occupational exposures (including taconite fibers), a mortality study, a case-control study of mesothelioma, an environmental study of airborne particulates in communities surrounding taconite plants, and a respiratory health study of current and former taconite workers and their spouses. The studies were designed to address the concerns of the northeastern Minnesota community and whether the 4,000+ current miners, their family members, and community residents remain at risk from ongoing exposures in the workplace or community. A final report was released in December 2014 (posted on a "taconite workers" website at the University of Minnesota) along with a variety of journal articles and three doctoral dissertations.

Following the University report, MDH announced that 21 additional mesothelioma cases had been identified in this cohort of 69,000 miners as of January 2015, bringing the total number of known cases to 101. Further data analysis and follow-up of this cohort remains in progress by the Minnesota Department of Health and University of Minnesota School of Public Health.

Scientific Report

Each of the Aims of the **Minnesota Occupational Health and Safety Program** (the "Program") are listed below along with a summary of the success in completing those Aims.

Aim 1: *Establish and maintain a scientific advisory group to identify relevant Minnesota-specific issues and priorities for occupational surveillance*

An advisory work group was convened and comprised of individuals from government, academia, and industry. The whole work group met at least annually, with subgroup meetings and individual communications at more frequent intervals depending on the project of interest. The work group included individuals with expertise in occupational medicine, workers compensation rules and regulations, OSHA standards and regulations, injury data and statistics, worksite occupational safety and health, and marketing and dissemination of public health and safety related works.

Aim 2: *Develop and maintain relationships with agencies, organizations, groups, and individuals who can provide and/or utilize appropriate surveillance data*

A number of relationships were developed and/or strengthened with the occupational health surveillance program. Quarterly meetings were established with staff from the Minnesota Department of Labor and Industry (DLI). A collaboration with the DLI led to their successful application of support from the U.S. Bureau of Labor Statistics to investigate the undercount present in the Survey of Occupational Injuries and Illnesses (SOII). The 2012 edition of DLI's annual *Workplace Safety Report* included six of the OHIs in addition to the annual data on fatal and nonfatal injuries, workers' comp claims, and MN OSHA inspections. Further collaboration involved convening an interagency workgroup to address the persistently high rate of agricultural fatalities in Minnesota.

A continuing relationship and collaboration was maintained with the University of Minnesota School of Public Health and its NIOSH-funded Midwest Center for Occupational Health and Safety and the Upper Midwest Center for Agricultural Safety and Health. This relationship has provided an opportunity to collaborate on methods to disseminate and distribute data and information completed by the MDH occupational surveillance program. As noted in Aim 3 below, this collaboration also involved a research project to identify rates, trends, and costs of agricultural injuries (fatal and non-fatal) in Minnesota, resulting in a potential new OHI and a PhD degree for the Program Director.

The relationship with the CDC-funded MDH Asthma Program was strengthened and the outputs of that relationship are described below (Aim 6). The Program also provided expertise to the MDH Lead Unit; Program staff served on a committee formed to update

guidelines for healthcare providers regarding pregnant women with elevated lead levels. The occupational health program provided their expertise regarding occupational lead exposure and workplace protections. Program staff also served on a work group for the MDH Flu vaccination program's initiative to increase the number of employer-provided flu vaccination clinics in the state.

Aim 3: *Collect, analyze, disseminate and utilize Minnesota data for 19 specified occupational health indicators using existing data systems based on criteria established by the Council of State and Territorial Epidemiologists (CSTE, 2009)*

The MDH Occupational Health and Safety Surveillance Program exceeded expectations with the completion of the original 19 indicators, plus three additional indicators that had been added by CSTE since the start of the Program. When possible, each indicator was completed for an expanded time period (2000-2012), providing a better opportunity to examine statewide trends. The compiled indicator data was shared annually with NIOSH and CSTE as per the co-operative agreement. A Program website was developed, with a separate page of text and graphics for each OHI.

In addition to the CSTE-defined OHIs, the program has also created two state-specific indicators related to agriculture that were not part of the original Aims of the Program. These indicators were modeled on the established NIOSH/CSTE OHIs in that they utilized pre-existing data sources that are typically available in other states. These indicators arose from the fact that while agricultural fatalities are well-documented, serious non-fatal agricultural injuries are generally not captured by existing surveillance systems such as SOII or workers' compensation data. Using Minnesota hospital discharge and ER data, the first of the two indicators measured the rates and trends of injury related to agriculture from 2000-2011. The second of the two indicators used direct medical cost data along with a variety of readily available sources to create estimates of the economic burden of these injuries. These indicators were used in part to drive forward the creation of a working group with members of MDH and DLI to address injuries and fatalities related to agriculture in Minnesota. The developed methodology and findings for these two state specific indicators were also the main content of a doctoral dissertation (Landsteiner, 2014).

