

Institute for Work & Health Accomplishments Report 2012



Institute
for Work &
Health

Research Excellence
Advancing Employee
Health

2012 ACCOMPLISHMENTS REPORT

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Introduction

The mission of the Institute for Work & Health is to conduct research to promote, protect and improve the health of working people in Ontario. The Institute is also committed to provide knowledge transfer and exchange services to improve access to and application of research evidence among agencies in the Ontario prevention system, workplace parties, occupational health and safety professional, clinicians, and policy makers to support improved outcomes in the prevention of work-related injury and illness and the prevention of work disability.

Our transdisciplinary research is focused in two key areas: preventing work related injuries and illnesses before they occur (primary prevention); and preventing and managing work disability should injuries or illness occur (work disability prevention and management). Prevention of work related injury and illness, evidence-based health care and return to work practices to manage disability are critical elements in an effective health and safety system. The Institute has core competencies in the areas of work-related musculoskeletal, labour market experiences, population health, and disability compensation systems.

The goal of our Knowledge Transfer and Exchange (KTE) activities is to build relationships with stakeholders to enable an ongoing exchange of information, ideas and experience. This exchange allows research knowledge to flow to our stakeholder audiences so it can be used in day-to-day decision-making and, in turn, allows practice-based knowledge to flow to researchers to inform and improve the work we do. We use a range of strategies to accomplish this goal and are committed to collaborations with partners in the Ontario prevention system, and with a wide range of other health and safety stakeholders.

Since 1990, we have provided research and other evidence-based products to inform and assist clinicians, employers, labour and other researchers. We also provide evidence to support the policy development processes of federal and provincial institutions, including workers' compensation boards and other organizations in Canada. We provide training and mentorship for the next generation of work and health researchers by sponsoring Masters and PhD students and Post-doctoral fellows, as well as through our seminar and workshop programs. Over the past 20 years, the Institute has hosted over 74 in-residence trainees and sabbaticants.

Research at the Institute

A summary of our 2012 progress and accomplishments are described below in the areas of Primary Prevention of Work Related Injury and Illness research; Prevention and Management of Work Disability research; and our three Foundation Programs which support this research portfolio: Data and Information Services, Measurement of Health and Function; and Systematic Reviews.

Knowledge Transfer & Exchange at the Institute

The overall strategic direction of Knowledge Transfer & Exchange (KTE) is to engage the Institute's stakeholders in research and knowledge transfer to ensure that the research evidence that is generated is available, understandable and usable for decision-making, program planning and practice. Enhancing the visibility of the Institute through communications and marketing is also part of this goal so stakeholders know that the Institute is a dependable resource for research evidence. The KTE accomplishments in 2012 are presented in a separate KTE section that fully describes accomplishments in our stakeholder relationship and exchange activities, as well as our communications activities.

Presentations, Publications, Awards and Collaborators & Staff

The third and fourth sections report on 2012 publications, presentations, grants and awards, and provide details on professional collaborations and staff appointments, as well as information on our academic and service contributions. It is important to note that many of our scientific staff are cross-appointed to other organizations which may require a substantial time commitment. The information reported here is therefore a reflection of IWH-related activity only.

The final pages of the report also list all IWH staff in 2012, as well as IWH adjunct scientists who have contributed to our activities in the past year.

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Prevention of Work Related Injury and Illness

Almost half of the Institute's core budget in 2012 was devoted to research and KTE activities that focus on evidence based strategies for the primary prevention of workplace injury and illness. This work spans a wide range of methodologies and issues. Our analyses of workers' compensation administrative data including no-lost-time and lost-time workers' compensation claims provide a comprehensive picture of the trends in claim rates across industries and labour force sub-groups. This information is fundamental to planning effective prevention strategies targeting those sub-groups at highest risk. We already know that some groups of workers are at higher risk than others. Workplace policies and practices have significant effects on health and safety within a company. Our research explores how OHS policies and practices in different work environments influence injury and illness. We have made significant progress this past year in several evaluation projects that are examining specific interventions and preventative strategies in the workplace. These evaluations should be of value to the prevention system partners and to individual employers interested in improving their safety record. Our research also leads to the development of tools that can be used by stakeholders and workplace parties, such as developing pictograms for the hotel and motel sector and evaluating kitchen preparation pictograms.

2012 Quick Statistics

Completed projects (5)

Ongoing projects (17)

Papers published or in press (32)

Peer review papers submitted (8)

Presentations of results (30)

External grants held (20)

Working Conditions and Health

Over the past 15 years, Institute researchers have gained expertise in analyzing large and complex data sets. These include population-based information, such as the Survey of Income & Labour Dynamics (SLID), National Population Health Survey (NPHS), the Canadian Community Health Survey (CCHS) and other Statistics Canada holdings. Through our special research agreements with the WSIB, IWH researchers have also developed an understanding and become adept in analyzing workers' compensation administrative data from Ontario and other provinces.

Our work on analyzing population-level data and compensation claims focuses on gaining a better understanding of working conditions and employment relationships, and risk factors for injury and disability in the labour market.

Working Conditions and Health in the Canadian Labour Market (0448)

Project Status: Ongoing

Introduction: Over the past decade, the Institute has established capacity to conduct research using Statistics Canada master files of longitudinal, repeated measure, health and labour market interview surveys (the National Population Health Survey (NPHS), the Survey of Labour Income Dynamics (SLID) and the National Longitudinal Survey of Children and Youth (NLSCY)). The longitudinal cohort in the NPHS extends to seventeen years and there are nine cycles available with the last cycle (2011) ending the survey. The SLID now contains information across four different panels from 1993 to 2010. Each survey contains detailed information on health status, disability status, labour market entry, labour market exit and labour market trajectories.

Objectives:

- To apply methods to measure changes in working conditions and examine their effects on different health outcomes.
- To examine if these relationships are consistent across selected groups (e.g. gender, family structure or occupation).
- To examine trends over time in the incidence and duration of work-related injury and illness.

Methods: To date the work under this project has been primarily directed in two areas. The first has been on how best to measure occupational position, and discrepancies between occupational attainment and personal educational potential. The second area of investigation has been the measurement of change over time. There has been some work to date on how to measure change in working conditions (e.g. job control) between the 1994 and 2000 cycles of the NPHS.

Status: Two papers were published in 2012: one examined the relationship between shift work and body mass index among Canadian nurses; and another examined the impact of changes in job strain and its components on the risk of depression.

Researchers: Peter Smith (Principal Investigator, Monash University), Monique Gignac, Sara Morassaei, Cameron Mustard

Stakeholder Involvement: This project has limited stakeholder involvement given use of secondary data.

Potential Audiences and Significance: Previous work with these secondary data sources have been valued by policy-makers, workers' compensation authorities and government departments involved in setting policies related to the provision of health benefits for labour market participants and policies aimed at worker protection through employment regulations

Publications:

Smith PM, Fritschi L, Reid A, Mustard CA. The relationship between shift work and body mass index among Canadian nurses. *Applied Nursing Research* 2013; 26(1):24-31.

The Measurement and Surveillance of Working Conditions and Lost-Time Claims in Ontario (0417)

Project Status: Ongoing

Introduction: The nature of an individual's employment will to a large extent determine whether they derive health benefits from employment, or if work contributes to deterioration in their physical or mental health. There are a range of characteristics of employment that are associated with risk of adverse health effects. For example, physical job demands and psychosocial work exposures are key determinants of the risk of work-related musculoskeletal disorder. Other working conditions relevant to understanding the health of the Canadian labour force include: hours of work, overtime hours, shift work, contingent or short-tenure employment and exposure to outdoor work. For more than a decade, IWH has made extensive use of health interview surveys and labour market surveys administered by Statistics Canada to describe the incidence and prevalence of work-related health disorders associated with various dimensions of working conditions. This work has served both to provide accurate surveillance information on the prevalence of different working conditions and to provide information on the risk of work-related disorder associated with different working conditions.

Objectives:

- To conduct surveillance research on the relationship between working conditions and work-related disorder.
- To examine differences between self-reported work-related injury information and routinely collected information (e.g. accepted claims from Workers' compensation boards).
- To document trends in working conditions and work injuries across different geographical and labour market segments over time.

Methods: The work performed under this project involves utilizing secondary data from Statistics Canada surveys and administrative claim data from WSIB. The objectives are to better understand what each data source is measuring (e.g., what do lost-time claims represent, what do "usual hours worked per week" represent), and to create time series to understand trends in particular working conditions among different labour market groups.

Status: Work completed in 2012 includes an important paper estimating the risk of incident depression following an increase in job demands. Using a sample (n=3735) from the National Population Health Survey, the study found respondents with increased psychological demands were more likely to have depression over the following 2 years (odds ratio=2.36; 95% confidence interval=1.14, 4.88). A very similar risk estimate has recently been reported from the UK Whitehall study.

Researchers: Cameron Mustard (Institute Coordinator), Amber Bielecky, Curtis Breslin, Sheilah Hogg-Johnson, Sara Morassaei, Peter Smith (Monash University)

Stakeholder Involvement: Stakeholders at the Ontario Ministry of Labour (MOL) and the Ontario Workplace Safety and Insurance Board (WSIB), as well as possible stakeholders in similar positions in other provinces, will be identified.

Potential Audiences and Significance: Directly relevant to policy makers at the MOL and the WSIB.

Publications:

LaMontagne AD, Smith PM, Louie AM, Quinlan M, Ostry AS, Shoveller J. Psychosocial and other working conditions: Variation by employment arrangement in a sample of working Australians. *American Journal of Industrial Medicine* 2012; 55(2):93-106.

Premji S, Smith PM. Education-to-job mismatch and the risk of work injury. *Injury Prevention* 2012 [Epub ahead of print].

Smith PM, Bielecky A. Examining the impact of changes in job strain and its components on the risk of depression. *American Journal of Public Health* 2012; 102(2):352-358.

Presentations:

Smith B, Hotermann A, Mustard CA, Smith PM. Relationship between leisure time and occupational physical activity and incidence of hypertension and diabetes: Evidence from the National Population Health Survey (1994-2009). 1-2 June 2012; Vancouver, Canada: Canadian Association for Research on Work & Health Conference.

Smith B, Hotermann A, Mustard CA, Smith PM. Association of leisure time and occupational physical activity with incidence of hypertension and diabetes. 1-2 June 2012; Vancouver, Canada: Canadian Association for Research on Work & Health Conference.

A Longitudinal Examination of the Relationship Between Labour Market Experiences, Health Behaviours and the Incidence of Diabetes and Hypertension (1165)

Project Status: Completed

Introduction: Immigration is an increasingly important aspect of Canadian society and the Canadian labour market. One in five labour market participants is an immigrant. New immigration is expected to account for all labour market growth within the next five years. Past research has suggested that certain immigrant groups (e.g., South Asian) may be at higher risk for particular health problems such as diabetes and high blood pressure compared to people born in Canada. Examining factors associated with diabetes and high blood pressure is important as both these diseases have increased rapidly over the previous two decades.

Objectives:

- To examine the relationship between immigrant status, working conditions and the incidence of diabetes and hypertension over a five to seven year period.
- To gain an understanding of the relative contribution that ethnicity, work conditions and health behaviours have on two increasingly important health outcomes, and suggest potential prevention and policy responses to decrease the numbers of Canadians, in particular immigrants, who suffer from both conditions.

Methods: This project will use time to event models to examine the relationships between immigrant status, ethnicity, and labour market conditions in the development of diabetes and hypertension using the linked Canadian Community Health Survey and Ontario Health Insurance Plan databases.

Status: The study has been completed with a fourth paper addressing the interaction between body mass index and the psychosocial work environment on the subsequent risk of diabetes in Ontario.

Researchers: Peter Smith (Principal Investigator, Monash University), Cameron Mustard, Richard Glazier (ICES)

Stakeholder Involvement: There is limited stakeholder involvement given the use of secondary data.

Potential Audiences and Significance: The results of this project are directly relevant to policy makers at the Ministry of Health and Long-Term Care. They are also of interest to immigrant agencies in Ontario.

Publications:

Smith PM, Glazier RH, Lu H, Mustard CA. The psychosocial work environment and incident diabetes in Ontario, Canada. *Occupational Medicine* 2012;62(6):413-419. <http://dx.doi.org/10.1093/occmed/kqs128>.

Smith PM, Smith BT, Mustard CA, Lu H, Glazier RH. Estimating the direct and indirect pathways between education and diabetes incidence among Canadian men and women: a mediation analysis. *Annals of Epidemiology* 2013; 23(3):143-149.

Rosella L, Mustard CA, Stukel T, Corey P, Hux J, Roos L, Manuel D. The role of ethnicity in predicting diabetes risk at the population level. In press: *Ethnicity and Health*.

Smith PM, Mustard CA, Lu H, Glazier R. Comparing the risk associated with psychosocial work conditions and health behaviours on incident hypertension over a nine-year period in Ontario, Canada. In press: *Canadian Journal of Public Health*.

Smith PM, Mustard CA, Lu H, Glazier R. The relationship between immigration, ethnicity and the nature of work on the risk of incident hypertension among a cohort of Ontarians: examining differences by gender and education. Submitted: *Canadian Journal of Public Health*.

Smith PM, Smith BT, Mustard CA, Lu H, Glazier R. Examining the pathways through which low education leads to increased diabetes risk among Canadian men and women. Submitted: Journal of Epidemiology and Community Health.

Smith PM, Bielecky A, Glazier RH, Lu H, Mustard CA. The interaction between body mass index and job strain on subsequent diabetes risk in Ontario, Canada. Submitted: Obesity.

Funding:

Smith PM, Glazier R, Mustard CA. A longitudinal examination of the relationship between immigrant labour market experiences, health behaviours and the incidence of diabetes and hypertension. CIHR: \$64,995 (2009-2010)

A Forecasting Model for Occupational Health & Safety Risk in Ontario (1175)

Project Status: Ongoing

Introduction: The Expert Advisory Panel on Occupational Health and Safety reported to the Minister of Labour in December 2010. Legislation was passed in June 2011 implementing a range of recommendations from the panel, including the establishment of a prevention office within the Ministry of Labour with responsibility to develop and execute an integrated occupational health and safety strategy for the province. The recommendations of the Expert Advisory Panel also included a charge to improve the indicators of occupational health and safety performance at the workplace level and at the system level (Recommendation 6). The goal of this project is to support the implementation of the Expert Advisory Panel recommendations concerning enhanced data for OHS performance measurement. Over the course of 2012, the Institute for Work & Health completed Phase 1 of the project, developing a framework of leading indicators of occupational health and safety performance based on characteristics of key economic sectors in Ontario including measures of numbers of workers, geographic distribution and occupational mix. The model also includes measures of occupational health and safety risk, based on the incidence of lost-time and no lost-time compensation claims and Rate Group base rates for workers' compensation insurance premiums.

Objectives:

- To support the implementation of the Expert Advisory Panel recommendations concerning enhanced data for performance measurement focused on estimates of occupational health and safety risk for 70 industrial sectors and 40 occupational groups.

Methods: This project's objectives are to estimate the risk of work-related injury and illness for 70 industry sectors, for 40 occupational groups and for five geographic regions for the period 2000-2011. Population-based data sources for the project include workers' compensation claims and emergency department visits for the treatment of work-related injury and illness. Two denominator series are required, stratified by industry, occupation and region. One series estimates the labour force insured for WSIB coverage, and the second series estimates the active labour force. Measures of working conditions and employment arrangements for industry sectors will be obtained from the Labour Force Survey

Status: To date, the project has completed the following elements: 1) a ten year time series estimating the labour force insured for WSIB coverage for 70 industry sectors and five geographic regions, 2) estimating compensation claim incidence rates for a ten year time series for 70 industry sectors, 3) developed methods for estimating insurance premium base rates for 70 industry sectors, 4) implementing a method for estimating the incidence of work-related injury and illness over a ten year period for five economic regions, based on records of emergency department visits.

Researchers: Cameron Mustard (Principal Investigator), Amber Bielecky, Jacob Etches, John O'Grady (Prism Economics and Analysis), Ernie Stokes (Stokes Economics Consulting)

Stakeholder Involvement: An implementation team appointed by the Ministry of Labour is responsible for governance of the objectives and timelines of this project. Contributions to this project will also be expected from the Workplace Safety and Insurance Board, the Health and Safety Associations, OHCOW and the WHSC. Over the period 2004-2010, the Institute worked with the above agencies in preparing six annual system performance measurement reports under the direction of the Occupational Health and Safety Council of Ontario.

Potential Audiences and Significance: The recommendations of the Expert Advisory Panel on Occupational Health and Safety place prominent emphasis on enhanced data for the measurement of the Ontario prevention system and the development of a common database for planning and operational purposes. This project will develop a framework for performance measurement and will contribute to enhanced operations information system for the Ontario prevention system.

Presentations:

Mustard CA. Project Status Report 1: A Forecasting Model for Occupational Health and Safety in Ontario. 23 October 2012; Toronto, Canada: Presentation to the Ontario Ministry of Labour.

Mustard CA. Project Status Report 2: A Forecasting Model for Occupational Health and Safety in Ontario. December 2012; Toronto, Canada: Presentation to the Ontario Ministry of Labour.

Methods for Surveillance of Work Injury by Time of Day in Ontario (1185)

Project Status: Ongoing

Introduction: Shift work – employment with anything other than a regular daytime work schedule – is a large part of work in the Canadian economy. About 25% of full-time workers aged 19-64 in Canada worked shifts in 2005. Research evidence has identified a number of potential health risks associated with shift work. There is particularly strong evidence that night, evening, rotating and irregular shifts are associated with an elevated risk of occupational injury. As many as 6-7% of workplace injuries can be attributed to the higher risk of injury associated with shift work schedules. In Ontario, there is currently no adequate method for monitoring the differences in work injury risk according to the time period of work. This project will address this gap in occupational health surveillance capacity by developing methods to estimate the association between the rate of work-related injury and time of injury for labour force participants in Ontario for the period 2004-2008. This project will evaluate emergency department encounter records as a source of information for the surveillance of work-related injury and illness in Ontario. Information on the hour of work injury, measured across the 24 hour clock, will be obtained from two sources of administrative records in Ontario for the period 2004-2008: workers' compensation lost-time claims and records of non-scheduled emergency department visits where the main problem is attributed to a work-related exposure. Denominator information required to compute the risk of work injury will be estimated from labour force surveys and population surveys conducted by Statistics Canada.

Objectives:

- To compare the incidence of work-related injury and illness presenting to Ontario emergency departments to the incidence of worker's compensation claims filed with the Ontario Workplace Safety and Insurance Board over the period 2004-2008.
- To use both data sources to estimate the incidence of work-related injury in relation to time of day of injury occurrence.

Methods: Information on the hour of work injury, measured across the 24 hour clock, will be obtained from workers' compensation lost-time claims and records of non-scheduled emergency department visits where the main problem is attributed to a work-related for the period 2004-2008. Denominator information required to compute risk of work injury per 200,000 hours for eight three-hour periods over the 24 hour clock, will be estimated from labour force and population surveys conducted by Statistics Canada.

Status: Records of work-related injury have been obtained from two administrative data sources in Ontario for the period 2004-2008: workers' compensation lost-time claims (N=435,336) and records of non-scheduled emergency department visits where the main problem was attributed to a work-related exposure (N=709,933). Denominator information required to compute the risk of work injury per 2,000,000 work hours, stratified by age and gender has been estimated from labour force surveys conducted by Statistics Canada. To date, the project has completed two reports. A first paper has described a comparison of the two data sources for the surveillance of work injury, concluding that emergency department records available for the complete population of Ontario residents are a valid source of surveillance information on the incidence of work-related disorders. A second paper has estimated the risk of work injury risk by time of day in the two population-based data sources, reporting that there was an elevated risk of work-related injury or illness in the evening, night and early morning periods in both administrative data sources and estimating that the fraction of lost-time compensation claims that can be attributed to the elevated risk of work injury in evening or night work schedules is 12.5% for women and 5.8% for men.

Researchers: Cameron Mustard (Principal Investigator), Amber Bielecky, Andrea Chambers, Chris McLeod (University of British Columbia), Peter Smith (Monash University)

Stakeholder Involvement: The project team has consulted with representatives of the Ontario Ministry of Labour and representatives of labour unions.

Potential Audiences and Significance: The results of this work will identify characteristics of workers, occupations, industries and injury events that are associated with the risk of work injury by time of day. These findings will be of interest to prevention authorities. Prevention authorities will also be interested in a detailed assessment of the validity of emergency department records as a source of surveillance information on the health of workers in Ontario.

Publications:

Mustard CA, Chambers A, McLeod C, Bielecky A, Smith PM. Comparison of data sources for the surveillance of work injury. *Occupational and Environmental Medicine* 2012; 69(5):317-324.

Smith PM, Fritschi L, Reid A, Mustard CA. The relationship between shift work and body mass index among Canadian nurses. *Applied Nursing Research* 2013; 26(1):24-31.

Mustard CA, Chambers A, McLeod C, Bielecky A, Smith PM. Work injury risk by time of day in two population-based data sources. *Occupational and Environmental Medicine* 2013; 70(1):49-56.

Presentations:

Fortune M, Mustard CA, Etches J, Chambers A. Staying cool: understanding heat-related injuries and illnesses among workers in Ontario, Canada. 9 November 2012; Toronto, Canada: Dalla Lana School of Public Health Research Day.

Mustard C, Chambers A, McLeod C, Bielecky A, Smith P. Comparison of data sources for the surveillance of work injury. 19-20 June 2012; Washington DC: Use of Workers' Compensation Data for Occupational Safety and Health Conference.

Mustard C, Chambers A, McLeod C, Bielecky A, Smith P. Comparison of data sources for the surveillance of work injury. 1-2 June 2012; Vancouver, Canada: Canadian Association for Research on Work & Health Conference.

Funding:

Mustard C, Smith P, Saunders R, McLeod C. Improved methods for work surveillance in Ontario. WSIB RAC: \$170,140 (2012-2014)

Vulnerable Workers

For the past several years, new and young workers have been a key population of interest to IWH researchers. These workers are most at risk of injury during the first month on a job. Another population that may be considered vulnerable to workplace injury or illness are immigrants, who make up an increasing segment of the Canadian labour force. IWH researchers initiated a WSIB RAC funded study with focus on the labour market experiences of immigrant workers in Canada using a number of secondary data sources originally collected by Statistics Canada. This project compared immigrant workers' risk of workplace injury with Canadian-born workers. IWH researchers investigated the nature of these risks or protective factors relating to immigrant workers, including characteristics related to workers themselves (e.g., ethnicity, gender), type of occupations (physical demand), and organizational factors (workplace size, industry).

Geographic Variation in Occupational Injury and Its Correlates Among Canadian Men and Women (0437)

Project Status: Completed

Introduction: Previous research shows that work injury rates differ by province, as well as regions within a province. These geographic differences in work injury risk may be related to provincial work safety policies, regional demographics, the region's socioeconomic status and social capital, and the region's labour market characteristics (e.g., industrial mix, unionization rates). We will use a national survey to describe work injury risk by province and regions within a province, as well as to identify the correlates of the variability. We will also determine the degree to which geographic variation in work injury risk differs for men and women. This project will provide some of the most detailed information on the geographic distribution and correlates of work injury.

Objectives:

- To describe and map geographic variation in work injuries at the provincial and sub-provincial level, with sub-analyses by gender and industry.
- To examine the association between injury risk and the regional socioeconomic indicators (e.g., household income, residential stability), regional labour market characteristics (e.g., firm size, unionization density), province of residence, demographic, and work-related characteristics.
- To specifically examine gender differences in the individual- and place-level factors predicting men's and women's work injuries. As part of these analyses we also plan to examine the rate of repetitive strain injuries.

Methods: Previous research shows that work injury rates differ by province, as well as regions within a province. These geographic differences in work injury risk may be related to provincial work safety policies, regional demographics, the region's socioeconomic status and social capital, and the region's labour market characteristics (e.g., industrial mix, unionization rates). We will use a national survey to describe work injury risk by province and regions within a province, as well as to identify the correlates of the variability. We will also determine the degree to which geographic variation in work injury risk differs for men and women. This project will provide some of the most detailed information on the geographic distribution and correlates of work injury.

Status: In 2012, we completed analyses on two studies: one examining determinants and geographic variation of work-related repetitive strain injuries (RSIs), and one examining more acute work injuries. The manuscript on work-related RSIs has been accepted at the American Journal of Industrial Medicine. The manuscript examining acute work injuries has been revised and re-submitted to the Annals of Epidemiology. Also, we completed descriptive analysis, created regional maps of Ontario health and safety association regions, and provided provincial injury rates for the Workplace Safety & Prevention Services (WSPS) regional teams.

Researchers: Curtis Breslin (Principal Investigator), Ben Amick, Selahadin Ibrahim, Sara Morassaei, Cam Mustard, James Dunn (St. Michael's Hospital), Jeremy Petch (St. Michael's Hospital), Ketan Shankardass (St. Michael's Hospital), Peter Smith (Monash University)

Stakeholder Involvement: Partners in this project included the Workplace Safety & Prevention Services, the Canadian Auto Workers union, and the Ontario Ministry of Labour.

Potential Audiences and Significance: This project will provide some of the most detailed information on the geographic distribution and correlates of work injuries. This knowledge could, for example, help the prevention system efficiently target resources and activities on regional —hot spots. In addition, information on the socioeconomic and labour market correlates of geographic variation in work injuries would point to non-OHS policy arenas that are a direct concern for efforts to reduce the burden of work injury in Canada. Given the gender segregation pervasive in the Canadian labour market, a gender sensitive approach to these contextual issues is required.