Aim 4: *Collaborate with the CDC-funded MDH Environmental Public Health Tracking (EPHT) implementation program to incorporate the occupational health indicators (OHI) into Minnesota's Indicator-Based Information System for Public Health (MN IBIS) – a public web portal*

The Program has continued to work with the MDH EPHT program to include the OHIs on the portal. Due to changing web-based technologies and policies, the original MN IBIS system that was in development at the start of this Program was eventually abandoned and

a different set of web technologies have been developed and employed for the data portal by the EPHT Program (the portal is now referred to as the MN Public Health Data Access). Limited staff access and issues with presentation style and interface have delayed the inclusion of the OHIs. While the OHIs may eventually be included in the Data Access portal, a webpage was developed for each OHI and added to the Program website, providing easy access to the OHI data http://www.health.state.mn.us/divs/hpcd/cdee/occhealth/indicators/index.html.

Aim 5: *Develop and implement additional strategies to disseminate and publish surveillance results, their interpretations, implications, and conclusions; this will include an annual performance review of the accomplishments and impacts of Minnesota's occupational surveillance program and associated activities*

The internet has quickly become the primary source of health information for both the public and public health professionals. Therefore, a high Program priority was the development of a web presence. To that end, a website was developed describing the program, each of the Program content areas, and separate pages for each of the OHIs with text, tables, and graphics (http://www.health.state.mn.us/divs/hpcd/cdee/occhealth/surveillance.html). As each additional year of indicator data is added, a revised trend analysis is completed and the indicator website is updated with the current information. The 2012 update to the *Work Safe Work Smart* curriculum was re-posted to the website and made freely available to users at no cost. (http://www.health.state.mn.us/divs/hpcd/cdee/occhealth/wsws.html). The report, *Feasibility of an Occupational Disease Reporting System*, was also posted on the Program website (http://www.health.state.mn.us/divs/hpcd/cdee/occhealth/reporting.html).

In addition to web-based dissemination of information and data, numerous oral or poster presentations have been given over the five year period to disseminate findings to professional audiences:

2010-2011

- Kari A, Williams A, Lindgren P, Johnson J, Bender A. "MDH Occupational Health and Safety Surveillance Program." Poster presented at the National Occupational Research Agenda (NORA) Symposium, University of Minnesota, April 27, 2011, Minneapolis.

2011-2012

- Kari A, Williams A, Lindgren P. "Rates and Trends of Pneumoconioses and Mesothelioma in Minnesota." Poster presented at the National Occupational Research Agenda (NORA) Symposium, University of Minnesota, May 1, 2012, Minneapolis.

- Kari A, Williams A, Lindgren P, Olson L. "Elevated Blood Lead Levels in Minnesota Adults: 2005 – 2011." Poster presented at the National Occupational Research Agenda (NORA) Symposium, University of Minnesota, May 1, 2012, Minneapolis.

- Williams A, Brunner W, Bender A, Kari A. Breakout Presentation "A regional excess of mesothelioma attributable to two occupational cohorts in Minnesota." CSTE Annual Conference, June 3-7, 2012, Omaha.

2012-2013

- Williams A, Kari A. "Tracking and Investigation of Asbestos-Related Diseases in Minnesota." Invited Feature Speaker, MDH Annual Asbestos Conference, St. Paul, January 16, 2013.

- Landsteiner A, Williams A, McGovern P, Nyman J, Lindgren P. "Developing Measures of Occupational Health and Safety Related to Agriculture." Poster presented at the University of Minnesota's School of Public Health Student Research Day: April 5, 2013, Minneapolis.

- Landsteiner A, Williams A, Lindgren P. "Rates and Trends of Occupational Fatalities in Minnesota." Poster Presentation at the NORA Symposium, University of Minnesota, May 2, 2013, Minneapolis.

- Landsteiner A, Williams A, Lindgren P. "Occupational Health Indicators." Poster Presentation at the NORA Symposium, University of Minnesota, May 2, 2013, Minneapolis.