Publications:

Breslin FC, Ibrahim S, Smith PM, Mustard CA, Amick III BC, Shankardass K. The demographic and contextual correlates of work repetitive strain injuries among Canadian men and women. Accepted: American Journal of Industrial Medicine.

Breslin FC, Amick BC, Dunn J, Ibrahim S, Shankardass K, Smith P. (Oct 2012). Geographic variation in occupational injury and its correlates among Canadian men and women. Final Report submitted to Canadian Institute of Health Research (CIHR).

Morassaei S, Breslin FC, Ibrahim S, Smith PM, Mustard CA, Amick III BC, Shankardass K, Petch J. Geographic variation in work injuries: A multilevel analysis of individual-level data and area-level factors within Canada. Accepted: Annals of Epidemiology.

Media Article: Head west, more injuries: Study. Canadian Safety Reporter, written by Melissa Mancini, December 12, 2012, http://www.safety-reporter.com/articleview/16912-head-west-more-injuries-study?utm_source=responys&utm_medium=email&utm_campaign=20121212_HR-CSRNewsletter

Media Article: Workers in Western Canada More at Risk of Injury. OHS Insider, November 1, 2012, <http://ohsinsider.com/do-diligence/workers-in-western-canada-more-at-risk-of-injury>

Media Article: Understanding western Canada's high risk of work injury. Straight Goods News, October 29, 2012, <http://sgnews.ca/blog/2012/10/28/understanding-western-canadas-high-risk-of-work-injury/>

Media Article: All things are not equal: Workers in western Canada at higher risk of injury. At Work, Issue 70, Fall 2012, http://www.iwh.on.ca/system/files/at-work/at_work_70.pdf

Media Article: Study finds persistence of higher injury risk for new workers. Health & Safety Ontario Network Magazine, published by Workplace Safety & Prevention Services (WSPS), Volume 2, Issue 3, No. 6, September 2012, <http://www.healthandsafetyontario.ca/HSO/media/WSPS/NetworkMag/Issue6/department2.htm>

Media Article: Study finds persistence of higher injury risk for new workers. At Work, Issue 69, Summer 2012, http://www.iwh.on.ca/system/files/at-work/at_work_69.pdf

Presentation:

Breslin FC, Ibrahim S, Smith PM, Dunn J, Amick BC, Morassaei S. Regional variation in self reported work injuries among Ontario service sector workers. 16 November 2012; Toronto, Canada: Institute for Work & Health Internal Plenary.

Funding:

Breslin FC, Amick BC, Dunn J, Ibrahim S, Shankardass K, Smith PM. Geographic variation in occupational injury and its correlates among Canadian men and women. CIHR: \$127,112 (2009-2011)

Preventing Musculoskeletal Disorders

These research projects will assess the effectiveness of approaches to the prevention of non-traumatic musculoskeletal disorders in two economic sectors. For example, we will aim to produce new knowledge about the effectiveness of in-person training programs compared with computer-based training programs for workers in seated office environments.

Development and Evaluation of a Computer-based Training Program to Prevent and Manage Musculoskeletal Injuries in Computer-based Work Environments (1150)

Project Status: Ongoing

Introduction: Ontario's growing knowledge and service industries are driven by computing and communication technologies. Consequently, more workers will be exposed to computer-based health and safety hazards. Conducting in-person training (IPT) as a prevention action is time and cost intensive. Computer-based training (CBT) has been shown to be just as effective as IPT in knowledge transfer/acquisition and changing behaviours. CBTs can be delivered quickly with minimal cost. With changing office work environments, however, it is important for office ergonomic training to be as up-to-date as possible with science and standards (e.g. CSA, ANSI and ISO). An office ergonomic expert panel will be convened to ensure the CBT is standard-compliant and comports with recent evidence. Instructional system design theory and usability assessment methods will guide the CBT design and development. The final product will be an evidence-based/standards-compliant office ergonomics CBT program that can be used by workplace parties in combination with other office ergonomic hazard control methods.

Objectives:

- To develop an evidence-based/standard compliant office ergonomics CBT program.
- To test the program's effectiveness in transferring the knowledge and skills required to reduce musculoskeletal disorder symptoms/injuries.

Methods: We will conduct a longitudinal study at the Centre of Addiction and Mental health (CAMH), where a group of 50-60 workers will be followed over time. Data will be collected using internet-based self-administered questionnaires to assess health and self-efficacy, in-person self-administered knowledge test before and after the training, observational data to assess ergonomic risk and appropriate ergonomic adjustment. To develop CBT we will conduct an assessment of whether the CBT is designed based on the current standards and the scientific evidence using an expert panel of ergonomists. We will conduct two formative user assessments with one focus group of the expert panel and two focus groups of CAMH employees. The CBT will be based on successful in-person office ergonomics training.

Status: The team completed pilot evaluation of the CBT at CAMH. We obtained feedback from an expert scientific panel. We then analyzed the data and revised the CBT. We worked with HSO to make CBT available to all employers in Ontario. The final report was submitted to funder and three manuscripts are being prepared. Findings were presented to stakeholders. As well, IWH staff undertook the training.

Researchers: Ben Amick (Principal Investigator), Trevor King, Lynda Robson, Ivan Steenstra, Dwayne Van Eerd, Mark Fernley (Centre for Addiction and Mental Health), Michelle Robertson (Liberty Mutual Research Institute for Safety)

Stakeholder Involvement: Partners in this project include CAMH and Liberty Mutual.

Potential Audiences and Significance: The results of this work are relevant to ergonomists, clinicians, external researchers, and employers.

Publication:

Robertson MM, Amick BC, Fossel AH, Coley CM, Hupert N, Jenkins M, Tullar JM, Katz JN. Undergraduate students' ergonomics knowledge of appropriate computer workstation design and work habits: The emerging young knowledge workforce. In press: Work: A Journal of Prevention, Assessment and Rehabilitation.

Presentation:

King TK, Amick BC, Fernley M, Ibrahim S, Robertson M, Robson L, Steenstra I, Van Eerd D, MacGregor C. The development and pilot evaluation of an online office ergonomics training program. 14-16 August 2012; Halifax, Canada: Association of Canadian Ergonomists Annual Conference.

Funding:

Amick BC, Dondertman B, Robertson M, Robson LS, Steenstra I, Van Eerd D. Development and evaluation of a computer-based training program to prevent and manage musculoskeletal injuries in computer-based work environments. WSIB BTG: \$56,680 (2010-2011)

A RCT of the Effectiveness of Two Office Ergonomic Training Approaches for Seated Environments: Comparing an In-person to Computer-based Training (0261)

Project Status: Ongoing

Introduction: The Ministry of Labour (MOL) Expert Advisory Panel identified improvements in training as key to improving the health and safety of Ontario workers. As the Canadian economy shifts to a service industry base, questions about how to reduce musculoskeletal injuries among knowledge workers become more important. Numerous studies have documented the limitations of low engagement occupational health and safety training in improving workplace health. More research is needed on the effectiveness of high-engagement versus low engagement training in improving health. Furthermore, while many companies offer computer-based training there is little evidence on the effectiveness of computer-based training compared to in-person training. This research addresses both of these issues.

Objectives:

- To produce new knowledge about the effectiveness of in person training programs as compared with computer-based training programs for knowledge workers in seated environments.
- To produce new knowledge about the effectiveness of high engagement versus low engagement training for knowledge workers in seated environments.
- To contribute to the nascent intervention effectiveness literature in office environments by identifying key pathways for reducing MSK injury risk and demonstrate economic benefits.
- To contribute evidence on effectiveness of worker health and safety training in office ergonomics.

Methods: To test the primary health and lost productivity outcome hypotheses, the research team will conduct a longitudinal study in multiple sectors and multiple work sites where groups will be randomly assigned to a control, e-learning, in-person training or a high engagement training model.

Status: In 2012, seven firms were recruited, all baseline observations were completed and the interventions were initiated.

Researchers: Ben Amick (Principal Investigator), Dorcas Beaton, Trevor King, Ivan Steenstra, Emile Tompa, Dwayne Van Eerd, Michelle Robertson (Liberty Mutual Research Institute for Safety)

Stakeholder Involvement: Partners in this project include the Public Services Health & Safety Association, the Workplace Safety & Prevention Services, the Infrastructure Health & Safety Association, and the Liberty Mutual Research Institute for Safety.

Potential Audiences and Significance: This work will be relevant to the MOL, the Ontario Workplace Safety and Insurance Board, health and safety associations, employers, labour, and training companies.

Publications:

Amick BC, Chaumont Menendez C, Bazzani L, Robertson M, DeRango K, Rooney T, Moore A. A field intervention examining the impact of an office ergonomics training and a highly adjustable chair on visual symptoms in a public sector organization. *Applied Ergonomics* 2012; 43(3):625-631.

Menendez CC, Amick BC, Robertson M, Bazzani L, DeRango K, Rooney T, Moore A. A replicated field intervention study evaluating the impact of a highly adjustable chair and office ergonomics training on visual symptoms. *Applied Ergonomics* 2012; 43(4):639-644.

Funding:

Amick BC, Van Eerd D, Steenstra I, Smith PM, Cole DC, Ibrahim S, Tompa E, Bigelow P, Robertson M, Beaton DE. A randomized controlled trial of the effectiveness of two office ergonomic training approaches for seated environments: Comparing an in-person to computer-based training. WSIB-RAC: \$235,047 (2008-2010)

Effective Occupational Health and Safety Practice

IWH has initiated a number of research projects to refine the measurement of organizational policies and practices that support optimal workplace practices. In 2012, we continued to benchmark leading organizational indicators for the prevention and management of injuries and illnesses, in addition to, examining leading indicators from occupational health and safety audit data. In 2012, we also initiated two projects; the first will analyze data already collected through an audit program in order to develop metrics predictive of later firm claim experience. This work will make a unique contribution to the research literature by contributing information on the predictive validity of OHS management audit data. The second project will seek to describe the incidence of repeat workers' compensation claims over a five year period, including measures of total health care expenditures, total wage replacement benefits and days of wage replacement benefits.

High Risk Firm Initiative: Assessing the Impact of Targeted Prevention Consultation Services (0432)

Project Status: Ongoing

Introduction: In 2005, the Ontario Ministry of Labour (MOL) led the development of the Ontario High Risk Firm Initiative, a comprehensive approach to workplace health and safety that aligns the efforts of the MOL inspectorate and the technical consulting and training staff of the Health and Safety Associations (HSAs). Under this initiative, the Ontario government committed to the goal of reducing workplace injuries by 20 per cent over a four-year period. The initiative features two core elements: 1) enhanced inspection and enforcement of health-and-safety systems in Ontario workplaces; and 2) the delivery of education, training and consultation services. The initiative targets Ontario workplaces with the poorest health-and-safety performance.

Objectives:

- To assess whether the High Risk Firm Initiative (HRFI) produces changes in health and safety practices and final outcomes (claims rates; costs and consequences of the initiative) in Ontario firms with costs appropriate to effectiveness and benefits.

Methods: A detailed evaluation protocol was developed, based on the recommendations of the June 2005 workshop. This protocol had four components: 1) plan to evaluate the system as a whole using secondary data sources; 2) primary data collection within a sample of firms, plus randomization of some firms to different components of the intervention; 3) economic evaluation of how firms react to intervention; 4) two qualitative studies - one studying firms and how they respond to the intervention and one studying the inspectors and HSA staff delivering the intervention.

Status: The data for this project was assembled and two of the ranking algorithms were mastered.

Researchers: Sheilah Hogg-Johnson (Principal Investigator), Ben Amick, Cameron Mustard, Lynda Robson, Emile Tompa, Dwayne Van Eerd, Philip Bigelow (University of Waterloo), Donald Cole (University of Toronto), Peter Smith (Monash University)

Stakeholder Involvement: MOL and WSIB continue to be involved with the project by providing data and helping with interpretation of findings.

Potential Audiences and Significance: The results of this research project will have major and broad implications for policy makers interested in the prevention of work-related injuries and the communication and enforcement of workplace safety standards at a system-wide level, both within and outside of Canada.

Publication:

Hogg-Johnson S, Robson LS, Cole DC, Amick BC, Tompa E, Subrata P, Smith PM, Van Eerd D, Mustard CA. A randomized controlled study to evaluate the effectiveness of targeted occupational health & safety consultation or inspection in Ontario manufacturing workplaces. *Occupational and Environmental Medicine* 2012; 69(12):890-900.

Funding:

Hogg-Johnson S, Robson LS, Cole DC, Amick BC, Smith PM, Tompa E, Mustard CA. A randomized controlled study of targeted OHS education, training and consultation in Ontario workplaces - High Risk Firms. WSIB RAC: \$59,700 (2008-2010)

Hogg-Johnson S, Amick BC, Cole DC, Mustard CA, Robson LS, Smith PM, Tompa E, Van Eerd D. Firm selection algorithms-comparison over time. WSIB RAC: \$72,650 (2011-2013)

Understanding the Management of Injury Prevention and Return to Work in Temporary Work Agencies (1125)

Project Status: Completed

Introduction: Temporary work agencies (TWAs) are a growing phenomenon and are part of a new flexible labour market, where the labour forces of organizations can be quickly and easily increased or decreased in response to demand for their product. There are over 700,000 temporary workers in Ontario and 1,300 or more TWAs. Temporary work agencies pose special challenges for the management of workers and their health and safety. While the TWA is the worker's legal employer, the three-way employment relationship between the worker, TWA, and client employer creates difficult conditions for the management of workers' job conditions, injury prevention, and return to work after injury. Also, temporary workers are, in general, at greater risk for occupational accidents and diseases than permanent workers.

Objectives:

- To gain an understanding of how TWAs are organized and how they manage injury prevention and return to work in light of their non-standard organization, and to examine industry-specific policy, legislation, industry norms and practices.
- To examine the responsibilities of client firms for the protection of workers' health and safety.
- To gain an understanding of how TWAs manage a diverse workforce and the client firms who hire the worker; how agency managers communicate with workers and clients about workplace safety, and to learn what injury prevention and management systems and practices exist within TWAs.
- To identify practices that can help protect and restore the health of TWA workers.

Methods: The methods will consist of five parts: 1) analysis of legislation, case law, and policy governing Ontario TWAs and their approaches to workplace health; 2) focus groups with workers employed by TWAs; 3) focus groups with employers who hire labour from TWAs; 4) in-depth interviews with TWA managers who interact with workers and clients; 5) situational grounded theory and discourse analysis of data considered together with legal-policy analysis. An Advisory Group will guide the research.

Status: This study identified aspects of the temporary agency business environment, Workplace Safety and Insurance Board (WSIB) regulations, and Ministry of Labour policies that make it difficult to protect temporary workers' health and safety and can lead to their increased exposure to hazards and poor return-to-work conditions. The study also identified how temporary agencies efforts to prevent work injuries are limited and inadequate. The study led to recommendations for increasing employer accountability for temporary worker injuries, and increasing Ministry of Labour vigilance around temporary agency worker needs and risks. Two journal articles have been published and another 2-3 are planned. Results were also presented at several national and international conferences.

Researchers: Ellen MacEachen (Principal Investigator), Christine Carrasco, Liz Mansfield, Ron Saunders, Harriet South, Agnieszka Kosny (Monash University), Katherine Lippel (University of Ottawa)

Stakeholder Involvement: Partners in this project include Colin Appleby (Industrial Accident Prevention Association); Michael Zacks (Office of the Employer Adviser); Nicholas Robins (Ministry of Labour); Elisabeth Mills (Ontario Services Safety Alliance); Deena Ladd (Workers Action Centre); Kate Lamb (Ministry of Labour); Judy Geary (WSIB); and Cindy Trower (Office of the Worker Adviser).

Potential Audiences and Significance: This study is expected to help the WSIB and the Ministry of Labour policy makers, case managers and inspectors to understand, conceptualize, and respond to workplace health and safety challenges in this growing and non-standard work arrangement. Knowledge of prevention and return to work approaches used by certain TWAs can also contribute to the diffusion of innovation and ideas for overcoming challenges in other industries. The study will have implications for workers, unions, and employers who hire temporary workers, compensation system parties and researchers who are interested in understanding and better managing work and health in the changing labour market.

Publications:

MacEachen E, Lippel K, Saunders R, Kosny A, Mansfield L, Carrasco C, Pugliese D. Workers' compensation experience-rating rules and the danger to worker's safety in the temporary work agency sector. *Policy and Practice in Health and Safety* 2012; 10(1):77-95.

Presentations:

MacEachen E, Lippel K, Saunders R, Kosny A, Mansfield E, Carrasco C, Pugliese D. How safe are workers in the temporary work agency sector? Occupational health and safety gaps and loopholes. 1-2 June 2012; Vancouver, Canada: Canadian Association for Research on Work & Health Conference.

Mansfield E, MacEachen E, Saunders R, Lippel K, Carrasco C. Temporary employment agencies as job creators or labour market gatekeepers? A discourse analysis of a public legislative debate over Bill 139 and employment standards for the temporary help agency sector in Ontario. 1-2 June 2012; Vancouver, Canada: Canadian Association for Research on Work & Health Conference.

MacEachen E, Saunders R, Lippel K, Kosny A, Mansfield L, Carrasco C. Return to work in temporary work agencies: the need for policy intervention. 22-24 October 2012; Groningen, The Netherlands: Work Disability Prevention and Integration (WDPI).

MacEachen E, Saunders R, Lippel K, Mansfield L, Carrasco C. What is the work, where is the workplace, and who is the employer? The challenge of supporting work reintegration of temporary agency workers. 29 June 2012; Toronto, Canada: WSIB Work Reintegration Group.

Mansfield L, MacEachen E, Saunders R, Lippel K, Kosny A, Carrasco C. Temporary Work Agencies as Job Creators or Labour Market Gatekeepers: An Analysis of a Debate on Employment Standards Legislation for Ontario's Temporary Help Agency Sector. 19 June 2012; Toronto, Canada: Institute for Work & Health Internal Plenary.

MacEachen E, Saunders R, Lippel K, Kosny A, Mansfield L, Carrasco C. The management of occupational health and safety and return to work issues in temporary work agencies: findings from a qualitative study. 10 April 2012; Toronto, Canada: Institute for Work & Health Open Plenary.

MacEachen E, Saunders R, Lippel K, Kosny A, Mansfield L, Carrasco C. The dynamics of occupational health and safety vulnerability for temporary agency workers. 18-23 March 2012; Cancun, Mexico: International Commission on Occupational Health (ICOH) Congress.

Funding:

MacEachen E, Kosny A, Lippel K, Saunders R. Understanding the management of injury prevention and return to work in temporary work agencies. WSIB RAC: \$208,941 (2010-2012)

The Safety Case for Business: A Multi-stakeholder Examination of Best Practices and Health and Safety Outcomes (0429)

Project Status: Ongoing

Introduction: By employing a multiple stakeholder perspective this study endeavors to provide empirical support for the safety case for business. Some literature suggests that practices that harm safety may also harm other business outcomes. Unfortunately, the comprehensive and compelling empirical research needed to reach conclusions as to the nature of the relationship between safety outcomes and economic outcomes is rare. The safety focused literature has assumed business outcomes, while the business literature has generally ignored safety outcomes. This study simultaneously examines best practices in safety and business operations and the effects of these best practices on both economic and safety outcomes.

Objectives:

- To empirically explore key relationships between safety and other organizational outcomes.
- To examine the relationship between health and safety outcomes and other operational outcomes such as costs, operating revenues, innovation, quality, flexibility and delivery.
- To study how the best practices in operations affect health and safety outcomes.
- To study how best practices in health and safety affect operational outcomes.

Methods: This project has two phases. In Phase 1 workplace parties were interviewed in about 10 plants/facilities in the manufacturing and transportation sectors in Ontario. The interviews provided deep insights and a cross sectional view of organizations. The information from Phase 1 was used to develop a questionnaire for surveying a larger number of organizations by telephone. In Phase 2, the survey was administered by phone to over 200 plants/facilities across Ontario. In both Phases data was collected from multiple respondents at each organization to get various stakeholder perspectives, specifically operating management, health and safety specialists and workers and/or their representatives. For Phase 2, health and safety outcomes were primarily measured with WSIB data. Statistical modeling is being undertaken to estimate the impact of health and safety on operational outcomes, and the impact of operational outcomes on health and safety.

Status: Two dominant cultures were identified in the case studies. The first dominant culture identified in was the supportive culture for safe operations. Facilities with this culture were committed to safety, were disciplined in how work was done, had a prevention focus, and were participatory. These facilities tended to take a long-term perspective when managing both safety and operations. The second dominant culture was the day-to-day operations culture. Facilities with this culture were not committed to safety, were relatively undisciplined, had a reactive focus, and encourage little or no participation. These facilities had a short-term focus on meeting operational (production) goals. The results show that culture and the choice of practices are related. Specifically, organizations with supportive cultures for safe operations also have joint management systems for safety and operations while organizations with day-to-day cultures tended not to have formal management systems and managed safety and operations separately.

Researchers: Mark Pagell (Principal Investigator, University of Dublin), Emile Tompa (Institute Coordinator), Ben Amick, Arold Davilmar, Sheilah Hogg-Johnson, Sara MacDonald, Lynda Robson, Anna Sarnocinska-Hart, Markus Biehl (York University), David Johnston (York University), Robert Klassen (University of Western Ontario), Anthony Veltri (Oregon State University)

Stakeholder Involvement: Partners supporting this project include a variety of labour associations, the Health and Safety Associations, and employer representatives.

Potential Audiences and Significance: The results of this project will be relevant to several workplace parties, such as employers, workers, and unions, as well as to the Workplace Safety and Insurance Board (WSIB).

Publications:

Longoni A, Pagell M, Johnston D, Veltri A. When lean is mean – a critical empirical exploration of lean practices and worker outcomes. Accepted: International Journal of Production Research.

Pagell M, Dibrell C, Veltri A, Maxwell E, Shah R. Is there a business case for safety? An exploration of operational best practices and worker safety outcomes. Submitted: Management Science.

Pagell M, Johnston D, Veltri A, Klassen R, Biehl M. Is safe production an oxymoron? Exploring how firms manage safety and operations. Accepted: Journal of Production and Operations Management.

Pagell M, Johnston D, Veltri A, Robson L, Shevchenko A. Exploring the decision to manage operations and safety jointly. Submitted: Decision Sciences.

Veltri A, Pagell M, Johnston D, Tompa E, Robson LS, Amick BC. Understanding safety in the context of business operations: Evidence from ten case studies. Safety Science 2013; 55:119-134.

Presentation:

Pagell M. Is safe production an oxymoron? 6 March 2012; Toronto, Canada: Institute for Work & Health Open Plenary.

Funding:

Pagell M, Tompa E, Biehl M, Johnston D, Klassen R, Veltri A, Hogg-Johnson S, Robson LS, Amick BC. The safety case for business: A multi-stakeholder examination of best practices and health and safety outcomes. WSIB-RAC: \$387,300 (2008-2011)

Benchmarking Leading Organizational Indicators for the Prevention and Management of Injuries and Illnesses (1160)

Project Status: Ongoing

Introduction: This research involves a cross-sectional survey of a series of organizational metrics considered important predictors of injury and illness rates and claims duration in a random sample of firms and full enumeration of firms served by Health and Safety Associations (HSAs). The total sample is expected to be 4,500-5,000 firms. The key organizational metrics (70 items) are: five measures of organizational policies and practices developed by Amick (2000) (people-oriented culture, active safety leadership, safety practices, ergonomic policies and practices and disability management programs and practices); one measure of safety culture developed by OHSCO (2008); eight measures for assessing the occupational health and safety (OHS) management system (safety policy, incentives for participation, training, communication, prevention planning, emergency planning, internal controls and benchmarking) developed by Fernandez-Muniz (2007); and one measure of employee relations/joint health and safety committee functioning developed by Shannon (1996) and Amick (2000). The firm-level survey data will be linked to five years of retrospective injury and illness claims data and one year of prospective injury and illness claims to determine which organizational metrics are related to injury and illness claims. We will use this information to describe what the most reliable and valid leading indicators are for use in benchmarking organizational and management behaviour in Ontario firms.

Objectives:

- To build a scientifically grounded evidence base for benchmarking leading indicators of firm organizational and management behaviour in OHS that is relevant to all sectors and all firms.
- To identify a reliable and valid set of firm level measures of organizational and management metrics relevant to OHS and usable by the OHS community.
- To examine relationships between WSIB claim rates & organizational and management metrics.
- To demonstrate a scientifically-grounded procedure for collecting valid firm-level estimates of organizational metrics, aggregating data and disseminating benchmarking data to stakeholders.

Methods: We will use a stratified sampling strategy with strata defined by a combination of sector/HSA affiliation, firm size (< 20 versus 20+ FTE), and geographic region. We will target all firms in all strata of the HSAs. We will be targeting 5,457 firms overall, allowing for some to refuse participation or to have closed prior to the survey, while still maintaining our targeted sample size of 4,500 overall. Sampling weights will be used for some of the analyses we propose. We will also develop some post-sampling stratification weights for non-participation. In our nested studies, we plan to seek 60 participating firms for the test-retest and to determine who the best informant is.

Status: Recruitment of firms and collection of benchmarking data were completed in 2012. Data entry and data management tasks were completed, as well as linking WSIB retrospective data to survey data. Several of the planned nested studies were also conducted.