- Landsteiner A, Williams A, McGovern P, Nyman J, Lindgren P. "Developing Measures of Occupational Health and Safety Related to Agriculture." Poster presented at the NORA Symposium, University of Minnesota, May 2, 2013, Minneapolis.

2013-2014

- Landsteiner A, Williams A, Lindgren P, McGovern P, Alexander B. "Rates and Trends of Injury Related to Agriculture in Minnesota, 2000 – 2011." Poster presented at CSTE Annual Conference, June 2014, Nashville.

- Landsteiner A, Williams A, Lindgren P, McGovern P, Alexander B. "Rates and Trends of Injury Related to Agriculture in Minnesota, 2000 – 2011." Poster presented at the NORA Symposium, University of Minnesota. May 2014, Minneapolis.

- Landsteiner A, Williams A, Lindgren P, Nyman J, McGovern P. "Economic Burden of Injury Related to Agriculture in Minnesota, 2004 – 2010." Poster presented at the NORA Symposium, University of Minnesota, May 2014, Minneapolis.

2014-2015

- Landsteiner A. "Rates and trends of indicators of occupational health and safety in Minnesota." Invited presentation and discussion at the Minnesota Public Health Association Policy and Forum Series on Zip Code Matters on the intersection of geography and public health, October 2014.

- Landsteiner A, Lindgren P, Williams A. "Elevated Blood Lead Levels in Minnesota Adults." Poster presented at the NORA Symposium, University of Minnesota, May 2015, Minneapolis.

- Klein R, Hillmer T, Landsteiner A, Williams A. "Worker Health and Safety Training in Minnesota High Schools." Poster presented at the NORA Symposium, University of Minnesota, May 2015, Minneapolis.

- Landsteiner A. "Estimating the Burden of Serious Farm-Related Injury in Minnesota." Break Out Session Presentation, CSTE Annual Conference, June 2015, Boston.

Aim 6: *Collaborate with the CDC-funded MDH Asthma Program to implement components of its strategic plan for work-related asthma in Minnesota*

The occupational health surveillance program continued its support and collaboration with the MDH Asthma Program. Program staff participated on the MDH Asthma program's reconvened work-related asthma advisory panel. Program staff also collaborated with the Asthma Program on the creation, analysis, and interpretation of an online survey of 1,900 licensed cosmetologists, identified through the licensure lists maintained by the Bureau of Cosmetology. The survey inquired about health and safety training, work practices, and respiratory health outcomes. Following internal agency review, the manuscript will be submitted to a peer-reviewed journal. Preliminary findings were presented in a factsheet at a CDC Asthma Program grantee meeting in Atlanta, June 5-7, 2013. The Program also collaborated with the Asthma program in the creation of an April 2011 MDH Health Alert for salon workers and their customers concerning formaldehyde-containing hair straightening products. The Program has also provided several articles for the Asthma Program's quarterly respiratory disease newsletter, *Breathing Space*.

Aim 7: *Review and update MDH's Work Safe Work Smart curriculum targeted to rural Minnesota adolescents*

Work Safe Work Smart is an occupational health and safety curriculum developed by MDH and targeted to rural Minnesota adolescents who may have both agricultural and non-agricultural work experiences. It was developed and pilot tested in several Minnesota counties with NIOSH support (1997-2000), and subsequently evaluated with additional

NIOSH support in a group-randomized study involving over 4,000 students in 38 (non-Metro) high schools (2000-2003). The *Work Safe Work Smart* curriculum had been last revised prior to its field evaluation in 2001. The curriculum had been converted to PDF format and made available for free download on the MDH website. The curriculum was updated in June 2012 by the original developer to address changes that had occurred to child labor laws as well as state-based educational mandates, and to update data and available online resources. It was then reposted on the MDH website for available download http://www.health.state.mn.us/divs/hpcd/cdee/occhealth/wsws.html and also submitted to the NIOSH state based surveillance clearinghouse.

Aim 8: *Evaluate the feasibility of revising and implementing an unenforced state statute requiring physician reporting of work-related illnesses and conditions*

A Minnesota state statute dating from 1939 requires a physician report to MDH any conditions believed to have a relationship to work. To date this statute has not been enforced and currently there are no reporting procedures or available staff to process the data. To determine the feasibility of occupational disease reporting, a comprehensive literature review and interviews with states that require physician reporting of occupational disease was undertaken. Key respondents to the survey overwhelmingly cited the difficulties and substantial resources needed to ensure completeness of reporting. Many respondents suggested the use of already existing methods of data collection or use of secondary data sets and to focus on state-specific priorities. With the use of the literature review and these interviews, recommendations were developed for Minnesota. This report, *Feasibility of an Occupational Disease Reporting System*, completed agency review in 2015 and is available on the MDH website http://www.health.state.mn.us/divs/hpcd/cdee/occhealth/reporting.html. The report was also submitted to the NIOSH state-based surveillance clearinghouse.