Researchers: Ben Amick (Principal Investigator), Sheilah Hogg-Johnson, Cameron Mustard, Lynda Robson, Colette Severin, Ivan Steenstra, Emile Tompa, Peter Smith (Monash University)

Stakeholder Involvement: Partners in this project include the Workplace Safety & Prevention Services, the Public Services Health & Safety Association, and Workplace Safety North.

Potential Audiences and Significance: This work will be relevant to the WSIB and HSAs.

Funding:

Amick BC, Hogg-Johnson S, Mustard CA, Smith PM, Tompa E, Robson LS, Steenstra I. Benchmarking leading organizational indicators for the prevention and management of injuries and illnesses. WSIB RAC: \$363,072 (2010-2013)

Developing Leading Indicators from OHS Management Audit Data (1190)

Project Status: Ongoing

Introduction: The development of leading occupational health and safety (OHS) indicators for use across many workplaces is an ongoing challenge. This project will analyze data already collected through an audit program: the Ontario Workplace Safety and Insurance Board (WSIB) Workwell program, in order to develop metrics predictive of later firm claim experience. This work will make a unique contribution to the research literature by contributing information on the predictive validity of OHS management audit data.

Objectives:

- To determine whether OHS management audit items naturally group together to form a single metric or multiple metrics.
- To determine how predictive audit metric(s) are of later firm claim experience.
- To make recommendations, based on data analyses and expert opinion, toward the development of a short version of the audit instrument.

Methods: Factor analyses will be used to analyze the structure of the audit data. Firm audit data will be linked with corresponding firm claims data and associations will be examined using multiple regression methods. Items will be reduced by considering the following: patterns of responses to items, results of factor analyses, the impact of removing items on internal consistency (KR-20 statistic), the correlation of items within scales, the results of applying the equidiscriminatory item-total correlation method and stakeholder input. The impact of reducing items on factor structure and prediction will be tested.

Status: Using confirmatory factor analysis, we confirmed the organization of items into 17 elements in the original instrument. We created a data set by linking claims data with audit data. We conducted regression analysis and found that variables based on audit data were not predictive of claims outcome. It was determined that some items within an element have high correlation, indicating the potential for future item reduction.

Researchers: Lynda Robson (Principal Investigator), Ben Amick, Sheilah Hogg-Johnson, Ivan Steenstra, Dwayne Van Eerd

Stakeholder Involvement: Partners supporting this project include the Ontario Workplace Safety and Insurance Board Workwell program, the Occupational Health Clinics for Ontario Workers, the Public Services Health & Safety Association, and the Workplace Safety & Prevention Services.

Potential Audiences and Significance: The results of this project will be relevant to Ontario occupational health and safety prevention system, and occupational health and safety professionals.

Presentations:

Robson L, Ibrahim S, Amick III BC, Hogg-Johnson S, Subrata P, Steenstra IA, Van Eerd D. Establishing the factor structure and predictive validity of OHS management audit data. 1-2 June 2012; Vancouver, Canada: Canadian Association for Research on Work & Health Conference.

Funding:

Robson LS, Hogg-Johnson S, Amick BC, Van Eerd D, Steenstra I. Developing leading indicators from OHS management audit data. WSIB RAC: \$86,800 (2010-2012)

Repeat Workers' Compensation Claims (1195)

Project Status: Ongoing

Introduction: Many of the characteristics of workers that influence the risk of work-related disability are well-known. In most sectors, men have a higher rate of claims than women, younger workers than those over 45, workers recently hired than those with longer tenure, and those in lower rather than higher paid jobs. However, the characteristics of workers who have multiple workers' compensation claims in a defined period of time is less clearly understood. This project will estimate the incidence of repeat workers' compensation claims over a five year period for a cohort of Ontario workers filing a workers' compensation claim in the period 2000-2005. Components of this project will seek to replicate Ontario analyses on workers' compensation data from the Australian state of Victoria.

Objectives:

- To describe the incidence of repeat workers' compensation claims over a five year period, including measures of total health care expenditures, total wage replacement benefits and days of wage replacement benefits.
- To replicate the Ontario analyses, where appropriate, on workers' compensation data from the Australian state of Victoria.

Methods: This study will be based on two longitudinal cohorts of workers registering an accepted workers' compensation claim for lost-time wage replacement benefits in the period 2000-2005 in Ontario, Canada and Victoria, Australia, where each worker in the cohort will be followed over a five year period from the date of an initial claim to ascertain the registration of subsequent compensation claim(s). Measures will be derived from administrative records of compensation claims to describe the injury, characteristics of the accident, the duration of disability, wage replacement benefit expenditures, benefit expenditures for health care services, characteristics of the worker, characteristics of the employer and frequency of reopened claims. Analytic methods will include descriptive analyses of incidence of repeat compensation claims by gender and age, occupation and industry. Additional analyses will be conducted on workers with histories of repeat lost-time claims to determine if repeat injury arose from the same or different affliction, in the same or different bodily location, occurred while working in the same or different industry and the same or different occupation, or occurred while working with same or different employer.

Status: Progress on this study to date has identified that the total number of first lost-time claims was 423,856 in Ontario and 78,605 in Victoria. The probability of a second lost-time claim within 5 years of the date of the first accident was 0.23 in Ontario and 0.18 in Victoria. The probability of a second claim does not appear to be highly conditional on age, sex, nature of injury, occupation or industry. The distribution of characteristics of second injuries was very similar between Ontario and Victoria: for example in both jurisdictions there was low concordance between the first and second claims on the nature of injury and part of body. In both jurisdictions, the majority of second claims are with the same employer and in the same occupation. Claims lasting longer than 1 year are much less likely to be followed by another claim. This study has used population-based work disability insurance records to compare the incidence of repeat compensation claims in two jurisdictions. Despite differences in scheme benefit policies, this study has found broadly similar patterns in the two settings.

Researchers: Cameron Mustard (Principal Investigator), Jacob Etches, Melanie Fortune, Alex Collie (Monash University)

Stakeholder Involvement: This project team will consult with representatives of the Ontario Workplace Safety and Insurance Board, the Ontario Ministry of Labour, and representatives of health and safety associations in Ontario.

Potential Audiences and Significance: The results of this work are expected to identify characteristics of occupations, industries and injury events that are associated with a higher risk of repeat workers' compensation claims. These findings will be of interest to prevention authorities. The results of this work estimating differences in benefit expenditures between initial and subsequent workers' compensation claims will be of interest to workers' compensation authorities.

Publications:

Etches J, Mustard CA, Ruseckaite R, Collie A. Repeat workers' compensation claims: A prospective analysis in Ontario, Canada and Victoria, Australia. Submitted: American Journal of Industrial Medicine.

Fortune M, Etches J, Mustard CA. Repeat compensation claims in Ontario: are some industries' workers more vulnerable? Submitted: Occupational and Environmental Medicine.

Presentation:

Etches J, Mustard CA, Ruseckaite R, Collie A. Repeat workers' compensation claims: A prospective analysis in Ontario, Canada and Victoria, Australia. 1-2 June 2012; Vancouver, Canada: Canadian Association for Research on Work & Health Conference.

International Symposium on the Challenges of Workplace Injury Prevention through Financial Incentives (1245)

Project Status: Completed

Introduction: Although experience rating has become one of the principal policy levers of workers' compensation providers, evidence of its effectiveness is mixed and it remains a debated and contested topic. For instance, the recent Arthurs review of experience-rating of workers' compensation in Ontario suggests its efficacy is not proven. The topic has primarily been investigated in the economics literature, but the evidence base is modest, due partly to the unavailability of high-quality measures of experience rating. This international symposium on the challenges of workplace injury prevention through financial incentives was focused on experience rating. The symposium launched the latest research on financial incentives, including the international papers assembled by Tompa in a special issue of the Journal of Policy and Practice in Health and Safety on the topic of experience rating, published in the spring of 2012. The symposium provided a forum for researchers, students, policy makers, injured workers, employer organizations, worker organizations, and other stakeholder groups to learn about the latest evidence, debate OHS incentive strategies, and identify opportunities for improving health and safety of workers.

Objectives:

- To present new research findings on financial incentives in workers' compensation.
- To facilitate the exchange of knowledge among academic researchers, students, policy makers, injured worker communities, employer organizations, worker organizations, and other stakeholder groups on financial incentives for occupational health and safety.
- To focus on key themes: evidence on the behavioral incentives of experience rating; alternative financial incentives in workers' compensation premium setting; claim and cost management issues associated with financial incentives.
- To support capacity building for research and knowledge transfer and exchange on financial incentives in workers' compensation.
- To identify knowledge gaps and research priorities on the financial incentives in workers' compensation.

Methods: The symposium was organized a symposium planning committee consisting of Ontario stakeholders and several academics. The planning committee brainstormed on the symposium scope and objectives. They developed an activity plan for a two day symposium. A venue for the symposium was confirmed and meeting details posted on a website. Invitations were sent out and a pre-meeting package consisting of summaries of key research studies and other symposium related material were sent out to invitees in advance of the symposium.

Status: We received a meeting grant from CIHR for the planning of the symposium. The two-day symposium was held on November 29-30, 2012. It had approximately 180 delegates from across Canada and from around the world. The symposium launched the latest research on financial incentives, including international papers published in a special issue of the Journal of Policy and Practice in Health and Safety in 2012. Plenary session recordings and concurrent session PowerPoints are available on the Institute website.

Researchers: Emile Tompa, Ellen MacEachen (Co-principal Investigators)

Stakeholder Involvement: The advisory panel included representation from the Workplace Safety & Prevention Services, the Ontario Federation Labour, the Office of the Employer Advisor, an injured worker advocate, and an international academic.

Potential Audiences and Significance: The symposium was attended by 180 academic researchers, students, policy makers, injured worker communities, employer organizations, and worker organizations from around the world. The symposium highlighted new research findings on financial incentives in workers' compensation, and identified knowledge gaps and research priorities on the topic.

Publications:

Tompa E. Experience rating in workers' compensation: guest editor editorial. *Policy and Practice in Health and Safety: Special Issue on Experience Rating 2012*; 10(1):1-2.

Mansfield L, MacEachen E, Tompa E, Kalcevich C, Endicott M, Yeung N. A critical review of literature on experience rating in workers' compensation systems. *Policy and Practice in Health and Safety: Special Issue on Experience Rating 2012*; 10(1):3-25.

Tompa E, Hogg-Johnson S, Amick B, Wang Y, Shen E, Mustard C, Robson L. Financial Incentives in Workers' Compensation: An Analysis of the Experience Rating in Ontario Canada. *Policy and Practice in Health and Safety: Special Issue on Experience Rating 2012*; 10(1):117-137.

Tompa E, Cullen K, McLeod C. Update on a systematic literature review on the behavioural incentives of experience rating. *Policy and Practice in Health and Safety: Special Issue on Experience Rating 2012*; 10(2):47-65.

Presentations:

Mansfield L, MacEachen E, Tompa E, Kalcevich C, Endicott M, Yeung N. A critical review of literature on experience rating in workers' compensation systems. 29-30 November 2012; Toronto, Canada: International Symposium on the Challenges of Workplace Injury Prevention through Financial Incentives.

Mustard CA, Smith PM, Tompa E, Petch J, McLeod C, Koehoorn M. Comparison of worker's compensation experience rating programs in the long-term care sectors in Ontario and British Columbia. 29-30 November 2012; Toronto, Canada: International Symposium on the Challenges of Workplace Injury Prevention through Financial Incentives.

Tompa E, Hogg-Johnson S, Amick BC, Wang Y, Shen E, Mustard C, Robson L. Financial incentives in workers' compensation: an analysis of the experience-rating programme in Ontario, Canada. 29-30 November 2012; Toronto, Canada: International Symposium on the Challenges of Workplace Injury Prevention through Financial Incentives.

Tompa E, MacEachen E. Symposium Organizers: International Symposium on the Challenges of Workplace Injury Prevention through Financial Incentives. Nov 29-30, 2012. www.iwh.on.ca/prevention-incentives-2012

Funding:

Tompa E, MacEachen E. Challenges of workplace injury prevention through financial incentives in a global economy. CIHR: \$25,000 (2012-2013)

Regulation and Incentives

In the thematic area of regulation and incentives, Institute scientists will continue their work evaluating the Ontario prevention system. Specifically, we continue to examine the impact of experience rating on the incidence of workers' compensation claims. In 2012, we worked on the following two projects; one that examined the impact of experience rating and OHS on claims experiences in British Columbia and Ontario, and the other that looked at the incidence of breakthrough improvements in a workplace's rate of injury and illness.

The Impact of Experience Rating and Occupational Health and Safety on Claims Experience in British Columbia and Ontario (1130)

Project Status: Ongoing

Introduction: Tying workers' compensation premiums of firms to their claims burden to varying degrees (known as experience rating) is a principal policy lever that insurance providers use to encourage firm-level investment in health and safety. The mechanics of how premiums are experience rated can vary quite dramatically from jurisdiction to jurisdiction, though few studies have investigated the effects of experience rating with direct measures of program features, and even fewer have undertaken comparative analysis of different approaches to experience rating. To respond to these research gaps, we plan to undertake a comparative analysis of workers' compensation premium setting in British Columbia and Ontario using micro-data at the firm level (from 2000-2008) to investigate the impact of various features of the two programs.

Objectives:

- To assess the incentive effects of prospective (British Columbia) versus retrospective (Ontario) experience rating programs.
- To assess the incentive effects of other features of the programs such as the degree of experience rating (using direct measures such as the rating factor), the maximum per claim and per firm costs considered in the program, the weight given claims costs from previous years, and the graduated participation aspect of the British Columbia program.

Methods: We will use regression modeling techniques to identify the effects of experience rating features and other contextual factors on measures of safety performance. Since the outcome measures will be rates or counts of claims by type, we will consider the Poisson and the negative binomial regression models. Another modeling approach we will consider is multi-level modeling, because some categories of firm characteristics such as size or industry may have less variability within than across categories. Time period, jurisdiction, industry, and firm-level contextual factors that bear on outcomes will be controlled for in the analyses. We plan to use a range of outcome measures at the firm level based on claims data that provide insight into safety and claims management activities. To overcome the fact that claims are not synonymous with injuries, we will use categories of claims that are less likely to be affected by reporting bias such as permanent impairments, acute trauma injuries and fatalities and compare them to those more likely to be affected. We will also use claims data in other creative ways to uncover specific behavioural consequences of the programs.

Status: In the first set of analyses we focus on the British Columbia (BC) sample only, and included all organizations in the BC Experience Rating (ER) program. The three key explanatory variables were based on premium changes between two successive years, specifically: 1) the percentage change in premiums between the most recent year and the year prior, 2) percentage change in premiums between the year prior and two years prior; and 3) the percentage change in premiums between two years prior and three years prior. Key outcome variables were: 1) total claim rate, 2) no-lost time claim rate, 3) short-term disability claim rate, 4) short-term disability days on benefits rates, and 5) long-term disability claim rate. In all models the key explanatory variables had the effects in the directions hypothesized when statistically significant—a larger percentage change in premiums was associated with a larger reduction in the claim rate outcomes. The largest impact on claim rates arose from percentage change in premiums between the year prior and two years prior. The smallest impact on claim rates arose from the percentage change in premiums between the most recent year and the year prior. This suggests that organizations take time to react to premium changes associated with the experience rating program. Impacts are greatest after a one year lag. In the second set of analyses we compared the BC ER program with the Ontario NEER program. Only large organizations were retained in the BC sample, since the Ontario NEER program only includes large organizations. Explanatory and outcome variables were the same as the first set of analyses. For the BC sample of large organizations, the results were comparable to that of the analyses with all BC ER organizations. For the Ontario models the key explanatory variables had the effects in the directions hypothesized when statistically significant—a larger percentage change in premiums was associated with a larger reduction in the claim rate outcomes. The key difference with the

Ontario and the BC results was that in Ontario the largest impact on claim rates arose from the most immediate premium adjustments, whereas the largest impact occurred with a one year lag in the BC program. Also, the impact of premium adjustment on claim rate outcomes was larger for all key explanatory variables, when significant, for the Ontario program.

Researchers: Emile Tompa (Principal Investigator), Cameron Mustard, Chris McLeod (University of British Columbia)

Stakeholder Involvement: Partners supporting this project include senior policymakers with the Ontario Workplace Safety and Insurance Board (WSIB) and WorkSafeBC.

Potential Audiences and Significance: WorkSafeBC and workplace parties in British Columbia will be particularly interested in the study findings, as they have a vested interest in the experience rating program. The findings will also be of interest to policymakers at the WSIB and at workers' compensation boards across Canada and the United States. Researchers investigating work and health issues, and particularly system level incentives for health and safety, are another target audience of this research.

Funding:

Tompa E, Mustard CA, McLeod C, Moore I. A comparative analysis of the occupational health and safety incentives of workers' compensation premium setting in British Columbia and Ontario. WorkSafeBC: \$201,342 (2009-2011)

Breakthrough Change in Workplace Occupational Health and Safety Performance (1145)

Project Status: Ongoing

Introduction: This project consists of three related mixed methods projects. They address the need of workplaces to better understand the degree to which large and intentional improvement in a workplace's rate of injury and illness "breakthrough change" (BTC) is possible and what factors are critical to making such change. The first project (P1) involved screening WSIB claim statistics to find firms that underwent BTC and then studying four in-depth. The second project (P2) involves a multiple case study of three sister manufacturing plants with contrasting outcome profiles (BTC, more modest change, no change) and includes nested quantitative analyses. The third project (P3) will test the validity of the BTC factors emerging from the first study, by investigating "stay-the-same" (STS) cases matched to the four in the first study. STS cases will be matched on size, sector and earlier poor performance; they will differ from BTC cases in having not undergone a large change in claim rate. Qualitative methods will be used to understand the basis for differences over time in OHS performance between BTC and STS cases.

Objectives:

- To determine the incidence of breakthrough change (BTC) in Ontario firms. (P1)
- To determine the critical success factors involved in BTC changes within individual firms and those common across BTC firms. (P1)
- To understand why and how firms make breakthrough improvements in their safety performance over time in manufacturing. (P2)
- To identify and understand factors determining differences in work injuries in manufacturing. (P2)
- To understand relationships between operational and safety performance in manufacturing. (P2)
- To test the validity of BTC factors. (P3)

Methods: Quantitative analysis of WSIB records, coupled with telephone interviews of a sample of firms that appear from claims statistics to have experienced BTC, in order to define BTC and describe its incidence in Ontario firms. Secondly, a multiple case study technique will be used to identify success factors critical to BTC in individual firms and across firms.

Status: Analysis on project 1 is ongoing. A report on project 1 was submitted to the funder (WSIB RAC). The findings of project 1 were presented at an academic conference and a manuscript is currently in progress. The results of project 1 are that an estimated that 1 in 200 Ontario firms underwent BTC over a decade. Through qualitative analysis, have found that there are several critical success factors occurring in 3 or all 4 of the cases, and we are currently finalizing the articulation of these. Project 2 was selected for funding by the WSIB RAC. Ethics approval was obtained for project 2. Commitments and timelines with partner workplaces were finalized. We visited three plants and collected data based on observations, review of documentation and 40 interviews.

Researchers: Lynda Robson (Principal Investigator), Ben Amick, Sheilah Hogg-Johnson, Liz Mansfield, Emile Tompa, Mark Pagell (University of Dublin), Harry Shannon (McMaster University)

Stakeholder Involvement: Partners include the Infrastructure Health and Safety Association, the Public Services Health & Safety Association, the Workplace Safety & Prevention Services, the Workers Health & Safety Centre, the Business Council on Occupational Health and Safety, and the Ministry of Labour.

Potential Audiences and Significance: The results of this project will be relevant to employers, health and safety associations, joint health and safety committees, the Ministry of Labour, the Workplace Safety and Insurance Board, and other researchers.

Publications:

Robson LS. Breakthrough change in OHS performance. Final report to Workplace Safety and Insurance Board (WSIB).

Presentations:

Robson L, Moser C, Amick III BC, Swift M, Pagell M, Hogg-Johnson S, Shannon H. Breakthrough change in Occupational Health & Safety. 1-2 June 2012; Vancouver, Canada: Canadian Association for Research on Work & Health Conference.

Robson L, Amick B, Moser C, Swift M, Hogg-Johnson S, Mansfield L, Pagell M, Shannon H, Subrata P. Breakthrough change in workplace OHS performance – interim findings. 8 June 2012; Toronto, Canada: IWH Health and Safety Association Liaison Committee.

Robson L, Amick B, Moser C, Swift M, Hogg-Johnson S, Mansfield L, Pagell M, Shannon H, Subrata P. Interim findings on an exploratory study of “breakthrough change” in workplace occupational health and safety. 12 June 2012; Toronto, Canada: Institute for Work & Health Internal Plenary.

Robson L. Interim findings from an exploratory study of “breakthrough change” in workplace OHS. 4 October 2012; Toronto, ON: Quarterly IWH-MOL Policy Forum.

Robson LS, Moser C, Amick III BC, Swift M, Pagell M, Hogg-Johnson S, Shannon HS, Mansfield L. Searching for breakthrough performance in occupational health and safety performance: demonstration of a method to find positive deviants. 11-12 October 2012; Copenhagen, Denmark: Presented at “Understanding the function of working environmental policy instruments” workshop. Hosted by Centre for Research on Working Environment Policy and its Impact (CAVI).

Funding:

Robson LS, Amick BC, Hogg-Johnson S, Mansfield L, Pagell M, Shannon HS. Breakthrough change in workplace OHS performance. WSIB BTG: \$57,668 (2009-2011)

Robson LS, Amick BC, Pagell M, Mansfield L, Shannon HS, Hogg-Johnson S, Tompa E. Further exploration of breakthrough change in OHS performance. WSIB RAC: \$180,360 (2012-2014)

Evidence Guides and Tools

Stakeholders are always interested in seeing research information developed into highly practical and applied tools. Some primary prevention projects at IWH lead to this type of product, such as the “Smart Planner” and the Participatory Ergonomics guide. While the initial “Smart Planner” project was completed, a new project received funding in order to develop a training workshop for workplace parties. Others focus more on the validation of existing tools. Included also in this section are projects assessing the measurement properties (e.g., reliability and validity) of an existing tool, and developing a prevention system monitoring report.

Development and Evaluation of Musculoskeletal Disorder Pictograms for the Ontario Prevention System (1110)

Project Status: Ongoing

Introduction: This project will address the needs of the English as a Second Language (ESL) population in Ontario's service sector. The initial focus of the project will be MSDs, which account for 30% of long-term claims, 53% of lost time days and 49% of benefit costs in Ontario's service sector. The pictogram approach has been proven to be a successful way to share important messages across various barriers, including cultural, language, age and education. Ontario Service Safety Alliance (OSSA) members need support in effectively communicating ergonomic hazards in their workplaces. This project will continue to support OSSA's alignment with other system partners and initiatives.

Objectives:

- To increase the accessibility of the MSD Guideline and Tool Kit to small businesses.
- To provide tools that would be suitable for vulnerable workers (youth, aging, immigrant, ESL).
- To provide health and safety in a manner that is simplified and easily understood.
- To ensure an evaluation component of the kitchen prep pictograms is developed.
- To develop pictograms for the hotel/motel sector and validate the existing tools.
- To transfer knowledge into the health and safety system.

Methods: In each phase of the project, literature scans will be conducted to identify best practices in, for example, tailoring training to or developing measurement tools for low literacy and English as a second language worker. Our goal in the scan is to inform the work and the stakeholder dialog. Intervention development will use focus groups for pictogram and training development. The development of the measurement tools, including the self-efficacy measure, will be supported by one-on-one interviews and, if possible, focus groups. Finally, the observational tool and training will be developed internally and pilot tested to examine inter-rater reliability.

Status: We recruited two hotels for focus groups and observations and presented to the Joint Health and Safety Committees. The team then finalized the preliminary tools, scheduled observations, completed pictograms in training; and presented a plenary with the Workplace Safety & Prevention Services. To date, observations have been conducted in one hotel.

Researchers: Ben Amick (Principal Investigator), Trevor King, Lynda Robson, Dwayne Van Eerd, Kim Grant (Workplace Safety & Prevention Services), Michelle Robertson (Liberty Mutual Research Institute for Safety)

Stakeholder Involvement: Partners in this project include the Workplace Safety & Prevention Services, the Workplace Safety and Insurance Board, and the Ministry of Labour.

Potential Audiences and Significance: The results of this work will be relevant to the Workplace Safety & Prevention Services, the Workplace Safety and Insurance Board, and the Ministry of Labour, as well as other prevention partners.

Presentation:

King T, Grant K, Hogg-Johnson S, Ibrahim S, Steenstra I, Amick BC. Alternative methods for reaching vulnerable workers: A pilot evaluation of pictograms and training in the preparation kitchen service sector. 1-2 June 2012; Vancouver, Canada: Canadian Association for Research on Work & Health Conference.