Aim 9: *Participate in the required biannual meetings, conference calls, and other required activities for Occupational State-based Surveillance*

Over the life of the grant the Principal Investigator, the Program Director, or both have attended all required biannual meetings as well as a number of unrequired meetings. They have participated in a multitude of conference calls, both for NIOSH and CSTE. They have actively participated in CSTE work group calls and on CSTE work subgroups tasked with a variety of issues related to the OHIs.

Additional Program Activities That Were Undertaken Beyond the Original Aims: *Additional activities were undertaken during the course of this Program as resources and time permitted. These are described below:*

Survey of Minnesota High Schools about Occupational Health and Safety Curricula. The revision of the *Work Safe Work Smart* curriculum led to the question of whether any high schools were still teaching that or any other occupational health and safety curriculum (such as the NIOSH Talking Safety). With the assistance of a School of Public Health graduate student intern, an online survey was developed and all Minnesota high schools were invited by email to participate near the end of the 2012-2013 school year. The survey found that few high schools (38%) are offering the training in any capacity and that various barriers exist to including concepts of occupational health and safety in school curricula including competing curricula and time constraints. Preliminary data were presented at a May 2015 NORA Symposium; following internal agency review, a manuscript will be submitted for peer-reviewed publication in late 2015.

Analysis of Minnesota Student Survey data to compare working and non-working students. With assistance from two School of Public Health graduate student interns, data from a statewide survey of high school students conducted every three years were analyzed to compare health outcomes and behaviors, academic performance, extracurricular activities, and other characteristics among working and non-working or volunteering youth. Preliminary data were presented at a May 2015 NORA symposium. Further analyses and manuscript preparation are pending additional grant resources.

Development of methods to ascertain serious agricultural injuries and their costs. Existing OHIs (CFOI) have consistently identified agriculture as one of Minnesota's most hazardous industries. While agricultural fatalities are well-documented, serious non-fatal injuries are largely excluded from existing surveillance systems, including SOII and workers' compensation. Consequently, a methodology was developed to conduct surveillance for injury related to agriculture in Minnesota utilizing hospital and ER discharge data. This methodology identified an annual average of 2,000 injuries related to agriculture requiring some form of medical attention. Costs of these injuries were also estimated. This work comprised a University of Minnesota doctoral dissertation in 2014 by the Program Director. A paper of the rates and trends was accepted for publication in the *Journal of Agromedicine*. A paper on the costs of agricultural injuries has been submitted for publication.

Reports and Publications

- Williams A, Kari A: [2010] New Occupational Health Surveillance Program to Include Respiratory Disease. Breathing Space – Respiratory Disease Newsletter, Vol 9, No.3, Minnesota Department of Health. (http://www.health.state.mn.us/divs/hpcd/cdee/asthma/documents/bs0910.pdf)
- Williams A: [2013] Preliminary Findings from Health Study of Minnesota Taconite Miners. Breathing Space—Respiratory Disease Newsletter, Vol 11, No. 2, Minnesota Department of Health. http://www.health.state.mn.us/divs/hpcd/cdee/asthma/Newsletter.html
- *Work Safe Work Smart* – an occupational health and safety curriculum http://www.health.state.mn.us/divs/hpcd/cdee/occhealth/wsws.html
- Landsteiner A: [2014] Estimating the Burden of Serious Farm-Related Injury in Minnesota. PhD Dissertation, University of Minnesota.
- Landsteiner A, Williams A, Lindgren P, McGovern P, Alexander B: [2015] Rates and Trends of Injury Related to Agriculture in Minnesota, 2000 – 2011. *Journal of Agromedicine*, in press (DOI 10.1080/1059924X.2015.1075449).
- Landsteiner A, Williams A: [2015] Feasibility of an Occupational Disease Reporting System. Minnesota Department of Health. http://www.health.state.mn.us/divs/hpcd/cdee/occhealth/documents/OccupationalDiseaseReporting.pdf