Funding:

Amick BC, Grant K, Breslin FC, Van Eerd D, Steenstra I, Keown K, Robson LS, Robertson M. Developing an intervention to reduce occupational health and safety risk among vulnerable workers: Pictograms and training for low-literacy hotel/motel workers. WSIB RAC: \$29,760 (2010-2011)

Occupational Health and Safety Economic Evaluation Resource Needs for the Health Care Sector in Ontario (1200)

Project Status: Completed

Introduction: This research is a developmental project aimed at identifying the best way to advance evidence-based occupational health and safety (OHS) resource allocation decision-making in the health care sector in Ontario. The full research project to follow from this development work will be economic evaluation tools and training development for the economic evaluation of OHS programs. Such initiatives will assist healthcare decision makers with identifying the most effective and efficient ways to protect the health of their workers. Within the current structure of the Ontario healthcare sector, decisions are spread across many parties and organizations with varying ability to evaluate OHS alternatives. Second, the data available for input into an economic evaluation varies across different healthcare organizations. Third, there are a range of economic evaluation analytic skills amongst OHS administrators and decision makers.

Objectives:

- To identify the best way to advance evidence-based OHS resource allocation decision making in the Ontario healthcare sector.
- To undertake an environmental scan and needs assessment.

Methods: We used a mixed methods approach consisting of schema mapping, in-depth interviews, and surveys to meet the objectives identified above. The work was undertaken in collaboration with partners from the healthcare field who provided input and feedback on data collection activities at four ½ day meetings held over the course of the study.

Status: Three types of organizations were identified as the preferred focus for our development work by our partners—hospitals, long-term care facilities, and community nursing organizations. The in-depth interview and telephone survey analyses revealed a variety of OHS cultures within the types of organizations. Some commonalities and decision making patterns were identified for hospitals, long-term care facilities and community nursing organizations. Scarcity of resources was a common theme. Across most organizations participating in the study we found that there was a lack of time to complete comprehensive evaluations of interventions, but more importantly there was a lack of understanding of economic evaluation methods. Most respondents were aware of their need to improve their skills in this area, but were not familiar with where to acquire such skills. Some organizations did complete business case analyses for Senior Leadership's approval of a new initiative, but ongoing formal evaluation was not common. Most respondents felt that better understanding of the resource implications of OHS programs would be of value to them and that they could use training and tools to help advance their ability to undertake economic evaluations.

Researchers: Emile Tompa (Principal Investigator), Ben Amick, Sara MacDonald, Cameron Mustard, Laurie Clune (Ryerson University), Carolyn Dewa (Centre for Addiction & Mental Health)

Stakeholder Involvement: Project partners included Patricia Boucher (Public Services Health & Safety Association), Linda Haslam-Stroud (Ontario Nurses' Association), Tim Savage (Ontario Hospital Association), and John Amodeo (Ministry of Health and Long Term Care). Partners will meet with the research team four times over a one year period to provide guidance on the study.

Potential Audiences and Significance: This research will be of interest to the WSIB, the Ministry of Health and Long Term Care, decision makers in healthcare organizations in Ontario, and the Public Services Health & Safety Association.

Publications:

Guzman J, Ibrahimova A, Tompa E, Koehoorn M, Alamgir H. Non-wage losses associated with occupational injury among healthcare workers. In press: *Journal of Occupational and Environmental Medicine*.

Soklaridis S, Cassidy JD, van der Velde G, Tompa E, Hogg-Johnston S. The Economic Cost of Return-To Work: The Employer's Perspective. *Work: A Journal of Prevention, Assessment and Rehabilitation* 2012; 43(3):255-262.

Tompa E. Chapter 4: Measuring the burden of work disability: A review of methods, measurement issues, and evidence. In: *Handbook of Work Disability: Prevention and Management*, Anema H, Loisel P (eds.) Springer, In press.

Tompa E, Clune LA, Mustard CA, Dewa CS, Amick BC, Sarnocinska-Hart A. May 2012. OHS Economic Evaluation Resource Needs for the Health Care Sector in Ontario. Final Report submitted to WSIB Research Advisory Council.

Tompa E, Dolinschi R, Natale J. Economic Evaluation of a Participatory Ergonomics Intervention in a Textile Plant. *Applied Ergonomics* 2013; 44:480-487. DOI: 10.1016/j.apergo.2012.10.019.

Tompa E, Foley M, Van Eerd D. Chapter 37: Economic Analysis of Ergonomic Interventions. In: Wilson JR and Corlett N. (eds.) *Evaluation of Human Work*, 4th Edition. Taylor & Francis Group, In press.

Tompa E, Macdonald S. Economic Evaluation in OHS: A Primer for Health-care Decision-makers. Booklet prepared for the health care sector.

Tompa E, van der Beek A, van Tulder M. Chapter 22: Disability Management: Economic Considerations. In: *Handbook on Return to Work*, Schultz IZ, Robert Gatchel R (eds.) Springer, In press.

Uegaki K, van der Beek AJ, Tompa E, van Tulder MW. Chapter 21: Cost-effectiveness of interventions for prevention of work disability. In: *Handbook of Work Disability: Prevention and Management*, Anema H, Loisel P (eds.) Springer, In press.

van Dongen HM, Tompa E, Clune L, Sarnocinska-Hart A, Bongers PM, van Tulder MW, van der Beek AJ, van Wier MF. Bridging the gap between the economic evaluation literature and daily practice in occupational health: a qualitative study among decision makers in the healthcare sector. Submitted: *Implementation Science*.

Funding:

Tompa E, Mustard CA, Amick BC, Clune L, Dewa C. OHS economic evaluation resource needs for the health care sector in Ontario. WSIB RAC: \$29,960 (2010-2011)

Economic Evaluation of Health and Safety Programs: A Training Workshop for Workplace Parties (1220)

Project Status: Ongoing

Introduction: Organizations regularly face challenging resource allocation decisions in an effort to remain competitive and profitable. With sometimes competing demands on scarce funds, managers need to allocate resources wisely across all parts of the organization. Consequently, complete information on the costs and consequences of health and safety (H&S) initiatives can be critical to the decision making process. Yet far too often organizations do not have the skill set to evaluate the cost and consequences of initiatives. In this project we are developing and delivering a half-day training workshop for workplace parties—managers, labour representatives, and H&S practitioners —on the economic evaluation of H&S initiatives. Four sessions will be delivered free of charge. The workshop will not be sector or organization size specific, though there will be a focus on recruiting participants from small- and medium-sized businesses. Through our previous work we have found that the greatest need for skills development is within this group.

Objectives:

- To increase awareness of the need to consider the cost and consequences of H&S initiatives systematically, comprehensively, and on an ongoing basis.
- To advance knowledge about sound economic evaluation methods for H&S initiatives.
- To increase the comfort level and ability to apply economic evaluation methods in workplaces.
- To stimulate dialogue and discussion, in workshop breakout session, about overcoming barriers to undertaking in-house H&S economic evaluations.

Methods: To develop the workshop content, in-depth interviews are being undertaken with workplace parties to get insights into the H&S decisions they confront, the challenges they face when making decisions, the analyses they currently do, and the information resources they currently access to assist with decisions. The interviews will facilitate customizing the workshop and will be the basis for a manuscript. To create and execute the workshop, the ADDIE model of instructional design is being used. ADDIE is a five-phase design approach that consists of Analysis, Design, Development, Implementation, and Evaluation.

Status: In 2012, we obtained ethics approval for this work. We held a team meeting to design the interview questionnaire. We also developed and started workplace interviews which are currently ongoing.

Researchers: Emile Tompa (Principal Investigator), Emma Irvin, Sara MacDonald, Lynda Robson, Kim Grant (Workplace Safety & Prevention Services), Kiran Kapoor (Workplace Safety & Prevention Services)

Stakeholder Involvement: Workplace parties will be involved in interviews and will participate in four workshops. HSA representatives from WSPS are involved as co-investigators.

Potential Audiences and Significance: This study is relevant to the Ontario Workplace Safety and Insurance Board, workplace parties in Ontario, and workers' compensation authorities and workplace parties across Canada.

Funding:

Tompa E, Grant K, Kapoor K, Robson L, Keown K, Irvin E. Economic evaluation of H&S programs: A training workshop for workplace parties. WSIB: \$58,880 (2010-2011)

Assessing the Feasibility of an Occupational Health and Safety Training Program that would Embed Curriculum for Enhancing Literacy and Other Essential Skills (1225)

Project Status: Ongoing

Introduction: This project will examine the feasibility of developing, implementing and evaluating a training program that would improve literacy and other essential skills (LES) as part of occupational health and safety (OHS) training. Research has shown that as little as 10 to 40 hours of training in areas such as oral communications, using documents or basic numeracy functions (e.g., percentages) can improve skills. However, there is little or no research on whether adding literacy curriculum to OHS training would make it more effective.

Objectives:

- To modify the curriculum of an OHS training program so as to enhance literacy and other essential skills and thereby enhance the effectiveness of the training in realizing OHS outcomes such as improved worker knowledge, worker and organizational actions that reduce injury risk, and reduced illness and injury rates.
- To explore the feasibility of developing and evaluating a pilot program, in consultation with OHS trainers, LES trainers, Health and Safety Associations (HSAs) and key stakeholders.

Methods: We will consult with organizations involved in delivery of OHS training in Ontario and with LES expert. We will review curriculum materials for selected OHS training programs (where there are LES issues). A literature search and a review of workers' compensation claims data will be conducted. We will develop selection criteria to identify programs most suitable for the proposed intervention. We will develop an outline of proposed changes to the curriculum and an outline of an evaluation plan.

Status: All feasibility criteria established at the outset of the study were met, namely: identification of a suitable target population (with significant exposures or injury burden and a significant gap between the average literacy skill levels of the current workforce and the actual skill requirements of the job); identification of existing OHS training program that could be extended to include literacy-enhancing curriculum; availability of partner with strong track record in OHS training; availability of partner with strong track record in LES training; availability of sites willing to participate in the demonstration and evaluation project; and achievement of consensus on outline of program model and evaluation model.

Researchers: Ron Saunders (Principal Investigator), Curtis Breslin, Lynda Robson, Karen Myers (Social Research and Demonstration Corporation)

Stakeholder Involvement: Organizations consulted included several health and safety associations (HSAs), a large employer association, and two unions involved on OHS training.

Potential Audiences and Significance: A training program with beneficial effects on OHS outcomes could be of interest to training providers, employer and labour organizations, and policy-makers.

Presentations:

Saunders R. Developing an OHS training program that enhances essential skills. 1-2 June 2012; Vancouver, Canada: Canadian Association for Research on Work & Health Conference.

Saunders R. Developing an OHS training program that enhances essential skills. 2 October 2012; Toronto, Canada: Institute for Work & Health Internal Plenary.

Funding:

Saunders R, Myers K, Robson LS, Breslin FC. Assessing the feasibility of developing, implementing and evaluating an occupational health and safety training program that would embed curriculum for enhancing literacy and other essential skills. WSIB RAC: \$29,100 (2012-2013)

Validation of an Ontario Prevention System Leading Indicator (1230)

Project Status: Ongoing

Introduction: In 2008, all Ontario Prevention System Partners (HSAs, MOL, WSIB and IWH) developed and piloted eight questions to quickly assess an organization's occupational health and safety performance. Using the eight questions, an organizational performance metric (OPM) was developed. In pilot work, the OPM predicted an employer's injury and illness claims rate in the last four years. The best employers, as rated by the OPM, had the lowest claim rates and the poorest performers the highest. The proposed research builds the scientific evidence base for the OPM tool by answering methodological and practical questions raised in the pilot work by stakeholders.

Objectives:

- To examine whether the OPM tool predicts future injury and illness rates.
- To examine whether the OPM tool is responsive to changes in the organization.
- To study how different modes of administration may affect responses (i.e., phone, in-person, over the internet, in meeting).
- To examine what responders are thinking when they answer the eight questions.

Methods: We will collaborate with the HSAs to re-contact and re-survey the 630 participating firms from 2009 to assess current OPM scores and if significant organizational changes occurred that are related to OPM score changes. We will link the survey data to WSIB claims data to examine predictive validity. We will conduct a nested mode of administration study randomizing firms to one of four arms (on-line, in-person, internet and in meeting). We will conduct 30 cognitive interviews expected to last about 1 hour as we will also explore alternative response formats. We will also conduct a series of case studies of the 10 matched firm pairs (one rated high on the OPM metric and one rated low).

Status: We met with five HSAs to reach consensus on the workplan. We developed the final questionnaire and finalized the new contact list. Firms were randomized by mode of administration. Data collected was initiated and is currently ongoing.

Researchers: Ben Amick (Co-Principal Investigator), Lynda Robson (Co-Principal Investigator), Sheilah Hogg-Johnson, Karen Turner, Dwayne Van Eerd, Peter Smith (Monash University)

Stakeholder Involvement: The HSAs (OHCOW, WSPS, PHSA, IHSA, WSN) are all involved directly in the research project. They will be contacting firms and re-administering the eight OPM questions, and will be collaborating with IWH to determine how to utilize the results. The Ontario Ministry of Labour (MOL) and WSIB have also been active in the tool's development and will continue to be involved. Linkages have already been made with the integration of HSAs into the research project. In addition, two stakeholder workshops are planned; one to share the survey results and to discuss how to share them with the participating businesses and a second workshop to review the usability of the OPM metric. This metric will integrate all the information from the surveys, case studies/audit work and cognitive interviews. Following these workshops, KTE will continue to engage a subgroup of these HSA stakeholders on the design and final format for the OPM tool. We will hold focus groups with a larger user community to test the design and layout of the tool.

Potential Audiences and Significance: In addition to the HSAs, other groups who will be interested in the findings include WSIB, MOL, employer organizations, organized labour and researchers.

Funding:

Amick BC, Robson LS, Hogg-Johnson S, Van Eerd D, Smith PM. Validation of an Ontario prevention system leading indicator. WSIB RAC: \$249,982 (2012-2014)

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Prevention and Management of Work Disability

The Institute has been committed to the study of return to work issues for over a dozen years. Its research portfolio in this area includes systematic reviews, observational studies based on primary data collection, and observational studies using administrative or secondary data. This portfolio of work has led to the development of tools for practical application in workplace parties and the compensation system.

In 2012, our portfolio of research included the continued examination for the risk factors for chronicity and understanding the phenomenon of claims persistency, as well as the examination of several interventions designed to improve the process and sustainability in return to work. As part of our focus in disability management and prevention, our research in the measurement of health and function continued to engage the clinical staff of the WSIB specialty clinics.

2012 Quick Statistics

Completed projects (8)

Ongoing projects (15)

Papers published or in press (28)

Peer review papers submitted (5)

Presentations of results (25)

External grants held (21)

Measuring Health and Function

Over the past 17 years, the Institute has focused on several aspects of research relevant to clinical care: the measurement of health and function includes understanding the course of disability and recovery; and the development of a clinical evidence base on the effectiveness of clinical interventions. These measurement tools and evidence on the clinically effective interventions for work related disability should assist the WSIB in their goal of increasing their capacity to measure other return to work and health care outcomes to improve the effectiveness of their business management.

Through 2012, researchers undertook a longitudinal cohort of injured workers who are attending the WSIB specialty clinic in Toronto and in London with the goal of understanding the usual course of persons attending the specialty clinic and to identify modifiable and non-modifiable factors that could predict the likely course of injured workers.

Measurement Methodology Studies (0925)

Project Status: Ongoing

Introduction: This is a group of studies with a primary focus on measurement issues and the development of measurement instruments. The data for much of this work comes from projects initiated for other research objectives within this theme and are described subsequently within each of those projects in greater detail.

Objectives:

- To advance our understanding of the measurement of longitudinal data collection (change versus trajectories).
- To advance our understanding of transitions in health (when pain becomes a problem, and measurement and interpretation of recovery).
- To disseminate our findings through peer-reviewed publications, presentations and Continuing Medical Education activities.

Methods: This project involves multiple methods aimed at advancing the science of measurement. This involves development and testing of instruments and efforts to improve the interpretability of their scores (analytic approaches, Rasch/IRT, MCID and benchmarking). Our work has resulted in several methodological papers, theoretical frameworks, and tools to help clinicians or stakeholders to make the best use of instruments.

Status: We worked with the OMERACT executive on writing criteria for responsiveness and discrimination. We worked to revise course content for the measurement course (U of T curriculum). We offered critique of appraisal systems for measurement properties and feedback to develop.

Researchers: Dorcas Beaton (Institute Coordinator), Claire Bombardier, Cynthia Chen, Sheilah Hogg-Johnson, Carol Kennedy-Yee, Peter Subrata, Dwayne Van Eerd, Pierre Côté (University Health Network), Jeffrey Katz (Brigham and Women's Hospital, Harvard University), Peter Smith (Monash University), Sherra Solway (Centre for Addiction and Mental Health), Gabrielle van der Velde (University of Toronto), Jeff Wright (Hospital for Sick Children, University of Toronto)

Stakeholder Involvement: Partners in this project include users of the instrument database, clinicians, researchers, trainees, and students.

Potential Audiences and Significance: Primarily directed at researchers at the Institute of Work & Health, the research community at large, and the clinical community who apply these instruments.

Presentations:

Burton K, Beaton DE. An assessment of the modified Rankin Scale as a stroke outcome measure in economic analyses of acute ischemic stroke outcomes. 2-6 June 2012; Washington, DC: ISPOR Annual International Meeting.

Kalsi-Ryan S, Fehlings M, Verrier M, Beaton DE, Popovic M, Curt A. Responsiveness and sensitivity of a clinical impairment measure specific for tetraplegia: An international multi-center study of the GRASSP. 3-5 September 2012; London, UK: Annual Scientific Meeting of the International Spinal Cord Society.

Work-related Outcomes of Injured Workers Attending WSIB Specialty Clinics for Upper Limb Disorders (0113)

Project Status: Ongoing

Introduction: It is known that the majority of disability costs associated with lost time claims comes from those workers with the longest duration of lost time – the proverbial "tail of the curve". One access point to injured workers in the "tail" is through the WSIB specialty clinics that usually see workers only after approximately six months post-injury. In this study, we examined the usual course of work-related outcomes (absenteeism and at-work productivity losses) in workers recruited from two upper extremity specialty clinics. We also examined the predictors of this course, and aimed to identify those which were amenable to intervention/modification. The project introduced web-based, touch screen data collection and continues with our "just-in-time" summary reports of the workers' responses.

Objectives:

- To understand the usual course of persons attending the specialty clinic.
- To identify modifiable and non-modifiable factors that could predict likely course.
- To join two specialty clinics (OAI and London) to coordinate and collaborate on this type of data collection and analysis with the view of establishing a network of research across specialty clinics in Ontario.

Methods: This cohort is a longitudinal cohort of injured workers who are attending the WSIB specialty clinic in Toronto and in London.

Status: We continued the prognosis analysis, and structural validation of the scales. We worked at expanding KTE with clinic staff. In addition, we submitted papers on a clinical prediction rule for longer term applicants; factor analysis of the WLQ scale; and a couple of papers on 5 at-work productivity measures. A portion of this work will be a part of a PhD thesis for one of the IWH students, Ken Tang.

Researchers: Dorcas Beaton (Principal Investigator), Claire Bombardier, Kim Cullen, Sheilah Hogg-Johnson, Ivan Steenstra, Pierre Côté (University Health Network), Joy MacDermid (McMaster University), Sonia Pagura (Sunnybrook & Women's Health Sciences Centre), Robin Richards (Sunnybrook & Women's Health Sciences Centre), Andrea Thompson (Orthopaedic and Arthritic Institute)

Stakeholder Involvement: Partners in this project include the WSIB Specialty clinics, speciality clinic partners, and WSIB staff.

Potential Audiences and Significance: The results of this work will be relevant to WSIB policy-makers, clinicians treating injured workers, and researchers interested in the application of research findings directly into clinical practice.

Publications:

Roy JS, MacDermid JC, Tang K, Beaton DE. Construct and predictive validity of the chronic pain grade in workers with chronic work-related upper extremity disorders. *Clinical Journal of Pain* [Epub ahead of print]

Tang K, Beaton DE, Amick BC, Hogg-Johnson S, Côté P, Loisel P. Confirmatory factor analysis of the Work Limitations Questionnaire (WLQ-25) in workers' compensation claimants with chronic upper-limb disorders. In press: *Journal of Occupational Rehabilitation*.

Tang K, Beaton DE, Lacaille D, Gignac MAM, Bombardier C. Sensibility of five at-work productivity measures was endorsed by patients with osteoarthritis or rheumatoid arthritis. *Journal of Clinical Epidemiology* [Epub ahead of print]

Tang K, Beaton DE, Lacaille D, Gignac MAM, Bombardier C. Beyond psychometric evaluations: Sensibility attributes of five at-work productivity measures were appraised by patients with osteoarthritis and rheumatoid arthritis. In press: Journal of Clinical Epidemiology.

Presentation:

Tang K, Beaton DE, Hogg-Johnson S, Cote P, Loisel P. Poster: Confirmatory factor analysis of the 25-item Work Limitations Questionnaire (WLQ-25) in workers' compensation claimants with chronic upper-limb disorders. 1-2 June 2012; Vancouver, Canada: Canadian Association for Research on Work & Health Conference.

The Measurement of Work Disability/Disability at Work (0117/0121)

Project Status: Ongoing

Introduction: This project includes five elements all aimed at improving our ability to measure the impact of limitations in health status on work productivity. The measures identify the impact of an injury or illness on work activities through self-reported limitations in job tasks. These measures may be markers for changes in productivity, may be precursors to disability resulting in work absence, and may also serve as indicators of productivity-related costs in an economic appraisal. In this set of projects we will identify new measurement properties, factors associated with work disability, and also create links between clinical, community and workplace populations as well as between different local, national and international networks of researchers interested in the measurement of work disability.

Objectives:

- To understand the development, use and measurement properties of currently existing measures of work disability and work productivity.
- To conduct a concurrent comparison of different measures of at-work disability.
- To provide leadership to two research transfer initiatives: Outcome Measures in Rheumatological Clinical Trials (OMERACT) workshop/module and I CAN Work-OMERACT alliance on Work Outcomes.
- To make recommendations for the role of self-report measures of work disability in workplace studies at IWH and in the broader community.

Methods: These set of projects will be using scale development and measurement methods, such as factor analysis and Item Response Theory. The study of measurement properties of existing scales will include validity and reliability analysis, and examining sources of potential bias in self-report, survey administration.

Status: The worker productivity collaboration resulted in a number of publications in 2012. Data collection for benchmarking scores on the Worker Productivity Measures and for the cognitive testing of indicators of work productivity was initiated.

Researchers: Dorcas Beaton (Principal Investigator), Ben Amick, Claire Bombardier, Monique Gignac, Sheilah Hogg-Johnson, Emma Irvin, Cameron Mustard, Dwayne Van Eerd, Annelies Boonen (OMERACT), Mieke Haase (OMERACT), Dianne Lacaille (OMERACT), Peter Tugwell (OMERACT), Suzanne Verstappen (OMERACT)

Stakeholder Involvement: The WSIB is a stakeholder, and is also coordinating the WSIB Shoulder and Elbow Specialty Clinic where the study is conducted. The clinic medical director is a co-investigator on the study, and clinic staff are also involved in the study. The OMERACT and CAN initiatives both integrate the stakeholders into the process. Peter Tugwell is our OMERACT mentor, and the I CAN Work OMERACT Alliance initiative will be well linked with that network.

Potential Audiences and Significance: A thorough understanding of work disability and the level of production lost from injured workers in the workplace, including how to measure this construct optimally, will be of particular interest to researchers, employers, employees, insurers, pharmaceutical industry, disability managers and clinicians.

Publications:

Beaton DE, Sujic R, McIlroy K, Sale J, Elliot-Gibson V, Bogoch ER. Patient perceptions of the path to osteoporosis care following a fragility fracture. *Qualitative Health Research* 2012; 22(12):1647-1658.

Hoang-Kim A, Beaton DE, Bhandari M, Kulkarni AV, Schemitsch E. The need to standardize functional outcome in randomized trials of hip fracture: a review using the ICF framework. *Journal of Orthopaedic Trauma* 2013; 27(1):e1-8.

Holness L, Switzer-McIntyre S, Harniman E, Dekoven J, Skotnicki S, Nixon R, Beaton DE. Hand and upper extremity function in workers with hand dermatitis. In press: Dermatitis.

Jolles B, Beaton DE, Gross D, Bogoch ER. Patient specific indices provide additional understanding of the outcome of total hip arthroplasty in patients with juvenile idiopathic arthritis. In press: Journal of Rheumatology.

Martino R, Beaton DE, Diamant NE. Patients', caregivers' and clinicians views about medical consequences related to oropharyngeal dysphagia. In press: Journal of Clinical Epidemiology.

Novak CB, Anastakis DJ, Beaton DE, Mackinnon SE, Katz J. Cold intolerance after brachial plexus nerve injury. *Hand* 2012; 7(1):66-71.

Novak CB, Anastakis DJ, Beaton DE, Mackinnon SE, Katz J. Patient specific functional scale: Establishment of validity in patients with upper extremity nerve injury. *Journal of Hand Surgery* 2012; 37(8):S1:45.

Pinsker E, Daniels TR, Inrig T, Warmington K, Beaton DE. The ability of outcome questionnaires to capture patient concerns following ankle reconstruction. *Foot Ankle International* 2013; 34(1):65-74.

Presentations:

Novak CB, Anastakis DJ, Beaton DE, Mackinnon SE, Katz J. Patient specific functional scale: Establishment of validity in patients with upper extremity nerve injury. 8 September 2012; Chicago, IL: American Society for Surgery of the Hand Annual Meeting.

Sankar A, Gignac MAM, Palaganas MP, Badley EM, Beaton DE, Davis AM. Return to work and work activity limitations following total hip and knee replacement. 26-29 April; Barcelona, Spain: World Congress on Osteoarthritis.

Sujic R, Beaton DE, Slater M, Bogoch E and The Ontario Osteoporosis Strategy Fracture Clinic Screening Program Evaluation Team. Predicting patient's readiness to accept osteoporosis treatment: Application of the stages of change model to post fracture context. 19-23 May 2012; Stockholm, Sweden: European Calcified Tissue Society Annual Congress.

Beaton DE, Bogoch ER, Sujic R, Sale J, Kimber M, Linton D, Nedanovski P, Zheng H. Evaluation of the Ontario Osteoporosis Strategy Fracture Clinic Screening Program. 8-10 June 2012; Ottawa, Canada: Canadian Orthopaedic Association.

Funding:

Beaton DE, Tang K, Smith PM, Lacaille D, Escorpizo R, Hofstetter C, Montie P, Verstappen S, Boonen A. Interpretability of measures of worker productivity: A study defining meaningful benchmarks and changes in scores for use in clinical trials and clinical practice in arthritis. Canadian Arthritis Network (CAN): \$50,000 (2012-2013)

Niagara Health System Evaluation (2165)

Project Status: Ongoing

Introduction: The burden of disabling musculoskeletal pain arising from work-related causes among workers in many health care settings in Ontario is substantial. This project proposes to measure the impact of a 3-year organization change initiative to reduce the burden of work-related injury and illness in Ontario's largest multi-site acute care community hospital system. The Niagara Health System (NHS) is an acute care community hospital system with seven sites in the Niagara region employing more than 4,300 staff. Over the past two years, NHS has identified limitations in the integrity of OHS policies and practices across the sites. The initiative was developed by NHS management and labour unions, with technical support provided by the Occupational Disability Response Team of the Ontario Federation of Labour, the Occupational Health Clinics for Ontario Workers and the Public Services Health & Safety Association. In 2011, NHS senior management and union representatives commenced implementation of a 3-year organization change plan to reduce the incidence of work-related musculoskeletal disorders, improve workplace practices in the area of return-to-work and disability prevention and strengthen the culture of safety in the organization. Over 2012-2014, objectives of the organizational change plan are to reduce incidence of total compensation claims registered with the Workplace Safety and Insurance Board by 25% and to reduce the total days of disability provided wage replacement benefits by WSIB by 25%.

Objectives:

- To conduct a quasi-experimental design, comparing workers' compensation claim incidence and duration in NHS to an Ontario health care system for 3 years prior to and following January 2012.
- To conduct a repeated survey of a sample of approximately 350 NHS staff for 2012-2014.
- To conduct two detailed case studies of the organizational change process, using both qualitative and quantitative research methods.

Methods: This study will apply a mixed methods protocol consisting of three components: 1) a quasi-experimental design, with measures obtained from administrative data, 2) a repeated time series design, based a survey sample of approximately 350 NHS staff for each of three years (2012-2014), and 3) two detailed case studies of the organizational change process, using qualitative and quantitative methods.

Status: In 2012, we conducted a baseline survey of NHS staff, administering the 26 item Organizational Policies and Practices instrument (Amick et al), a scale measuring physical job demands and a pain scale. In general, the profile of perceptions of health and safety practices, physical job demands and pain symptoms in the NHS workforce was similar to benchmark measures available for other health care workforce samples in Ontario. We also prepared the field work protocol for one of two detailed case studies, focused on the implementation of a return-to-work / accommodation policy.

Researchers: Cameron Mustard (Principal Investigator), Ben Amick, Andrea Chambers, Dwayne Van Eerd

Stakeholder Involvement: Partners in this project include the Niagara Health System, the Ontario Nurses' Association, the Occupational Disability Response Team of the Ontario Federation of Labour, the Occupational Health Clinics for Ontario Workers, and the Public Services Health & Safety Association.

Potential Audiences and Significance: The results of this applied research project will be relevant to acute care health care institutions in Ontario and will be expected to provide evidence-based guidance to quality improvement initiatives focused on the protection of the health of health care workers in Ontario. This research project will also address gaps in the evidence base concerning effectiveness and cost/ benefit ratio of integrated initiatives to reduce the burden of work-related disorders in health care workers.

Funding:

Mustard C, Amick BC, Van Eerd D. Organizational change to protect worker health. CIHR: \$306,706 (2012-2015)

Clinical Treatment

Injured workers, health care providers, payers, such as the WSIB and the public, are increasingly asking for system-wide processes to improve the quality of care provided and to measure the success of care delivery. High quality care implies practices that are consistent with the best evidence of efficacy and effectiveness (from randomized trials or observational studies) as well as systematic assessment of actual health outcomes. The Institute has made major contributions towards evidence-based practice (EBP) for the most burdensome musculoskeletal conditions: low back pain, neck pain, upper extremity conditions and chronic back pain. In addition, much of the current work of our researchers in EBP is related to the Institute's role as an international Cochrane Collaboration Review site.

Cochrane Back Review Group: Systematic Reviews of the Scientific Literature on Spinal Disorders (0440)

Project Status: Ongoing

Introduction: The Cochrane Collaboration is an international network of individuals and institutions committed to preparing, maintaining, and disseminating systematic reviews of the scientific literature on the effects of health care. The Institute hosts the Cochrane Back Review Group (CBRG), one of 53 review groups in the Cochrane Collaboration. The editorial and central coordinating activities associated with the CBRG are described here. The activities associated with Institute researchers who are conducting Cochrane reviews are described in project 670. The work of the Cochrane BRG remains closely aligned with the new systematic review program initiated at IWH in 2005.

Objectives:

- To prepare, maintain and disseminate systematic reviews of the scientific literature on spinal disorders.
- To maintain a specialized database of trials on spinal disorders and related disorders as a resource for those conducting literature searches, and to help identify gaps in the literature and to suggest areas for further studies.
- To communicate regularly with our CBRG stakeholders.

Methods: We will monitor and complete communication functions on an ongoing basis. We will develop a new contact management system.

Status: In 2012 we created a presence on social media by becoming an active member of online communities, including Twitter, and Facebook. In addition to submitting a number of protocols and reviews we worked with our authors to improve the editorial process.

Researchers: Teresa Marin (Institute Coordinator), Claire Bombardier, Rachel Couban, Andrea Furlan, Emma Irvin, Allison Kelly, Philip Kiff, Jill Hayden (Dalhousie University)

Stakeholder Involvement: Clinical stakeholders: Participate in Cochrane activities at their own level of interest and expertise. This varies by individual, but may involve attending a systematic review workshop, conducting a review, or helping with strategies to make Cochrane reviews more accessible to clinical colleagues, students and the general public. (See KTE project #0617 for more details).

Potential Audiences and Significance: Patients, health care professionals, policy-makers and payers. Updated systematic reviews of the literature provide the most current information on the effectiveness of treatment modalities and therapies, thereby assisting evidence-based treatment and payment decisions.

Presentations:

Couban R, Marin T, Jacobs W. Poster: Medical devices: Known and unknown unknowns. 9-10 May 2012; Winnipeg, Canada: Cochrane Canada Annual Symposium.

Couban R. Poster: Medical device information: Can we get there from here? 11-15 June 2012; Hamilton, Canada: Canadian Health Libraries Association Conference.

Funding:

Grimshaw J, Beyene J, Bombardier C, Feagan BG, Klassen TP, Lavis JN, Moayyedi P, Moher D, Tugwell P, Wright JM. Knowledge synthesis and translation by Cochrane Canada. CIHR: \$9,600,000 (2010-2015)

Evidence-Based Practice (0670)

Project Status: Ongoing

Introduction: Many researchers at the Institute are authors (or co-authors) of systematic reviews of health care interventions, including Cochrane, non-Cochrane reviews and Clinical Practice Guidelines. These reviews offer opportunities for partnerships with other systematic review teams and with local, national and international communities and stakeholders. While conducting these reviews, Institute researchers are exposed to various challenges on the methodology of conducting reviews, and the expertise of the Institute in solving these challenges is developed and strengthened.

Objectives:

- To conduct and update systematic reviews of health care interventions for musculoskeletal pain.

Methods: Systematic methodology includes literature search, paper screening for inclusion/exclusion criteria, data extraction of included studies, quality appraisal of included studies, and findings synthesis.

Status: A review on alternative medicine was completed and published. Updates on opioid and alternative medicine reviews were initiated, in addition to a review on interventions to improve walking ability in patients with spinal stenosis.

Researchers: Andrea Furlan (Principal Investigator), Carlo Ammendolia, Claire Bombardier, Emma Irvin, Teresa Marin, Dwayne Van Eerd, Rhoda Reardon (College of Physicians and Surgeons), Maurits Van Tulder (VU, Amsterdam)

Stakeholder Involvement: Cochrane and non-Cochrane systematic reviews form the evidence basis of clinical practice guidelines worldwide and of evidence-based clinical tools for practitioners.

Potential Audiences and Significance: Up-to-date systematic reviews of the literature provide the most current information on the effectiveness of treatment modalities and therapies, thereby assisting evidence-based treatment and payment decisions by patients, health care professionals, policy makers and payers.

Publications:

Furlan AD, Yazdi F, Tsertsvadze A, Gross A, Van Tulder M, Santaguida L, et al. A systematic review and meta-analysis of efficacy, cost-effectiveness, and safety of selected complementary and alternative medicine for neck and low-back pain. *Evidence-Based Complementary and Alternative Medicine* 2012; 953139.

Furlan A, Chapparo LE, Irvin E, Mailis-Gagnon A. Undertreated pain and opioid misuse: Can we kill two birds with one guideline? In press: *Canadian Medical Association Journal*

Dryden T, Furlan AD, Imamura M, Irvin E. (2012) Chapter 12: Low back pain. In: Dryden T, Moyer CA, editors. *Massage Therapy: Integrating Research and Practice*. Champaign, Illinois: Human Kinetics, pp. 139-149.

Furlan AD, Pennick V, Hayden J, Ammendolia C. (2012). Section V.II: Mechanical low back pain: Non-operative management. In: Bhandari M, editors. *Evidence-based Orthopaedics*. Chichester, UK: Wiley-Blackwell, pp. 678-685.

Furlan AD, Irvin E. Co-editors: *Guidelines: Use of analgesics for non-cancer chronic pain for NOUGG*.

Funding:

Furlan AD, Flannery J, Reardon R. Opioid Guidelines Dissemination amongst Ontario physiatrists. *AFP Innovation Fund*: \$45,604 (2009-2011)

Examining Opioid Prescriptions Among Low Back Pain Claimants (2170)

Project Status: Ongoing

Introduction: Increasing use of prescription opioids among workers with musculoskeletal disorders, such as back pain, has become a significant source of concern for workers' compensation systems across North America. Recent data suggest opioids are being prescribed increasingly earlier after filing a workers' compensation claim for work-related low back pain (WRLBP) and that these early opioid prescriptions are leading to prolonged work disability. However, a number of methodological limitations are present in these studies that cast doubt on the validity of their conclusions.

Objectives:

- To describe pre-claim and post-claim patterns of LBP-related health care and opioid, non-opioid, and adjuvant analgesic prescriptions and their associated factors.
- To describe whether opioid, non-opioid, and adjuvant analgesic prescription patterns have changed since 1998.
- To assess the validity of workers' compensation billing data on opioid, non-opioid, and adjuvant analgesic prescriptions.
- To describe post-claim opioid prescription patterns suggestive of possible opioid misuse or problematic prescribing and describe whether these patterns have changed since 1998.
- To determine whether opioid analgesics prescribed to workers within the first eight weeks of filing a new workers' compensation lost-time claim for WRLBP are associated with future work disability compared to NSAIDs and muscle relaxants.
- To determine whether specific opioid prescription characteristics are associated with future work disability among workers who receive at least one opioid prescription in first eight weeks of claim.

Methods: This project seeks to answer these questions using linkable, person-specific, population-based data from two sources: Population Data BC, representing one of the world's largest collections of health data; and PharmaNet, a province-wide network containing prescription data from all BC pharmacies. Data from PharmaNet will be used to provide a comprehensive picture of prescription opioid patterns pre- and post-claim. Population Data BC data provide a unique opportunity to characterize low back pain-related health care utilization pre- and post-claim, as well as supplementary health care and comorbidities.

Status: In 2012, we submitted and obtained ethics approval. We submitted an application to Population Data BC for data. After some delay we have received access to the data to proceed with the study.

Researchers: Sheilah Hogg-Johnson (Principal Investigator), Nancy Carnide, Andrea Furlan, Pierre Côté (University Health Network), Mieke Koehoorn (University of British Columbia)

Stakeholder Involvement: Partners in this project include the workers' compensation boards, the National Opioid Use Guideline Group, clinicians, injured workers and their representatives.

Potential Audiences and Significance: The findings will improve our understanding of whether opioids provided early in the course of a workers' compensation claim are associated with work disability. This study will generate new knowledge on LBP-related health care leading up a claim. This study will also provide a comprehensive picture of analgesic prescribing patterns and their determinants, as well as a preliminary picture of opioid prescription patterns suggestive of misuse and problematic prescribing. These findings will be fundamental to informing new and existing treatment policies in workers' compensation systems, as well as physicians for guiding their treatment decisions. The findings will also have implications for injured workers seeking safe and effective pain management options.

Funding:

Hogg-Johnson S, Carnide N, Furlan A, Koehoorn M, Côté P. Early opioid prescriptions for work-related MSK disorders of the back: understanding utilization patterns, determinants & impact on work disability. WorkSafe BC: \$64,855 (2011-2013)

Return to Work Practices

The WSIB has identified improved return to work outcomes as a priority in reducing costs to the system. They articulate the need to fully support workplace parties in achieving more successful return to work outcomes and to reduce the costs of claims while respecting injured workers. Approximately 20% of disability episodes compensated by the WSIB involve duration disability longer than twelve weeks. There is some emerging evidence that the persistency of long duration disability episodes is increasing. Understanding the factors which may lead to or which may predict this long duration disability and poor return to work outcomes is a significant part of the IWH portfolio both in our observational and qualitative research studies described below. In 2012, we continued work on a project to look at the “Skills for job recovery” which tests the feasibility of an online program for developing self-efficacy and the skills needed for the job of returning to optimal work. In addition, working with some of our stakeholders we examined the role of co-workers in the return to work process.

Recurrent or Persistent Work Disability Episodes (0341)

Project Status: Ongoing

Introduction: Following an occupational injury and work absence, recurrence of work absence is a critical outcome to consider when assessing sustainability of return-to-work (RTW). It is also associated with future persistent work absence. Indeed, 20% of injured workers with a musculoskeletal (MSK)-related lost-time claim have one recurrence or more of work absence in the first six months post-injury, and they are more than twice as likely as workers without recurrences to be still be off work (2005 IWH analyses). Our study seeks to identify the risk factors of long-term RTW trajectories of injured workers, and to describe the long-term health, work limitations, and non-work role participation consequences of such trajectories, with a focus on recurrent and persistent work absence.

Objectives:

- To identify modifiable workplace, insurer, healthcare provider (HCP), and worker risk factors for recurrent and persistent work absence over 24 months post-injury.
- To describe the differences in, and identify the determinants of, the health status, work limitations, and role participation in parenting and caregiving of injured workers over 24 months post-injury, associated with four RTW trajectories: sustainable first RTW; No recurrence(s) of work absence with sustainable first RTW; recurrence(s) with sustained RTW; recurrence(s) without sustained RTW; and persistent work absence.

Methods: We conducted a prospective cohort study of 632 injured workers, who filed WSIB lost-time claim for an MSK-related work injury of the back or upper extremity. Data was collected via telephone interviews at 1 month, 6 months, 12 months, and 24 months post-injury. Linkage of the interview with WSIB data allowed data extraction on compensation duration and history, leading to a comprehensive picture of RTW trajectory.

Status: Completed a number of analyses using the original data in order to prepare a number of papers.

Researchers: Renée-Louise Franche (Principal Investigator) (Vancouver General Hospital), Sheilah Hogg-Johnson (Institute Coordinator), Ben Amick, Curtis Breslin, Nancy Carnide, Hyunmi Lee, Cameron Mustard, Colette Severin, Ivan Steenstra, Pierre Côté (University Health Network), Gail Hepburn (University of Lethbridge)

Stakeholder Involvement: Partners in this project include the WSIB, RTW specialists, and external researchers.

Potential Audiences and Significance: Current RTW interventions do not focus on preventing recurrence and persistent work absence. Our study will provide evidence to guide future RTW interventions, whether they are provided by WSIB or by other insurers/companies. The outcomes of this study will be relevant to current and planned activities in return-to-work at WSIB. Specifically, the findings will strengthen WSIB case assessment ability, and assist in the design and selection of appropriate interventions. Furthermore, the study findings can be incorporated into WSIB's external education initiatives.

Publications:

Amick BC, Steenstra IA, Hogg-Johnson S, Katz J, Lee H, Brouwer S, et al. How do organizational policies and practices affect return to work and work role functioning following a musculoskeletal injury. Submitted: American Journal of Public Health.

Bültmann U, Steenstra IA, Lee H, Hogg-Johnson S, Carnide N, Franche RL, Amick BC. Measurement properties of the work limitations questionnaire among injured workers with musculoskeletal disorders – Do depressive symptoms matter? Submitted: Pain.

Presentations:

Amick BC. How do organizational policies and practices affect return to work and work role functioning following a musculoskeletal injury. 22-24 October 2012; Groningen, The Netherlands: Scientific Conference on Work Disability Prevention & Integration.

Amick BC, Lee H, Hogg-Johnson S, Steenstra I, Brouwer S, Franche RL, Bultmann U. How do organizational policies and practices affect return to work and work role functioning following a musculoskeletal injury. 1-2 June 2012; Vancouver, Canada: Canadian Association for Research on Work and Health Conference.

Carnide N, Franche R-L, Hogg-Johnson S, Côté P, Breslin FC, Bültmann U, Severin CS, Krause N. Depressive symptomatology following a workplace injury: A prospective cohort study. 12 June 2012; Toronto, Canada: CIHR Strategic Training Program in Work Disability Prevention, Dalla Lana School of Public Health, University of Toronto.

Van Eerd D, Brouwer S, Syres G. Topical Seminar: How do organizational policies and practices affect return to work and work role functioning following a musculoskeletal injury. 22-24 October 2012; Groningen, The Netherlands: Second Scientific Conference on Work Disability Prevention and Integration: Healthy Ageing in a Working Society.

Skills for Job Recovery: Testing the Feasibility of an Online Program for Developing Self Efficacy and the Skills Needed for the Job of Returning to Optimal Work (2125)

Project Status: Completed

Introduction: Injured workers can lack the skills and experience to navigate their way through the potential obstacles to successful return to work (RTW). The purpose of this project is to assess the need for and feasibility of an online support and education program for developing the —Skills for the Job of Recovery. Through the use of focus groups and survey methods, the content, internet accessibility and literacy, and receptivity of workers can be evaluated. Our workplace partners are the specialty clinics who offer the best access to workers at a later stage in recovery from across the province. Our study will provide a template for content and delivery of this program.

Objectives:

- To explore the feasibility of conducting a web-based support and education program (Skills for the Job of Recovery) that aims to empower injured workers attending WSIB specialty clinics in the successful navigation of their work recovery journeys (specifically improved self-efficacy for RTW, lower health distress, lower illness intrusiveness, improved knowledge of skills).

Methods: We will use focus groups and survey methods to evaluate the content, internet accessibility and literacy, and receptivity of workers. Seven focus groups (three with workers, two with clinicians, and two to be determined based on the first five) will be conducted by a trained facilitator. A coordinator will be present and take field notes and assist. Injured workers' groups will be recruited from those attending the WSIB Shoulder and Elbow Clinic. Focus groups will be audio-taped and transcribed, and content-based analyses will proceed. Furthermore, a convenience sample of 200 injured workers attending a WSIB Specialty Clinic for their first appointment and who are able to complete a questionnaire in English will be asked to complete a survey about their internet access and confidence.

Results: We completed the survey portion of the study at Shoulder and Elbow Clinic. Data collection was completed along with the focus group analyses and interviews with vendors of online learning system. The final report is being compiled for submission.

Researchers: Dorcas Beaton (Principal Investigator), Ben Amick, Stephanie Chesser, Carol Kennedy-Yee, Ellen MacEachen, Ivan Steenstra, Dwayne Van Eerd, William Gnam (Centre for Addiction and Mental Health), Kate Lorig (Stanford University), Joy MacDermid (McMaster University), Iona MacRitchie (Sunnybrook & Women's Health Sciences Centre), Robin Richards (Sunnybrook & Women's Health Sciences Centre), Peter Smith (Monash University), Kenneth Tang (St. Michael's Hospital), Gabrielle van der Velde (University of Toronto)

Stakeholder Involvement: Injured workers will be recruited from the Holland Centre Clinic and potentially the London site. The WSIB specialty clinic programs will be used as the source of longer term injured workers for the study, specifically the Shoulder and Elbow Clinic (Holland Orthopaedic and Arthritic Centre) with partners in the Hand and Upper Limb Clinic and the Post-traumatic Stress Clinic.

Potential Audiences and Significance: Our project will test the feasibility of running an effective online support and education program to improve and support Job of Recovery skills (empowerment, self-efficacy) that are required by injured workers for managing their RTW process. While we will focus on workers attending WSIB specialty clinics, we will also assess the potential to deliver this program through workplaces, WSIB case managers, and health care providers.

Funding:

Beaton DE, Smith PM, Van Eerd D, Kennedy C, Tang K, Steenstra I, Gnam W, MacRitchie I, Lorig K, Van der Velde G. Skills for the job of recovery: Testing the feasibility of an online program for developing self-efficacy and the skills needed for the job of returning to optimal work. WSIB BTG: \$58,145 (Oct 2009-May 2012)

Training Initiatives in Work Disability Prevention (0144)

Project Status: Ongoing

Introduction: The IWH is recognized for its expertise in evidence-based practice and work disability prevention. It has received an increasing number of requests to share its expertise and to contribute to the education and training of educators, clinicians and future researchers. The IWH supports the CIHR Work Disability Prevention (WDP) Program, which is now based at the University of Toronto, by contributing Scientist's time and expertise. We also encourage our students to participate in the program. The WDP program has attracted international attention and recognition, and many non-Canadian students apply.

Objectives:

- To influence the next generation of health-care professionals and research trainees by participating in the development and execution of the CIHR Work Disability Prevention training initiative.

Methods: Many scientists at the IWH are involved as mentors or committee members for this CIHR training initiative in work disability prevention.

Status: In 2012, we planned an e-course, a summer session, and conducted optional courses. The two-week summer session was held in June and the e-course was offered in the spring. We also held quarterly Program Executive Committee meetings, an annual Program Advisory Committee meeting, and developed a community of practice. A committee reviewed student practicum proposals to the WDP Program twice a year. Work on reviewing the WDP Handbook chapters is ongoing. As well, we planned and held the WDPI conference in 2012.

Researchers: Ellen MacEachen (Institute Coordinator), Curtis Breslin, Sheilah Hogg-Johnson, Emile Tompa, Pierre Côté (University Health Network), Jaime Guzmán (University of British Columbia)

Stakeholder Involvement: A Program Advisory Committee consisting of policy-makers, employers, union representatives, students, and injured workers provides advice to the Program Executive Committee. Stakeholders are also involved in educational activities during the summer session.

Potential Audiences and Significance: The IWH training initiatives will be of particular interest to health-care professional students, educators, clinicians, and research trainees.

Publications:

Dunstan D, MacEachen E. Bearing the brunt: Co-workers' experiences of work reintegration processes. *Journal of Occupational Rehabilitation* 2013; 23(1): 44-54.

Dunstan D, MacEachen E. An organizational behavioral explanation of co-workers' critical role in work reintegration. Submitted: *Journal of Occupational Rehabilitation*.

Hogg-Johnson S, MacEachen E. Chapter 9: Methodological issues in work disability prevention research. In: Loisel P, Anema J, editors. *Handbook of Work Disability: Prevention and Management*. New York: Springer Publishing, 2013.

MacEachen E. Understanding work disability systems and intervening upstream. In: Loisel P, Anema J, editors. *Handbook of Work Disability: Prevention and Management*. New York: Springer Publishing, 2013.

Stahl C, MacEachen E, Lippel K. Exploring ethical perspectives in the field of work disability prevention and return to work. *Journal of Business Ethics* 2013 [E-pub ahead of print] DOI 10.1007/s10551-013-1661-y

Steenstra I, Busse J, Hogg-Johnson S. Predicting return to work for workers with low-back pain. In: Loisel P, Anema J, editors. *Handbook of Work Disability: Prevention and Management*. New York: Springer Publishing, 2013.

Tjulin Å, MacEachen E. The importance of workplace social relations in the return to work process: a missing piece in the return-to-work puzzle? In: Schultz I, Gatchel R, editors. *Handbook of Return-to-Work: From Research to Practice*. In press: Springer Publishing.

Funding:

Loisel P, Breslin FC, Hogg-Johnson S, MacEachen E, Tompa E, Smith PM, Lippel K, Franche RL, Bultmann U, et al. CIHR strategic training program in work disability prevention. CIHR: \$1,950,000 (2009-2015)

Buddies in Bad Times: The Role of Co-Workers in the Return to Work Process (2240)

Project Status: Completed

Introduction: Co-worker support is important for successful return to work, yet there is little understanding of the challenges that face co-workers when an injured colleague returns to work on modified or accommodated duties. To better understand these challenges, we will interview unionized electricians working within the industrial construction sector. We will examine the social, organizational and systemic barriers that might work against the creation of a supportive and respectful accommodated work environment. We believe that co-workers have a unique perspective on issues that may impact successful return-to-work (RTW), such as the impact of accommodated work on productivity; teamwork and bonuses; the issue of legitimacy of the injury and; sense of (un)fairness or “special” treatment. Interviewees will be asked for solutions to any challenges that they describe. The project has strong partners in the construction sector and electrical trades who will be engaged in consultative workshops, and in a targeted dissemination of findings.

Objectives:

- To gain information about the challenges and rewards of co-worker support for accommodated colleagues
- To understand the social dimensions of RTW from the perspective of co-workers.
- To explore the co-workers’ perceived role in the process of supporting an injured colleague’s RTW.
- To determine, from their perspective, what are the opportunities and challenges of the RTW process for injured colleagues.
- To understand these results as they relate to workplace disability prevention models of RTW.
- To identify constructs around co-worker support with item-generation for the purpose of developing a questionnaire on co-worker social support.

Methods: We will conduct between 15-20 interviews with electricians. We will also conduct two by-invitation consultative focus groups. One focus group will be with injured workers and another with union stewards and business field representatives. The focus groups will focus on issues related to RTW and the role of co-workers. Focus groups will be recorded and transcribed.

Status: All interview data was coded and analysed. The findings were interpreted by the research team and results were written up in a peer-reviewed article published by the Journal of Occupational Rehabilitation. The findings were also disseminated to partners and stakeholders. The final report to the funder (WSIB RAC) was prepared for submission.

Researchers: Agnieszka Kosny (Principal Investigator, Monash University), Christine Carrasco, Marni Lifshen, Ivan Steenstra, Dee Kramer (University of Waterloo), Richard Wells (University of Waterloo)

Stakeholder Involvement: Carmine Tiano, Director of WSIB Training and Advisory Services for the Provincial Building and Construction Trades Council of Ontario is a member of our research team. We will utilize the networks facilitated by Mr. Tiano to help us craft prevention messages that are context-specific to the construction trades, as well as to help us disseminate our findings.

Potential Audiences and Significance: The findings of the research study will be disseminated using the networks of our stakeholder partners including that of the IBEW, Ontario General Contractors Association (OGCA), the Building Trades Council, Council of Ontario Construction Associations (COCA), as well as the internal communication of Guild Electric Limited. The IBEW has 15,000 members in Ontario; the Building Trades’ network includes 14 trades and 122 locals across Ontario; OGCA has 217 members and several alliances and partnerships with other associations. Guild Electric Limited is a large company with 500 employees.

Publication:

Kosny A, Lifshen M, Pugliese D, Majesky G, Kramer D, Steenstra I, Soklaridis S, Carrasco C. Buddies in bad times? The role of co-workers after a work-related injury. *Journal of Occupational Rehabilitation* 2012 Dec 28; [Epub ahead of print].

Presentation:

Kosny A, Majesky G. Financial incentives, injury prevention and return-to-work in the unionized electrical construction sector. 29-30 November 2012; Toronto, Canada: International Symposium on the Challenges of Workplace Injury Prevention through Financial Incentives.

Funding:

Kosny A, Kramer D, Wells R, Steenstra I, Majesky G, Ryan E, Tiano C. Buddies in bad times: The role of co-workers in the return to work process. WSIB RAC: \$50,809 (2010-2012)

Compensation and Benefits

Over the course of regular meetings with WSIB staff, the Institute has identified a number of opportunities for our research to contribute to understanding the factors related to long-duration disability episodes. This includes analyses of the markers of claims persistency under two different sets of legislation Bill 162 and Bill 99.

The examination of wage replacement benefits is another area of IWH research which is highly relevant to workers' compensation policy in managing work disability in Ontario and other jurisdictions. One of the objectives of our research is to understand the adequacy and equity of long term disability income loss compensation programs. This work attempts to answer questions about earnings loss post-injury and the impact of workers' compensation system policies on the lives of injured workers. This ongoing research program considers the post-accident experience of individuals who have sustained permanent impairment due to a work-related accident occurring in Ontario and British Columbia. This research is supported by grant funding from the U.S. National Institute of Occupational Health & Safety (NIOSH) and WorkSafeBC.

A third area of study follows the Institute's long standing commitment to conduct research that informs compensation policy and practice that responds to the needs of seriously injured workers and other particular groups of workers. One of the key objectives in this area is to provide evidence based research that responds to the knowledge gaps in understanding the consequences of work injury and to understand the impact of legislation, policies and programs on these consequences within different groups of workers. In 2012, a critical review of the literature on experience rating and workers' compensation systems resulted in a special issue of *Policy and Practice in Health and Safety*. We also received funding for a project which will compare a variety of outcomes in the 1993 early claimant cohort and the 2005 readiness for return to work cohort.

Adequacy and Equity of Workers' Compensation Benefits (0418)

Project Status: Completed

Introduction: Prior to June 30, 2002, WorkSafeBC had a bifurcated award system for compensating long-term work disability arising from work-related accidents. Two methods of benefits calculation were considered with each claim—a loss-of-function/permanent-impairment benefit and a loss-of-earning-capacity benefit. A worker was eligible for whichever benefit was higher. Bill 49, effective June 30, 2002, introduced a single award system for long-term work disability benefits based on loss-of-function. There are concerns that the change in benefits policy will have an adverse impact on some beneficiaries, particularly those who would have received a loss-of-earning-capacity benefit under the old system. Other changes to the short- and long-term disability benefit programs may also have an adverse impact on the adequacy and equity of wage-replacement benefits received by injured workers. These include a change of the benefit formula from 75% pre-tax to 90% after tax of pre-injury earnings, changes to cost-of-living adjustment, integration of CPP disability benefit into the benefits formula, and changes to benefits received after age 65.

Objectives:

- To investigate the impact of changes in benefits calculation on the financial circumstances of workers' compensation beneficiaries.
- To investigate the adequacy and equity of wage-replacement benefits provided by the pre- and post-Bill 49 benefit programs, including earnings and earnings losses; lost earnings replacement; differences earnings losses between women and men; regional differences in earnings losses; principal income sources post accident; marital formation/dissolution post accident.

Methods: We used a sample of long-term disability claimants from the pre-June 2002 claimant cohort to undertake a counterfactual analysis, i.e., the benefits the cohort would have received if they were to receive benefits under Bill 49. The sample frame was claimants who had a work accident between 1990 and 1994. This frame was linked to the Longitudinal Administrative Databank (LAD), which is a 20% random sample of Canadian tax filers. Actual benefits received by claimants were linked along with an identifier indicating the type of benefits received. We identified approximately 18-19% of this frame in the LAD. For each claimant identified in the LAD we estimated on a yearly basis: 1) the after-tax labour-market earnings before and after the accident year, 2) the pre- and post-Bill 49 benefits, 3) the earnings recovery rate post-accident, and 4) the lost wage-replacement rate with pre- and post-Bill 49 benefits. Earnings recovery and wage-replacement rates were calculated in two ways: 1) a comparison with pre-injury, after-tax earnings, and 2) a comparison with a sample of uninjured counterparts that have similar socio-demographic characteristics and earnings profiles prior to the accident year. Linkage and analyses for short-term disability claimants were based on frames from calendar years 1996, 1998, 2000.

Status: Overall, the move to Bill 49 resulted in reduced benefits. For the entire sample the reduction was 15%. Most strata still remained above the 90% target in terms of earnings replacement rates. The exception was the 50-59 age bracket, which did not achieve the target 90% in the pre-Bill 49 era, and had an even lower rate with the Bill 49 changes considered in the analysis. The aggregate-level earnings replacement rate for this stratum was 78% and the individual-level was 82%. It appears that this age bracket is particularly vulnerable to the changes introduced with Bill 49. Overall, the earnings replacement rates were still quite high with most over 100%. The average aggregate-level earnings replacement rate for the entire sample was 101% and individual-level earnings replacement rate was 104%.

Researchers: Emile Tompa (Principal Investigator), Miao Fang, Heather Scott-Marshall

Stakeholder Involvement: Senior policymakers at WorkSafeBC and BC worker representatives.

Potential Audiences and Significance: This project is of interest to both workers and workers' compensation insurance providers. Other jurisdictions will also be interested in this study, since the benefits programs in BC are quite unique, particularly the long-term disability program in existence prior to the introduction of Bill 49.

Publication:

Scott-Marshall H, Tompa E, Liao Q, Fang M. Marital formation in individuals with work-related permanent impairment. *Disability and Health Journal* 2013; 6(1):43-51.

Funding:

Tompa E, Mustard CA, Koehoorn M. Adequacy and equity of British Columbia workers' compensation benefits. *WorkSafeBC*: \$163,200 (2006-2008).

Compensation and Consequences of Work Injury (0428)

Project Status: Completed

Introduction: A group of researchers, injured workers, community representatives and organizations is investigating the workers' compensation system and its influence on the lives of injured workers. The research agenda of the Community-University Research Alliance (CURA) on workers' compensation and work injury will look at how the system helps and protects-or negatively impacts - injured and ill workers. The project will focus on injured workers' financial situations, their employment opportunities and their health and well-being. Under this project umbrella, were a number of different, but linked research initiatives - some located at IWH and others at our partner institutions.

Objectives:

- To conduct innovative, community-based research that responds to knowledge gaps in understanding the consequences of work injury and the impact of legislation, policies, programs and practices on these consequences.
- To increase research capacity in the social and health sciences on occupational health and safety and workers' compensation through training and mentoring of new researchers.
- To encourage evidence-based policy decision making in the workers' compensation arena through ongoing linkage and exchange with key stakeholders.

Methods: The Alliance research projects were divided into four themes: 1) Legislation, policies, programs & practices; 2) Financial security & employment experiences; 3) Health & well-being; 4) History and social/political movements. The initiative also included academic and community capacity building.

Status: The Research Action Alliance on the Consequences of Work Injury (RAACWI) had five research objectives: 1) to undertake innovative, community-based research on the consequences of work injury and the impact of legislation, policies, programs and practices on these consequences; 2) to increase research capacity on the topic by providing training and mentoring opportunities for new researchers; 3) to build strong community-academic links in the course of undertaking the research; 4) to encourage evidence-based policy decision making in the workers' compensation arena; and 5) to equip injured workers and their representatives with the skills to continue the process of involvement in research and the dissemination of evidence. These objectives have been met and surpassed in multiple ways. We have seen RAACWI mature over its six years to an initiative that is a role model for other community-based research initiatives. RAACWI community and academic participants have engaged in a variety of research, capacity building and knowledge mobilization activities from designing and organizing a large survey; to website development; to student/new researcher recruitment and mentoring (the initiative engaged 19 masters students, 11 doctoral students and 8 postdoctoral fellows); to supporting a variety of community capacity building activities (e.g., Community Forums, Speakers' School---approximately 400 community contributions over the lifetime of the initiative); to organizing semi-annual team building meetings, quarterly steering committee meetings; to coordinating policymaker dialogue sessions; to preparing quarterly newsletters, issues briefings and information brochures; to participating in theatre projects; to hosting two highly successful stakeholder symposia.

Researchers: Emile Tompa (Principal Investigator), Sara MacDonald, Ellen MacEachen, Cindy Moser, Heather Scott-Marshall. External Co-investigators and collaborators: Ballantyne P, Buonastella O, DeWolff A, Duran C, Eakin J, Endicott M, Forest J, Franche RL, Gildiner A, Gray G, Guzman J, Keglevic M, Kirsh B, Kosny A, Lalli A, Lippel K, MacEachen E, Mantis S, McKinnon J, O'Hagan F, O'Regan R, O'Reilly P, Pacini S, Piner L, Sinclair S, Stone SD, Storey R, Ublansky D, Tucker E, Vinneau P

Stakeholder Involvement: Ongoing dialogue sessions were held with the WSIB in the form of Blue Sky meetings on the topics of stigma and RTW. The program was developed in conjunction with injured workers and representatives. The lead partners were McMaster University, IWH and Bancroft Institute.

Potential Audiences and Significance: Injured workers, their families and their representatives, WCBs, MOLs and workplace parties.

Publication:

Tompa E et al. 2012. Workers' compensation and the consequences of work injury: Final report submitted to SSHRC. 413 pp.

Funding:

Tompa E, MacEachen E, et al. National Symposium on the consequences of work injury. CIHR Meeting Grant: \$25,000 (2011-2012).

Tompa E (Principal Investigator), Ballantyne P, Buonastella O, DeWolff A, Duran C, Eakin J, Endicott M, Forest J, Franche RL, Gildiner A, Guzman J, Keglevic M, Kirsh B, Lalli A, Lippel K, MacEachen E, Mantis S, McKinnon J, O'Regan R, O'Reilly P, Pacini S, Piner L, Sinclair S, Stone SD, Storey R, Ublansky D, Tucker E, Vinneau P (Co-investigators and Collaborators). Community-University Research Alliance on Workers' Compensation and the Consequences of Work Injury. Social Science and Humanities Research Council (SSHRC): \$997,322 (2006-2012)

A Prediction Rule for Duration of Disability Benefits in Workers With Non-Specific Low Back Pain (2105)

Project Status: Completed

Introduction: The ability to distinguish between injured workers at high and low risk of chronicity and recurrence is very appealing and could lead to improved outcomes and cost savings. Some prediction rules have been developed for low back pain, although they have not been validated in different jurisdiction. This study aims to build prediction rules and a computer-based prediction tool for key disability outcomes for injured workers in Ontario with low back pain lost time claims. The rule(s) will estimate the probability of remaining on benefits beyond six months, the number of days on benefits, the likelihood of a recurrence, and the probability of remaining on benefits in a possible recurrence specific to each injured worker.

Objectives:

- To study what combination of factors measured early in the life of the claim predicts whether a worker will remain on benefits beyond six months post-accident.
- To study what combination of factors best predicts the length of the first episode of wage-replacement benefits.
- To study what combination of factors best predicts who may have a recurrence of benefit receipt, after the first episode has ended.
- To study what combination of factors best predicts how long it will be until a recurrence, after the first episode has ended.
- To study whether the same combination of factors predict the length of first episodes and of subsequent episodes of wage replacement (and of the gaps between them).

Methods: We will use administrative data from the Workplace Safety and Insurance Board (WSIB) and the Readiness for Return to Work Cohort (R-RTW). Each question will be answered by developing a statistical predictive model for specific outcomes. Different predictors may be important for different outcomes. Each prediction rule will be built in blocks. The first block will consist of variables routinely collected and entered in the WSIB claims database for administrative purposes. A second block will consist of additional variables from the R-RTW cohort, in which workers in the first four weeks of work disability were included and administered more elaborate, scientifically established, questionnaires over a two year period. The second block is added to investigate the potential importance of collecting this information routinely at the WSIB. Stakeholders will be involved in the development of final products through focus group meetings and workshops.

Status: In 2012, we explored predictive factors in the Readiness for Return to Work (R-RTW) cohort and added those potentially predictive factors from the R-RTW cohort to an established predictive rule. We validated the new predictive rule with bootstrapped sample, ROC curves, and C-index, and calculated the outcomes. We were then able to build a tool based on a predictive rule. Workshops focusing on the feasibility and usability of the tool were held. Results have been communicated to stakeholders and manuscripts are in progress. The findings were presented at an international academic conference and a final report to the funder (WSIB RAC) was submitted.

Researchers: Ivan Steenstra (Principal Investigator), Ben Amick, Jason Busse, Arold Davilmar, Andrea Furlan, Sheilah Hogg-Johnson, Hyunmi Lee, David Tolusso

Stakeholder Involvement: Partners in this project include the WSIB, return to work specialists, human resources professionals, and employers. Stakeholders will be involved in the development of the final product through focus group meetings and workshops.

Potential Audiences and Significance: The key user groups for this prediction tool will be disability managers, WSIB case managers and return to work specialists and human resource professionals and employers. All these groups are interested in a reliable predictor of time until an injured worker with low back pain is able to return to work.

Presentations:

Steenstra I, Tulusso D, Hogg-Johnson S, Davilmar A, Lee H, Busse JW, Furlan A, Franche RL, Amick BC. A prediction rule for duration of disability benefits in works with non-specific low back pain. 18-23 March 2012; Cancun, Mexico: International Congress on Occupational Health Conference.

Steenstra IA, Tulusso D, Hogg-Johnson S, Busse JW, Furlan A, Franche RL, Amick BC. Development of a decision-support tool using administrative data augmented with data from the R-RTW cohort study. 22-24 October 2012; Groningen, The Netherlands: Second Scientific Conference on Work Disability Prevention and Integration: Healthy Ageing in a Working Society.

Funding:

Steenstra I, Amick BC, Busse, J, Franche R-L, Furlan A, Hogg-Johnson S, Tulusso D. A prediction rule for duration of disability benefits in workers with non-specific low back pain. WSIB RAC: \$79,692 (2010-2011)

Work Disability Trajectories and Claim Duration in Ontario Under Three Workers' Compensation Legislations (2115)

Project Status: Completed

Introduction: Since the early 1990s, the time on benefits has been increasing for Ontario workers' compensation claims. Over the last decade, there has been a dramatic increase in the number of total compensated days per lost time claim and an increase in the rate of claims remaining active and open for extended periods of time. This trend is in contrast to the trend of declining claim rates experienced over much of the 1990s. This study provides information that helps better understand how changes in labour-market opportunities have contributed to the increase over a period of approximately 20 years. Specifically, it uses information from a linked database to investigate the labour-market earnings patterns of short- and long-term disability claimants from three different time periods and receiving benefits under three different programs (the pre-1990 Bill 101 program, the 1990-1997 Bill 162 program, and the post-1998 Bill 99 program). Based on the analysis of three successive claimant cohorts, the study provides invaluable information to better understand the individual and contextual factors that contribute to labour-market engagement and earnings recovery, and how these have changed over time.

Objectives:

- To study how the composition of short-term (temporary disability) and long-term (permanent impairment) disability claimants changed over three time periods in terms of gender, age bracket, region of residence, and pre-accident earnings.
- To study how labour-market earnings recovery changed over the three time periods for short-term and long-term disability claimants.

Methods: This study draws on the linkage of a 20% sample of short- and long-term WSIB claimants from 1986, 1992 and 1998 to a Revenue Canada tax file. The tax file is called the Longitudinal Administrative Databank (LAD) and contains a simple random sample of 20% of Canadian tax filers. Analyses draw on a claimant-control matching process in which claimants were matched with uninjured controls in the LAD, based on age, gender, pre-accident earnings trajectories and region of residence. Descriptive analysis consisted of a difference-in-differences approach in which within and across time period differences in earnings recovery were compared, i.e., claimants were compared to their matched controls (the first level of differences) and these differences were compared to similar claimants from the two other time periods (the second level of differences). Regression modeling techniques were used to estimate the significance and magnitude of factors that bear on labour-market engagement and earnings recovery.

Status: Statistical analysis identified five distinct trajectories for long-term disability claimants from the three WSIB programs considered in this study (i.e., the pre-1990 Bill 101 program, the 1990-1997 Bill 162 program and the post-1998 Bill 99 program). Two were high earnings recovery trajectories, and three were low earnings recovery trajectories. Claimants from the most recent program (i.e., the post-1998 Bill 99 program) had a lower probability of being in the lowest earnings trajectory compared to claimants from the two earlier programs (i.e., the pre-1990 Bill 101 program, the 1990-1997 Bill 162 program), and higher probability of being in the second highest one. The probability of being in the other three trajectories was statistically similar across the three programs. Other factors identified as relevant to earnings recovery trajectory of a claimant were impairment level, pre-injury earnings, age, and unemployment rate.

Researchers: Emile Tompa (Principal Investigator), Ben Amick, Sheilah Hogg-Johnson, Qing Liao, Heather Scott-Marshall

Stakeholder Involvement: The study's Advisory Committee is made up of Judy Geary, Joe Sgro from the WSIB and Nicholas Robins from the Ontario Ministry of Labour (MOL).

Potential Audiences and Significance: This study is relevant to the WSIB, the MOL, and injured worker representatives. Researchers interested in work disability outcomes will also be interested in the substantive findings as well as the methods used in the analysis.

Presentations:

Tompa E, Hogg-Johnson S, Amick BC, Liao Q. Work Disability Trajectories under Three Workers' Compensation Programs. 22-24 October 2012; Groningen, The Netherlands: Second Scientific Conference on Work Disability Prevention and Integration: Healthy Ageing in a Working Society.

Tompa E, Hogg-Johnson S, Amick BC, Liao Q. Work Disability Trajectories under Three Workers' Compensation Programs. January 2012; Amsterdam, The Netherlands: VU presentation, Vrije Universiteit.

Funding:

Tompa E, Hogg-Johnson S, Amick BC, Scott-Marshall H. Work disability trajectories and claim duration in Ontario under three workers' compensation legislations. WSIB RAC: \$141,088. (2009-2012)

Examining Determinants and Consequences of Work Injuries Among Older Workers (2120)

Project Status: Completed

Introduction: The labour force in Canada is aging. There are currently over 315,000 people aged 55 years or older working in British Columbia. This number is likely to increase as the percentage of people aged over 50 who are working or looking for work is increasing. Given the increasing importance of older workers in British Columbia, this project seeks to examine if there are differences in the types of injuries sustained by older workers, even when they are in similar occupations to younger workers; and to examine if these trends in injury have changed over time; and examine the factors that might help prevent injuries among this age group, or reduce the amount of health care or wage replacement required when they get injured.

Objectives:

- To examine the trends in the incidence and intensity of lost-time claims among older workers over time, and relative to workers of younger age groups.
- To determine if these patterns have changed over time; if they are different to younger workers within similar occupational and industrial groups; and if they differ depending on pre-existing health status.
- To examine whether similar types of injury claims require similar amounts of health care (including hospitalizations) and time off work (as assessed by wage replacement) across age groups; and the effect that occupation and industry, as well as pre-existing health status have on health care and time off work differences among age groups.

Methods: This project will use administrative workers' compensation and health care data contained within the British Columbia Health Linked Database (BCHLD). The methods will be primarily basic descriptive epidemiology, however multivariate regression techniques will be utilized to account for differences in occupational or industrial exposures where sample size is limited.

Status: In 2012, we completed analysis on the relationship between age and lost-time injury claim rates in British Columbia using claim data combined with Labour Force Survey estimates. The results of this work have been written up in a paper that is currently in press at the Journal of Occupational Health. The findings were also presented at the CARWH conference in Vancouver. We also completed analysis examining age differences in the consequences of work injuries (days compensated and health care costs), and completed analysis examining the role of age and pre-existing chronic conditions. A manuscript on the results of this work is currently in progress. Further analysis on the consequences of work injury by age group was also completed. A manuscript on the results of this work is currently being prepared by the research team. The final report to the funder (WorkSafeBC) is also currently being drafted for submission in 2013.

Researchers: Peter Smith (Principal Investigator, Monash University), Dorcas Beaton, Amber Bielecky, Sheilah Hogg-Johnson, Selahadin Ibrahim, Cameron Mustard, Ron Saunders, Heather Scott-Marshall, David Toluoso, Mieke Koehoorn (University of British Columbia), Chris McLeod (University of British Columbia)

Stakeholder Involvement: We have formal collaborations with various agencies in British Columbia: Fraser Health, the United Food and Commercial Workers Union, and the BC Injury Research and Prevention Unit.

Potential Audiences and Significance: The results of this research program will provide a comprehensive knowledge base on the current work injury burden and associated outcomes for older workers in British Columbia. This knowledge base will serve as a foundation for future decisions concerning the directions of additional primary research on older workers. The results will also provide preliminary evidence for policy development related to working conditions and prevention and consequences of work injuries among older workers in British Columbia.

Publications:

Bielecky A, Smith PM. "Don't ask, don't report?" Methods of measuring self-reported chronic conditions in epidemiology. Submitted: Chronic Diseases in Canada.

Smith PM, Bielecky A, Mustard CA. The relationship between chronic conditions and work-related injuries and repetitive strain injuries in Canada. *Journal of Occupational and Environmental Medicine* 2012; 54(7):841-846.

Smith PM, Bielecky A, Mustard CA, Beaton D, Hogg-Johnson S, Ibrahim S, Koehoorn M, McLeod C, Saunders R, Scott-Marshall H. The relationship between age and work injury and illness in British Columbia: examining differences across time and nature of injury. In press: *Journal of Occupational Health*.

Presentations:

Bielecky A, Smith P, Mustard C, Beaton D, Ibrahim S, Saunders R, Toluoso D. The relationship between age and work injury in British Columbia: Differences by time period, gender and occupation. 1- 2 June 2012; Vancouver, Canada: Canadian Association for Research on Work & Health Conference.

Smith P. Impacts of an ageing workforce on claim rates and work disability – Australian and Canadian perspective. 8 November 2012; Auckland, New Zealand: Invited Presentation, 2nd Australasian Compensation Health Research Forum.

Smith P. The ageing workforce – how do we adapt and manage in relation to return to work. 5 September 2012; Adelaide, Australia: Invited Presentation, WorkCover South Australia Annual Conference.

Smith P. The ageing workforce and its implications for occupational health and safety prevention programs and work-injury compensation systems: A Canadian perspective. 28 March 2012; Melbourne, Australia: Invited Presentation, Institute for Safety, Compensation and Recovery Research.

Funding:

Smith PM, Beaton DE, Hogg-Johnson S, Ibrahim S, Koehoorn M, McLeod C, Mustard CA, Saunders R, Scott-Marshall H, Toluoso D. Examining determinants and consequences of work-injuries among older workers. WorkSafeBC: \$225,000 (2009-2012).

Comparison of the 1993 Early Claimant Cohort and the 2005 Readiness for Return to Work Cohort (2145)

Project Status: Ongoing

Introduction: The number of days of benefit payment has been steadily increasing since 1998 in Ontario. Work in progress using WSIB administrative data suggests that changes in worker, injury & workplace attributes do not explain these increases. On the other hand, some markers of claims management (e.g., delays in adjudication) are related to the increase in claim duration. In this project, we will examine differences in injury severity, worker health, workplace attributes such as disability management practices and work status as reported by the worker. To accomplish this we take advantage of two worker cohorts - the Early Claimant Cohort (ECC) and the Readiness for Return to Work Cohort (R-RTW) recruited in 1993 and 2005, respectively. The two cohorts bracket the major WSIB policy changes in 1998. The overarching study goal is to explain what is driving recent increases in lost time claim durations.

Objectives:

- To compare 1-year health-related outcomes and work status to determine whether there are differences in the 1-year outcome or differences in change within the 1st year.
- To compare claims outcomes over four (and then six) years between the two cohorts to determine whether there are differences.
- To determine whether the duration and patterns of benefit receipt are different between the two cohorts and whether those differences can in turn be explained by differences in worker, injury or workplace characteristics or claims milestones.

Methods: This study is based on a comparison of two longitudinal inception cohorts with four years follow-up each. Many design features of the cohorts were similar. We will determine a further set of inclusion criteria to select two more similar "comparison cohorts". All participants will have soft-tissue injuries of the back or upper limb. A database will be assembled including the eligible claimants of the comparison cohorts and the measures identified as comparable between two cohorts. Baseline attributes (worker, injury and workplace) will be compared. Health outcomes (pain grade, health-related quality of life) and work outcomes reported by the worker will be compared at 12-month mark. Claims milestones such as delays in registration or adjudication indicative of claims management will be examined and compared across the two cohorts to examine their role in the health and claims outcomes. Predictive models will be constructed to identify factors (worker, injury, workplace, health, claims milestones) related to claim duration and whether they are similar or different between two cohorts/time periods.

Status: We completed descriptive statistics for baseline attributes of the two cohorts. We refined outcome definitions and prepared outcome measures for both studies. Additional WSIB data required for the study was obtained. Outcome measures and milestones were assembled and analysis of the outcome measures was initiated and is currently ongoing.

Researchers: Sheilah Hogg-Johnson (Principal Investigator), Ben Amick, Cynthia Chen, Hyunmi Lee, Ivan Steenstra, David Toluoso, Emile Tompa, Ute Bultmann (University of Groningen), Renée-Louise Franche (Vancouver General Hospital)

Stakeholder Involvement: We will continue to have regular meetings with Judy Geary, Paul Gilkinson and Joe Sgro from the WSIB.

Potential Audiences and Significance: This study will provide information relevant to the WSIB. The study goals are to identify factors that have led to prolonged claim durations in recent years, some of which may be related to changes in practices arising from a policy change - the enactment of the Workplace Safety & Insurance Act in 1998. Some of the changes in practices we are examining as a potential driver of prolonged claims duration are key claims milestones. We may identify key changes in key claim milestones that could suggest areas for changes in claims management that might improve worker outcomes and reduce claim durations.

Presentation:

Hogg-Johnson S, Amick BC, Chen C, Tulusso D, Tompa E. Examining claim milestones to enlighten drivers of long claim duration. 1-2 June 2012; Vancouver, Canada: Canadian Association for Research on Work and Health Conference.

Funding:

Hogg-Johnson S, Tulusso D, Franche R-L, Bultmann U, Amick BC, Steenstra I, Tompa E. Comparison of the 1993 Early Claimant Cohort and the 2005 Readiness for Return to Work Cohort. WSIB RAC: \$120,805 (2011-2013)

Benefit Adequacy and Equity in Ontario, 1998-2006 (2150)

Project Status: Ongoing

Introduction: The purpose of this study is to describe post-injury earnings and benefits of workers' compensation beneficiaries in Ontario since the changes in the program that came into effect in 1998. The enactment of Bill 99 in 1998 introduced a number of changes to the workers' compensation system in Ontario, including the following: benefits are based on a rate of 85% of pre-injury post-tax earnings, (changed from 90%), benefits are adjusted annually for inflation, at a rate of ½ of the increase in the Consumer Price Index (CPI), minus one percentage point, to a maximum of 4 percent a year, and vocational rehabilitation services that had been delivered by the Workers' Compensation Board were replaced by a Labour Market Re-entry program with third-party delivery of rehabilitation services.

Objectives:

- To provide a comprehensive summary of earning losses and earnings replacement rates for a cohort of workers' compensation beneficiaries who experience a work injury in the period 1998-2006.

Methods: The study examined earnings losses and earnings replacement rates for long-term and short-term disability claimants who experienced a work injury during the years 1998 -2006. Post-injury earnings recovery and earnings-replacement rates will be calculated by comparing claimants' post-injury earnings and benefits receipt with: 1) their pre-injury, after-tax earnings, and 2) the earnings of a sample of uninjured counterparts that had similar characteristics and earnings to the claimants prior to the injury year. Descriptive analyses will be provided for various categories of claimant (age group, gender, region, nature and rating of physical impairment and occupation)--a more extensive set of categories than previously examined.

Status: We obtained approval for the record linkage from Statistics Canada. We completed a data sharing agreement with the WSIB. The development of the sample frame and related variables for the record linkage is underway and the linkage is currently in progress. As well, we submitted an operating grant to CIHR for funding which was successful.

Researchers: Emile Tompa (Principal Investigator), Cameron Mustard, Ron Saunders

Stakeholder Involvement: In August 2010, Institute staff briefed senior management of the WSIB on the results of studies examining the adequacy of benefits in the pre-1990 Ontario program and in the program that was in place during the period 1990-1997. At this briefing, the President of the WSIB requested that the Institute proceed to update these studies to describe more recent cohorts of beneficiaries.

Potential Audiences and Significance: A key knowledge transfer and exchange activity for this study will be frequent consultations with WSIB policymakers and worker representatives to ensure that the analyses undertaken and results obtained are framed appropriately and address relevant issues.

Funding:

Tompa E, Saunders R, Mustard C. Impairment and work disability of workers' compensation claimants in Ontario, a cohort study of new claimants from 1998-2006. CIHR: \$204,580 (2013-2015)

Examining the Impact of Physical Conditions and Depression on the Labour Market Participation of Older Working-aged Canadians: Exploring Differences by Gender and Sex (2155)

Project Status: Ongoing

Introduction: The Canadian population is getting older. Certain aspects of health decline as we get older, such as increases in certain health conditions. From both a society and individual perspective it is important to keep older workers in the labour market. As such, it is important that we understand how health conditions, both physical and mental, impact on the ability of people to continue to work, and if there are differences in these relationships and the ability to stay at work for men and women. It is likely that the number of workers with multiple chronic conditions will increase given the aging workforce in Canada. As such developing a clearer understanding of the impact that health conditions, by themselves and in combination, have on labour market participation, and if these relationships differ for men and women, is a vital area of future research.

Objectives:

- To examine the pattern of chronic conditions among older working-aged Canadian in separate analyses for men and women (40 to 74 years).
- To explore differences in the impact of particular conditions on work status, in particular to explore if this relationship differs for men and women and if it has changed between 1994 and 2007.
- To examine the temporal relationship between the onset of different chronic health conditions and subsequent labour market participation for 40 to 60 year olds at baseline from 1994 to 2008.
- To examine differences in the time lag between the onset of chronic conditions and changes in labour market participation.
- To examine the influence of health conditions on labour market re-entry, among respondents who have left the labour market for at least one survey cycle.

Methods: We will utilize both repeated cross-sectional and labour market surveys between 1994 and 2007, as well as data from the Canadian National Population longitudinal Health Survey. We will use path analysis modeling methods, which allow us to examine both direct and indirect relationships between our independent measures of interest (age and health conditions), while simultaneously examining the relationships between our independent variables, within the one model. Our analytical framework will be guided by a Gender Sex-Based Analytical (GBSA) approach.

Status: In 2012, we completed cross-sectional analysis examining the relationship between chronic conditions (physical and mental) and labour market participation. We also completed further analysis examining the relationship between chronic conditions and restrictions of activity at work. The results of this work have been written up in a paper that was submitted to a peer-reviewed journal and presented at an academic conference.

Researchers: Peter Smith (Principal Investigator, Monash University), Dorcas Beaton, Amber Bielecky, Cynthia Chen, Selahadin Ibrahim, Cameron Mustard

Stakeholder Involvement: This is a secondary data analysis so stakeholder involvement is limited during the analytical part of the project. Results and interpretation of results will be disseminated and discussed with various industry and labour groups with an interest in mental and physical health conditions and labour market participation.

Potential Audiences and Significance: This project will develop a general knowledge base concerning the ability of older workers to find work that fulfills their needs in the Canadian labour market – and highlight particular gender- and sex-based differences in this relationship – providing both direction for future research questions and preliminary evidence for policy development that recognises the role that health plays in the successful labour market participation among older men and women in Canada.

Publication:

Smith PM, Chen C, Bielecky A, Ibrahim S, Beaton D, Mustard CA. Examining the relationship between chronic conditions, multi-morbidity and labour market participation in Canada: 2000 to 2005. Submitted: Ageing and Society.

Presentations:

Smith PM Examining the relationship between chronic conditions, multi-morbidity and labour market participation in Canada. 5 June 2012; Toronto, Canada: Institute for Work & Health Internal Plenary.

Smith P. Examining the interaction between work demands and arthritis on activity restrictions at work. 24 October 2012; Groningen, The Netherlands: Second Scientific Conference on Work Disability Prevention and Integration.

Funding:

Smith PM, Beaton D, Ibrahim S, Mustard CA. Examining the impact of physical conditions and depression on the labour market participation of older working-aged Canadians: exploring differences by gender and sex. CIHR: \$120,000 (2011-2013)

Examining Individual and Workplace Factors which Differentiate Injuries that Result in Wage Replacement from Those That Do Not (2175)

Project Status: Completed

Introduction: Whether an injury results in time off work or not has important implications in Ontario. Recent reports have suggested that differences between lost-time claims (LTCs) and no-lost-time claims (NLTCs) have become increasingly blurred in Ontario due to the increased use of workplace accommodation, or claims management practices. A better understanding of whether NLTCs are becoming more similar to LTCs – or if there are factors outside of the injury itself that preferentially lead to no time off work being reported – have been hampered by the lack of information being electronically stored with NLTCs. This project will address this knowledge gap by matching NLTCs where detailed information has been collected, to LTCs in the WSIB administrative database.

Objectives:

- To compare the characteristics of injuries (e.g. nature and event) submitted as no-lost-time claims (NLTCs) and lost-time claims (LTCs) occurring to employers of the same size and rate group in Ontario over three time periods (1996, 2000 and 2005).
- To examine what characteristics of workers and workplaces are associated with an injury being a LTC versus a NLTC among similar types of injuries over three time periods (1996, 2000, 2005).

Methods: To address each objective we will conduct two matched case-control studies. In each case we will match NLTC collected as part of a previous project with LTCs from the WSIB administrative data holdings. Our NLTC database contains injury information on the type of injury (nature, event, part of body, source and secondary source), workplace (industry, rate group and size), and worker characteristics (occupation, job tenure, age, gender) for 6,921 NLTCs with an injury date in 1996, 2000 and 2005.

Status: The extraction of LTCs from the WSIB administrative database was completed. LTCs from similar workplaces and injuries were matched to existing NLTC in the database. We completed analysis examining trends in injuries submitted as NLTC and LTC from similar firms. We are currently in the process of interpreting these results and preparing a peer-reviewed article for submission.

Researchers: Peter Smith (Principal Investigator, Monash University), Sheilah Hogg-Johnson, Cameron Mustard, Emile Tompa

Stakeholder Involvement: Formal linkages have already been created with the following organizations: Tim Hortons and the Restaurant and Food Services Advisory Committee for Workplace Safety and Prevention, Workplace Safety and Prevention Services (WSPS), the Public Services Health and Safety Association (PSHSA), and the Canadian Manufacturers and Exporters (CME). Interactive knowledge transfer strategies will include engaging key stakeholders in early discussions as the project progresses including a discussion of findings to develop —messagesll for dissemination.

Potential Audiences and Significance: This research will generate new knowledge and a greater understanding of what existing and future trends in NLTCs versus LTCs demonstrate in respect to primary versus secondary prevention of workplace injuries in Ontario. It will also allow one of the first examination of whether workplace factors such as premium payments or workplace size, or individual factors such as age, occupation and job tenure, are associated with having time off work (or not) following a similar type of injury. This research will be of interest to occupational health and safety policy portfolios both at the provincial and federal levels, the WSIB, and other compensation agencies in Canada, the Association of Workers' Compensation Boards of Canada (AWCBC), the MOL, provincial health and safety partners such as Health and Safety Associations, as well as management and workplace parties.

Funding:

Smith PM, Hogg-Johnson S, Mustard CA. Examining individual and workplace factors which differentiate injuries that result in wage replacement from those that do not. WSIB RAC: \$60,450 (2011-2012)

Work Injury and Poverty: Investigating Prevalence Across Program and Over Time (2180)

Project Status: Ongoing

Introduction: Research on the economic impact of work disability has found that permanently impaired workers have reduced labour-market earnings, suffer significant long-term financial losses, and are at increased risk of poverty. There is also some preliminary research undertaken by injured worker groups that suggests the proportion of impoverished claimants has been rising, although it is difficult to generalize from studies based on samples of convenience. Furthermore, little is known about the specific factors contributing to claimant poverty and the reasons for its possible increase.

Objectives:

- To investigate the prevalence of poverty amongst injured claimants with permanent impairments and how it differs from that of matched, uninjured controls.
- To investigate whether the prevalence of poverty amongst claimants changed over time.
- To investigate whether the program under which claimants receive benefits bears on the prevalence of poverty.
- To examine the magnitude and significance of the effects of individual, programmatic, temporal, and other contextual factors on the probability of poverty.

Methods: This study draws on the linkage of a 20% sample of workers' compensation claimants to a Revenue Canada tax file that was undertaken in 2007. The claimant sample includes workers who sustained a permanent impairment from a work accident and are receiving benefits from four different legislative programs over three different time periods. The tax file is called the Longitudinal Administrative Databank (LAD) and contains a simple random sample of 20% of Canadian tax filers. Analyses draw on two methodological approaches. The first is a claimant-control matching process in which claimants will be matched with uninjured controls in the LAD, based on age, gender, pre -accident earnings source and amounts, and family characteristics. Descriptive analysis consists of a difference-in-differences approach in which within and across time period/program differences in poverty will be compared. Regression modeling techniques are used to estimate the significance and magnitude of factors that bear on low income at the individual and family level.

Status: The matching of claimants with controls was completed. Poverty measures were identified. Further development of poverty measures and testing using the sample of claimants and controls is ongoing. A stakeholder meeting is planned for 2013.

Researchers: Emile Tompa (Principal Investigator), Sheilah Hogg-Johnson, Ron Saunders, Heather Scott-Marshall, Peri Ballantyne (Trent University)

Stakeholder Involvement: We plan to meet with Ontario Workplace Safety and Insurance Board (WSIB) policy makers to discuss the findings from this study at several points over the time frame of this study. We have met with them in the past on the topic of work disability trajectories. The topic of injured worker poverty fits in well with the subject matter of a related study on work disability trajectories, since poverty may be associated with inability to re-integrate into the labour market.

Potential Audiences and Significance: The WSIB is an important user group and audience for the results from this study. We will disseminate our findings first through a WSIB group and to directors at the WSIB. Reports and presentation materials will be developed to convey key findings in a manner that is transparent and useable. Another critical audience to target for dissemination is the injured worker community and their representatives, as well as service providers.

Funding:

Tompa E, Scott-Marshall H, Ballantyne P, Saunders R, Hogg-Johnson S. Work injury and poverty: Investigating prevalence across programs and over time. WSIB RAC: \$88,160 (2012-2014)

Income Security and Labour-Market Engagement: Envisioning the Future of Disability Policy in Canada (2195)

Project Status: Ongoing

Introduction: A significant current context of work disability is the changing nature of work, workers, and injuries. Disability programs have different and sometimes conflicting eligibility criteria such that people are shuffled between programs and can fall through the cracks. In the past, efforts to revamp the Canadian work disability policy system have been piecemeal, uncoordinated, and have failed to address core changes to workplaces and the labour-markets. Given the current economic climate, the tendency may be to rationalize, cut budgets, restrict eligibility and downsize programs in order to address short-run constraints. However, such tactics may magnify system inadequacies, increasing disparities and cost shifting. Our initiative lays the ground for evidence-informed, coordinated approach. Our 7-year initiative is a transdisciplinary inquiry into the future of work disability policy and labour-market engagement.

Objectives:

- To provide a forum for within- and cross-provincial and national dialogue on challenges and opportunities for improving the work disability policy system for working age individuals.
- To identify problems and challenges associated with program coordination and complexity.
- To identify relevant and favourable alternative approaches to system design and service provision through select comparisons with countries and small scale trials.
- To mobilize knowledge developed within and outside of the initiative in order to inform policy.
- To build capacity for research and knowledge mobilization on the topic of work disability policy.

Methods: An LOI was submitted to SSHRC in February 2012. From June through November the full grant was developed. Partner meeting were held in August and September with each of the four clusters—British Columbia, Ontario, Quebec and Newfoundland. Meetings focused on developing the partner relationships, research program, governance structure, and knowledge mobilization plan.

Status: We received \$20,000 funding in June 2012 to support full grant development. We held half-day grant development workshops with participants in each of the provincial clusters (British Columbia, Ontario, Quebec, and Newfoundland). The full grant was submitted on November 1, 2012.

Researchers: Emile Tompa (Co-Principal Investigator), Ellen MacEachen (Co-Principal Investigator), Curtis Breslin, Ron Saunders, Heather Scott-Marshall. External co-investigators and collaborators: Baril-Gingras G, Bernier J, Bornstein S, Boucher N, Calvert J, Cooke G, Côté P, Coutu MF, Dawe D, de Boer C, Dewa C, Durand MJ, Facey M, Finkler E, Franche RL, Gewurtz R, Grignon M, Hanes R, Helfand N, Heymann J, Holness L, Ison T, Jennissen EM, King A, Koehoorn M, Laberge M, Latimer E, Lippel K, Loisel P, MacAhonic P, McLeod C, Mendelson M, Montreuil S, Neis B, Noël A, O'Campo P, Ostry A, Premji S, Provencher Y, Rioux M, Shaw L, Small S, Stapleton J, Torjman S, White M, Zeytinoglu I

Stakeholder Involvement: Stakeholders are involved in all aspects of the initiative, including governance. Three symposia will be held over the seven year time period which will serve as the principal forums.

Potential Audiences and Significance: This initiative will be of interest to all stakeholders in the Canadian work disability policy system, which includes Canada and Quebec Pension Plan Disability, social assistance for people with disabilities, Disability tax credits, Employment Insurance, Sickness or Veterans Benefits, private disability pension plans, motor vehicle accident insurance and compensation for victims of crime, as well as employers.

Funding:

Tompa E (Co-Principal Investigator), MacEachen E (Co-Principal Investigator), Baril-Gingras G, Bernier J, Bornstein S, Boucher N, Breslin CF, Calvert J, Cooke G, Côté P, Coutu MF, Dawe D, de Boer C, Dewa C, Durand MJ, Facey M, Finkler E, Franche RL, Gewurtz R, Grignon M, Hanes R, Helfand N, Heymann J, Holness L, Ison T, Jennissen EM, King A, Koehoorn M, Laberge M, Latimer E, Lippel K, Loisel P, MacAhonic

P, McLeod C, Mendelson M, Montreuil S, Neis B, Noël A, O'Campo P, Ostry A, Premji S, Provencher Y, Rioux M, Saunders R, Scott-Marshall H, Shaw L, Small S, Stapleton J, Torjman S, White M, Zeytinoglu I (Co-investigators and Collaborators). Income Security and Labour-Market Engagement: Envisioning the Future of Disability Policy in Canada. Full proposal submitted to SSHRC Nov 1, 2012, requesting \$2,760,782 over 7 years.

Tompa E (Co-Principal Investigator), MacEachen E (Co-Principal Investigator), Banting K, Baril-Gingras G, Bornstein S, Boucher N, Calvert J, Cooke G, Côté P, Dawe D, de Boer C, Dewa C, Facey M, Gewurtz R, Gold D, Grignon M, Heymann J, Holness L, Koehoorn M, Laberge M, Latimer E, Loisel P, McLeod C, Montreuil S, Neis B, Noël A, Ostry A, Premji S, Provencher Y, Rioux M, Saunders R, Shaw L, Small S, Zeytinoglu I (Co-investigators and Collaborators). Income Security and Labour-Market Engagement: Envisioning the Future of Disability Policy in Canada. SSHRC Partners Grant LOI: \$20,000 received to develop full grant.

Evidence Guides and Tools

As in Primary Prevention, the research we conduct in work disability management and prevention may lead to the evaluation of specific interventions and to the development of tools or decision aids.

In this suite of projects we describe the evaluation of a return-to-work intervention and the development of tools or metrics for use with long term claims. IWH researchers are also contributing to a Canadian based international training initiative for young researchers interested in work disability prevention.

Development and Testing of the DASH Outcome Measure - DASH Instrument (0425)

Project Status: Ongoing

Introduction: This multi-year project involves the development and ongoing testing of the DASH, a 30-item self-completed questionnaire designed to measure disability and symptoms in any or multiple disorders of the upper limb. The DASH Outcome Measure was jointly developed by the IWH and the American Academy of Orthopaedic Surgeons. Copyright of the DASH/QuickDASH Outcome Measure was transferred in 2005 to IWH. It is now in worldwide use with cross-cultural adaptation versions available in over 30 languages. In 2003, the 11-item QuickDASH was released. In 2004, there was specific testing of the QuickDASH in clinical and research settings. In 2005, the QuickDASH development paper was published in the *Journal of Bone and Joint Surgery*. In 2011, the DASH manual was updated and loaded onto our website. Several tools to assist users with the calculation of DASH/QuickDASH scores have been developed both within the Institute (e.g., QuickDASH scoring e-tool) and externally (e.g., Orthopedic Scores for DASH/QuickDASH). In addition, PRORehab developed a SmartPhone application for DASH.

Objectives:

- To continue work with the DASH and modern measurement theory and DASH benchmarking.
- To continue user's survey analysis and synthesis.

Methods: Series of projects and activities to support and advance measurement using the DASH/QuickDASH. The project involves support of translations, manuals, and manuscripts on these instruments.

Status: The DASH/QuickDASH Factor analysis review was completed and submitted for publication. The team working with a developer in the US created a DASH app for an iPad.

Researchers: Dorcas Beaton (Institute Coordinator), Claire Bombardier, Kim Cullen, Sheilah Hogg-Johnson, Carol Kennedy-Yee, Philip Kiff, Quenby Mahood, Peter Subrata, Peter Smith (Monash University), Sherra Solway (Centre for Addiction and Mental Health)

Stakeholder Involvement: Consultation with clients, clinicians, educators, professional organizations, regulatory bodies and other researchers will continue to occur throughout these projects.

Potential Audiences and Significance: The DASH is now available in 30 languages. Professional organizations such as the Canadian Physiotherapy Association (CPA), American Academy of Orthopaedic Surgeons (AAOS) and regulatory colleges have demonstrated their support through use of the DASH, as has the WSIB. Orthopaedic implant manufacturers have contacted the Institute regarding the use of the DASH in trials of new products. Several providers of outcome measurement database have also contacted the Institute for the use of the DASH/QuickDASH. Anyone interested in outcome measurements that reflect client's perspective could be a potential user of DASH. The manual has enjoyed equal popularity and utility.

Publications:

Kennedy C, Beaton D, Smith P, Tang K, Van Eerd D, Hogg-Johnson S, Inrig T, Couban R. The *QuickDASH* Outcome Measure: Systematic Review of Measurement Properties. In press: *Quality of Life Research*.

Kennedy CA, Beaton DE, Smith P, Van Eerd D, Tang K, Inrig T, Hogg-Johnson S, Linton D, Couban R. Measurement properties of the QuickDASH outcome measure and cross-cultural adaptations of the QuickDASH: a systematic review. *Quality of Life Research* 2013 Mar 12. [Epub ahead of print]

Presentation:

Kennedy CA, Beaton DE, Smith P, Van Eerd D, Tang K, Inrig T, Hogg-Johnson S, Linton D, Couban R. Measurement properties of the QuickDASH Outcome Measure and cross-cultural adaptations of the QuickDASH: a systematic review. 5 May 2012; Toronto, Canada: Canadian Society for Surgery of the Hand/Canadian Society of Hand Therapists Annual Scientific Meeting.

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Foundation Programs

There are two programs within the Research Program whose scope of activities may cross cut all the research we undertake at the Institute. These two programs, Data & Information Systems and Systematic Reviews have their own methodological foci, and provide this expertise to all relevant research projects in the Institute, hence the term foundation programs.

The first of two foundation programs at the Institute is Data & Information Systems. The success of Institute research, including the productivity of our scientists, rests to no small extent on expertise provided by the staff of this program. This team of statisticians and programmers/analysts provides statistical consulting and information technology solutions to all the other research programs.

Reliable measurement methods and rigorous analytic approaches are vital to research excellence. Among other things, they help scientists clarify the relationship between exposures and outcomes in epidemiologic studies.

Our data sources include current administrative data from the Workplace Safety and Insurance Board (WSIB). Program staff are constantly refining the Institute's ability to use this resource to its maximum capacity. They also develop and maintain our repository of historical WSIB databases as a potential resource for future research projects. Our access to WSIB administrative data provides scientists with some unique opportunities.

Program staff are very responsive to the needs of other Institute researchers, and as a result, are highly regarded by our scientists and staff in the other program. Besides being a source of methodological expertise and data management, program staff have also taken the lead in other areas. These include the exploration, development and implementation of research methodologies with new approaches to accessing, collecting, analyzing, interpreting, storing and maintaining the security of our data.

This team also provides continuity and training across the organization in maintaining issues of privacy, confidentiality and data security. Projects listed below which have an internal focus are a small part of the portfolio of this group as program staff are primarily involved in projects described elsewhere.

2012 Quick Statistics

Completed projects (2)

Ongoing projects (6)

Papers published or in press (3)

Peer review papers submitted (3)

Presentations of results (3)

External grants held (3)

WSIB Data Routine Statistics (0845)

Project Status: Ongoing

Introduction: The Ontario Workplace Safety and Insurance Board (WSIB) routinely collects claims-based data for administrative and reporting purposes. Through a special research agreement with the WSIB, the Institute for Work & Health can access and use much of the WSIB routinely collected data for research purposes.

Objectives:

- To continually develop and maintain expertise in the data holdings of the WSIB.
- To aid Institute researchers by providing information on the data holdings and their potential use for research projects.
- To respond to ad hoc requests for data extractions required for project planning purposes, etc.
- To develop internal capacity to use WSIB data and maintain three staff who can extract data.
- To develop set of core competencies regarding WSIB data.
- To position IWH to provide assistance to external researchers (work involving IWH, WSIB RAC, WSIB Privacy Office)

Methods: The methods change depending upon the request. Data extractions largely involve creating SAS programs which tap data stored in a number of large files stored either on a mainframe computer or on tape.

Status: Responded to ad hoc requests for WSIB data as required. Ensured research agreements for feasibility studies are completed prior to ad hoc requests. Sought opportunities to expand knowledge of different WSIB resources. Updated codebook and made it available to the scientists to help them when submitting a data extraction request. System 57 mastered and documentation initiated in 2012.

Researchers: Sheilah Hogg-Johnson (Institute Coordinator), Amber Bielecky, Arold Davilmar, Hyunmi Lee, Peter Subrata, Peter Smith (Monash University)

Stakeholder Involvement: Partners in this project include the WSIB through our research and master agreements, external researchers from universities, and the CREs.

Potential Audiences and Significance: This IWH research activity is largely of interest to internal Institute colleagues, but has potential interest to WSIB stakeholders also. Data extractions will be conducted solely for Institute researchers as per our research agreement with the WSIB.

Data Dictionary (0301)

Project Status: Ongoing

Introduction: The Data Dictionary project is an attempt to create a searchable catalogue that documents the tools, resources and information on areas of research at the Institute. Staff initiating research at the Institute will be able to access this information, thereby limiting duplication of effort. Information will typically include the concept, definition, data access (if applicable), previous IWH work, and links to other sources of information on the concept. A beta version of limited information had been completed.

Objectives:

- To identify areas and subjects where specific researchers at the Institute may contribute information.
- To create a template for the presentation of information within the Data Dictionary.
- To display this information and together with IWH staff, work towards agreement on the structure of the Data Dictionary (i.e., how best to categorize the information within it).
- To cross reference information where appropriate.
- To maintain the dictionary.

Methods: First, we will build an inventory of internal and external microdata holdings used for IWH research. Then, we will classify all microdata holdings with respect to documentation and storage needs. A set of rules/guidelines for documenting/storing pre-analytic and analytic datasets will be developed. An investigation of available software solutions for creating and maintaining documentation will be undertaken and suitable software selected. This will take into account the ongoing use of the wiki for capturing WSIB data knowledge and the current IWH initiative for knowledge management. Finally, staff will be educated on the software and rules/guidelines for documenting microdata holdings and pre-analytic and analytic datasets.

Status: A draft inventory of internal microdata holdings was completed. A framework for classifying data (titled “Levels of Data Framework”) was created. A list of the different types of data documentation was generated. An informal review of software solutions for storing data documentation was conducted, and the Wiki was selected. The Wiki for WSIB data documentation and knowledge was revived, restructured with added content. New software apps for the wiki were explored and a new vehicle selected. A small number of staff received basic training on the use of the Wiki. The structure of the wiki was expanded to allow for the eventual addition of other data sources (besides WSIB). A standard process for creating, naming and setting permissions on T drive was developed, documented and communicated to staff. A standard process for storing and accessing Statistics Canada DLI data sources was developed, documented and communicated to staff.

Researchers: Sheilah Hogg-Johnson (Institute Coordinator), Amber Bielecky, Arold Davilmar, Jacob Etches, Peter Subrata, Michael Swift

Stakeholder Involvement: Ministry of Labour Data Diagnostic Unit: potential audience and user of Dictionary – potential contributor around sources/uses of data.

Potential Audiences and Significance: Largely of internal interest, but may be some specialized interest with data users within the Ministry of Labour and the Workplace Safety and Insurance Board.

Methodological Developments in Systematic Reviews (0951)

Project Status: Ongoing

Introduction: As part of the IWH's commitment to continuously improve the field of (SR) methodology; we propose to undertake the following methods projects:

- A. Update two Cochrane reviews: 1) Multidisciplinary bio psychosocial rehabilitation for neck and shoulder pain among working age adults; 2) Alcohol and drug screening of occupational drivers for preventing injury.
- B. Prevention Review Methodology: Evaluation of prevention reviews in comparison to Cochrane reviews.
- C. Comparison of Evidence synthesis methods.
- D. Realist/Rapid Review project.
- E. Review classification project.
- F. Database of prognosis reviews.

Objectives:

- To update two Cochrane reviews in order to broaden the SR expertise throughout the organization.
- To publish a paper intended to underline the challenges and solutions of adapting the established systematic review methodology to non-clinical literature.
- To publish a paper intended to compare study recommendations using a meta analytic versus narrative synthesis approach.
- To develop a process for conducting realist/rapid reviews.
- To create a classification of various review typologies.
- To develop a database of prognosis reviews.

Methods: The IWH Systematic Review protocol usually includes the following steps: develop question; conduct literature search; identify relevant publications; quality appraisal; data extraction; and evidence synthesis.

Status: We initiated an update on two Cochrane reviews. A report was written which compared study recommendations using a meta analytic versus narrative synthesis approach. We initiated the development of terms for rapid and realist reviews and gave a plenary on realist reviews. We created a typology of review types.

Researchers: Andrea Furlan (Institute Coordinator), Emma Irvin (Institute Coordinator), Dwayne Van Eerd (Institute Coordinator), Ben Amick, Kim Cullen, Quenby Mahood, Teresa Marin, Claire Munhall, Jill Hayden (Dalhousie University), Robin Parker (Dalhousie University), Maurits van Tulder (VU, Amsterdam)

Stakeholder Involvement: Partners in this project include external researchers, the WSIB, clinicians, and policy-makers.

Potential Audiences and Significance: Methods groups of the Cochrane Colloquium and other researchers conducting systematic reviews and those interested in incorporating stakeholders in the process.

Publications:

Gensby U, Lund T, Kowalski K, Saidj M, Jorgensen AMK, Filges T, Irvin E, Amick B, Labriola M. Workplace disability management programs promoting return to work: a systematic review. *Campbell Systematic Reviews* 2012;17. [2012-020]

Gensby U, Lund T, Kowalski K, Saidj M, Jorgensen AMK, Filges T, Irvin E, Amick BC, Labriola M. Taxonomy classifying components around WPDM programs. Submitted: *Journal of Occupational Rehabilitation*.

Irvin E, Brewer S, Amick BC. Systematic reviews in disability management and the prevention of occupational injuries: Moving from science to practice. Submitted: Journal of Occupational Rehabilitation.

Mahood Q, Van Eerd D, Irvin E. Searching for grey literature for systematic reviews: sources, strategies, yields and impacts. Submitted: Research Synthesis Methods.

Salbach NM, O'Brien K, Brooks D, Irvin E, Martino R, Takhar P, Chan S, Howe J. Speed and distance requirements for community ambulation: A systematic review. In press: Archives of Physical Medicine and Rehabilitation.

Presentation:

Irvin E, Van Eerd D, Steenstra I. Topical Seminar: Roundtable on work disability prevention knowledge synthesis and transfer. 22-24 October 2012; Groningen, The Netherlands: Scientific Conference on Work Disability Prevention and Integration Healthy Ageing in a Working Society.

Participatory Ergonomic Tool Development (3100)

Project Status: Completed

Introduction: Musculoskeletal disorders and injuries (MSDs) are a leading cause of lost time injury claims and lost productivity in Canadian workplaces. This places a significant burden on the health of Canadians and therefore on the healthcare and compensation systems. The physical risk factors for MSDs can be reduced through improved ergonomics. Ergonomics is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance (IEA). One emerging approach to ergonomic interventions is to engage workers in the process of identifying and solving ergonomic risks – called participatory ergonomics (PE). PE interventions are effective in reducing MSDs and their impact. PE entails including employees in hazard identification, solution development and solution implementation.

Objectives:

- To work with our educationally influential (EI) networks in healthcare and ergonomics and other stakeholders.
- To develop and evaluate the development process for a PE tool that could be used by health & safety practitioners to initiate PE programs for workplaces.
- To disseminate and evaluate the uptake of the PE tool.

Methods: The study will be an open cohort followed for 12 months with data collection via online surveys at baseline, 3, 6 and 9 months. Study participants will be recruited in to the cohort for the first 6 months, so there is at least 3 months of follow-up possible for each participant. The cohort will consist of all stakeholders from British Columbia who download the PE guide from a host website.

Status: We completed data collection and planned the analysis steps. We completed data analysis and focused on descriptors for the WorkSafeBC report. The WorkSafe BC report was completed. Subsequently, some team members explored more sophisticated analysis options for the PIs thesis.

Researchers: Dwayne Van Eerd (Principal Investigator), Ben Amick, Emma Irvin, Trevor King, Philip Bigelow (University of Waterloo), Donald Cole (University of Toronto), Kiera Keown (CIHR), Tesha Slack

Stakeholder Involvement: In British Columbia, we will engage with a group of stakeholders from the PE process and implementation systematic review (a previous WorkSafeBC funded project). We will also engage an advisory group (Judy Village, Dan Robinson, Christie Harell, and Stephen Symon) to provide additional stakeholders who will receive the PE guide in an electronic format.

Potential Audiences and Significance: Practitioner stakeholders (such as ergonomists, kinesiologists, OTs, etc) suggested that the PE SR findings be developed into a tool. The WSIB, employers, and labour groups will be interested in improved MSD prevention interventions that such a tool would facilitate. KT practitioners and knowledge dissemination organizations will be interested in our approach.

Presentations:

Van Eerd D, King T, Slack T, Keown K, Cole DC, Irvin E, Amick B, Bigelow P. Dissemination and uptake of an evidence-based guide for participatory ergonomics. 14-16 August 2012; Halifax, Canada: Association of Canadian Ergonomists Annual Conference.

Van Eerd D, King T, Irvin E, Keown K, Cole DC, Amick B, Bigelow P. Development and dissemination of an evidence-based guide for participatory ergonomics. 22-24 October 2012; Groningen, The Netherlands: Scientific Conference on Work Disability Prevention and Integration Healthy Ageing in a Working Society.

Funding:

Van Eerd D, Keown K, Cole DC, Irvin E, Amick BC. Dissemination and uptake of a participatory ergonomics tool for workplaces. WorkSafeBC: \$44,925 (2010-2011)

Knowledge Transfer and Exchange in Work and Health – Narrative Review (3110)

Project Status: Ongoing

Introduction: The burden of workplace injury and illness can be great and affects not only individual workers but workplaces, the medical system, insurance systems and society as a whole. Occupational health and safety is an important aspect of prevention of workplace injury and illness. The field of occupational health and safety is broad and may encompass occupational hygiene, engineering, biomechanics, ergonomics, psychology and sociology. Therefore practitioners may focus on different risk factors and aspects of workplace health and safety as they design and implement prevention activities. How do workplace parties locate and evaluate the information required to make the decisions that must be made to protect workers from the risks that are present at workplaces? How do workplace parties decide on the best approaches to reduce injuries and illnesses at work?

Objectives:

- To review the literature on KTE in work and health settings as a narrative review employing a comprehensive search strategy.

Methods: The proposed literature review will explore the scientific literature for studies or descriptions of knowledge transfer and exchange (KTE) approaches employed in work and health. The review will not focus solely on KTE “interventions” or approaches nor will it be limited to particular quantitative study designs or qualitative studies. It will also include articles that describe potential approaches or planned KTE activities that are relevant to work and health. A comprehensive but focussed literature search will be done in selected electronic databases (Medline, Embase, ERIC, Social Sciences, Web of Science, and Business Source Premier) as well as a database maintained at IWH for KTE research. The search strategy will focus on keywords for workplaces (worker, workplace, occupational etc) combined with knowledge transfer (knowledge trans, knowledge exchange etc. In addition, reference lists from relevant articles will be searched for relevant articles. Searches will not be restricted by language but English language articles from peer-reviewed and non-peer-reviewed sources will be selected for review. Titles, abstracts, and full articles from all available searches will be scanned to determine if they describe KTE in work and health contexts. English language articles from peer-reviewed journals will be selected for review if they describe (or propose) a KTE approach or program relevant to work and health research or practice. The extraction of information and writing steps will be iterative in nature and conducted in parallel. A narrative synthesis will be completed by grouping the information from each article according to: Workplace context, Knowledge transfer and exchange approach, the theoretical frameworks (or models), the types of knowledge use targeted, and audiences involved.

Results: The literature searches were tested in selected databases and then updated for 2012.

Researchers: Dwayne Van Eerd (Principal Investigator), Emma Irvin, Quenby Mahood, Philip Bigelow (University of Waterloo), Donald Cole (University of Toronto), Nancy Theberge (University of Waterloo)

Stakeholder Involvement: A group of KTE stakeholders, the KTTC, will be approached informally to check on recent literature that may be relevant to work and health.

Potential Audiences and Significance: Work and health stakeholders and practitioners (such as ergonomists, kinesiologists, OTs) will be targeted. The WSIB, employers, and labour groups will be interested in improved MSD prevention interventions and facilitating the transfer of knowledge to guide the intervention design and implementation. Furthermore, KT practitioners and knowledge dissemination organizations will be interested in the review findings.

Funding:

Van Eerd D, Reardon R, Clements D, Laupacis A, Amick BC, Irvin E, Brenneman Gibson J, Keown K, Cole DC, Garcia J. KTE Practices: A systematic review of the quality and types of performance measures used to assess KTE implementation effectiveness and impact. CIHR: \$100,000 (2009-2010)

Systematic Review: Prognostic Factors for Low Back Pain (3115)

Project Status: Ongoing

Introduction: If a worker hurts their back, many people want to know how long it will take before they return to work (RTW). The worker wants to know because being off work can seem endless and lead to insecurity and anxiety. The workplace wants to know whether it should make alternate work arrangements. Compensation agencies want to know to guide intervention decisions for early and safe RTW. In this study, we will assess the evidence on factors that predict duration of time away from work in workers experiencing chronic low back pain (cLBP) related episode of time away from work. Interpretation of the vast body of studies on prognostic factors for delayed RTW is difficult. The amount of information can be quite overwhelming to the actual users of scientific knowledge. Making inferences about the prognosis of RTW from these studies is difficult and this has led to much confusion. In 2005, Dr Steenstra and colleagues published a systematic review on prognostic factors for duration on sick leave due to acute LBP. This study will expand this systemic review to the chronic phase of LBP.

Objectives:

- To assess the evidence on factors that predict duration of time away from work by workers at the chronic stage of a LBP related episode of time away from work.
- To develop an evidence-based handbook to help direct RTW practices in the province of Manitoba.

Methods: The search strategies to identify relevant studies are influenced by those advocated by the Cochrane Collaboration and by Haynes et al. We will use an updated search strategy in PubMed, EMBASE and PsycINFO from inception of each database to the present, extracting those references already reviewed in the 2005 systematic review search. The references and citations of all relevant articles and recently published review articles will be screened for additional publications. Two reviewers will independently select studies meeting the same inclusion and exclusion criteria as the 2005 review. Two reviewers will score the quality of included studies.

Status: In 2012, we finalized the search strategy, completed the Title and Abstract search, retrieved and selected relevant publications. We then completed the process of full paper screening and started the process of critically appraising relevant papers.

Researchers: Ivan Steenstra (Principal Investigator), Jason Busse, Sheilah Hogg-Johnson, Emma Irvin, Quenby Mahood, Claire Munhall, Dwayne Van Eerd, Steven Passmore (University of Manitoba), Nelson Oranye (University of Manitoba)

Stakeholder Involvement: Partners in this project include clinicians and the Manitoba Worker's Compensation Board.

Potential Audiences and Significance: The results of this systematic review will be relevant to clinicians, researchers, employees and employers.

Publication:

Steenstra I, Busse J, Hogg-Johnson S. Predicting return to work for workers with low-back pain. In: Loisel P, Anema J, editors. Handbook of Work Disability: Prevention and Management. New York: Springer Publishing, 2013.

Funding:

Steenstra I, Irvin E, Mahood Q, Hogg-Johnson S. Prognostic factors for the time away from work in workers away from work due to acute low back pain, an update of a systematic review. Manitoba Workers' Compensation Board: \$40,361 (2010-2011)

Return to Work Systematic Review Update (3130)

Project Status: Ongoing

Introduction: A systematic review of workplace-based return to work interventions was carried out by the Institute of Work & health and published in 2004. The review included studies published between January 1990 and December 2003. Since the review was completed there has been a growing research literature in the area of return to work (RTW). This project will update the initial review to reflect the current research evidence base. It will also extend the review through the inclusion of research relating to system/jurisdictional interventions. Furthermore, it will determine whether the Seven Principles of Successful RTW, a globally recognized action tool, need to be changed or modified based on the current evidence. This review will facilitate the integration of —high quality best practice research evidence into the development of return to work policies and programs and in so doing will improve the effectiveness of programs to reduce work disability and return injured workers to employment.

Objectives:

- To update the evidence base for workplace-based return to work programs and system/jurisdictional return to work programs and policies.

Methods: Systematic review methodology includes literature search, paper screening for inclusion/exclusion criteria, data extraction of included studies, quality appraisal of included studies, and findings synthesis.

Status: We developed the search strategy for locating studies. We selected our choice of electronic library databases to identify relevant studies. We decided whether to review articles in both English and French as per the initial review. We further determined inclusion and exclusion criteria to determine relevance of studies. We also developed tools for the screening of identified studies for relevance. Finally, we identified studies of high and very high quality using a screening tool.

Researchers: Ben Amick (Principal Investigator), Nancy Carnide, Kim Cullen, Sheilah Hogg-Johnson, Emma Irvin, Vicki Kristman, Quenby Mahood, Ron Saunders, Dwayne Van Eerd, Fiona Clay (ISRCC), Alex Collie (ISRCC), Ulrik Gensby (Roskilde University), Gail Kovacs (WSIB), Marie Laberge, Andrew Palagyi (ISRCC), Rasa Ruseckaite (ISRCC), Dianne Sheppard (Monash University), Gillian Syres (ISRCC)

Stakeholder Involvement: Partners in this project include the WSIB, WSPS, PSHSA, IHSA, WSN, Injured Worker's Consultants (IWC), members of the employer community, private insurers, and OPSEU.

Potential Audiences and Significance: Members of our stakeholder community as listed above are eager to receive an update to this literature and the Seven Principles document as they refer to them frequently in their workplaces. The Seven principles remains one of the top downloaded items from our website.

Experience Rating Systematic Review (3150)

Project Status: Completed

Introduction: Experience rating is a common feature of workers' compensation insurance programs across North America and in jurisdictions around the world. It is the principal way in which insurance providers attempt to create incentives for firms to invest in health and safety. Hence, understanding the type, magnitude, and consequences of behavioural effects created by experience rating is critically important to designing programs that promote desirable behaviours and minimize the likelihood of undesirable ones. Experience rating continues to be a controversial policy lever in the workers' compensation and work disability policy arena. Development in several jurisdictions suggests that policy makers continue to struggle with designing effective financial incentives in their program. Diverse developments from around the world suggest that there is a lack of clarity on how best to incent employers to focus on health and safety, and particularly whether financial incentives such as experience rating are effective.

Objectives:

- To update the evidence on the effectiveness of experience rating of workers' compensation insurance premiums (both the introduction of, and the degree of) on incenting improvements on workplace occupational health and safety performance.
- To determine whether there are a sufficient number of new studies to warrant an update on the literature review of the effectiveness of experience rating in improving occupational health and safety outcomes.
- To determine whether the quality of evidence has improved since the last review.
- To determine whether the strength of evidence has increased since the last review.

Methods: We used the same systematic review methodology as the original review. Specifically, a rigorous and systematic literature search was completed. Studies that met subject-matter and methods criteria underwent a quality assessment. Evidence from included studies was synthesized using a qualitative approach known as "best-evidence" synthesis. This approach ranks the strength of evidence based on the quantity, quality, and consistency of studies meeting the quality inclusion criteria.

Status: In terms of the introduction of experience rating, based on six studies there was moderate evidence that its introduction is associated with a lower frequency of injuries. With respect to the degree of experience rating, based on seven studies there was also moderate evidence that a higher degree of experience rating is associated with a lower frequency and severity of injuries. The quality of more recent studies has increased, and there were fewer low quality studies meeting subject matter inclusion criteria in this literature. As a result of the increase in the number of studies, we were able to undertake substrata analysis based on type of injury outcome considered in the analysis.

Researchers: Emile Tompa (Principal Investigator), Kim Cullen, Chris McLeod (University of British Columbia)

Stakeholder Involvement: A workshop was held with researchers and injured worker community representatives to review this and other studies that will be part of a special issue of a journal on the topic of experience rating in workers' compensation premium setting.

Potential Audiences and Significance: This study is relevant to the Ontario Workplace Safety and Insurance Board, and other workers' compensation authorities in Canada and internationally.

Publication:

Mansfield L, MacEachen E, Tompa E, Kalcevich C, Endicott M, Yeung N. A critical review of literature on experience rating in workers' compensation systems. *Policy and Practice in Health and Safety: Special Issue on Experience Rating* 2012; 10(1):3-25.

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Knowledge Transfer & Exchange

The Institute considers Knowledge Transfer & Exchange (KTE) to be a process by which relevant research information is made available and accessible through interactive engagement with stakeholders for practice, planning and policy-making. Stakeholders frequently are involved early in the research process to provide researchers with guidance to help shape the research questions and provide information about the context in which research results are likely to be used. Stakeholders also may be involved while the research is underway and at the message extraction stage when the research has been completed. The target audiences for the Institute include policy-makers (for example federal and provincial governments, disability insurers such as WSIB), prevention parties, health and safety associations (HSAs), workplace parties (labour and employers) and clinicians.

The KTE process is supported by user-friendly materials and a corporate communications strategy that enhances the Institute's ability to communicate effectively with its stakeholders. The communication tools include our corporate newsletters, the IWH web site, media relations, special events and the marketing of specific products such as booklets and workshops. In addition, KTE actively works to build capacity in our audiences to understand and use research evidence.

The work of KTE falls into three goals:

- Build stakeholder/audience relationships to enhance the applicability and uptake of IWH research. KTE creates formal and informal networks of stakeholders to allow us to link with stakeholders over time with different research messages. KTE also provides support to the systematic review program engaging appropriate stakeholders throughout the review process.
- Develop effective strategies to reach key audiences and build capacity in our audiences to make better use of research evidence in their decision-making.
- Support the Institute through effective communication strategies. This goal focuses on increasing the Institute's visibility through communications and marketing. The website continues as a major source of outreach along with the publication of our quarterly newsletter *At Work*. We have continued to pursue coverage in trade media. IWH continued its presence at conferences and workshops to enhance strategic linkages with its audiences and partners.

Disability Managers Network (0638)

Project Status: Ongoing

Introduction: IWH invited disability management professionals (identified via the Contact Relations Management database or the leadership of the 60 Summits network) to join a new IWH hosted Disability Managers Network (DMN). Approximately 70 people accepted this invitation to form the new network. Members of the group are seen as valued stakeholders that not only benefit from IWH research, but could potentially contribute to future research projects. The network involves an annual in-person meeting, regular electronic updates, opportunities to participate in research projects, and fostering engagement through social media.

Objectives:

- To facilitate knowledge exchange among IWH researchers and individuals who are involved in the practice of disability management in Ontario.
- To facilitate the dissemination of research findings to the community of disability management practitioners in Ontario.
- To invite members to participate in/ provide advice on IWH research projects, and participate in IWH events (e.g. Workshops, seminars).
- To provide KTE support for research projects with messages for RTW audiences.

Methods: Support stakeholder meetings for research projects (e.g., multi-morbidity study). Interview disability managers and develop project plan to create network of disability managers and expand our contact list. Highlight completed research articles on RTW in IWH newsletter. Identify key research priorities at annual event, and communicate with DMs on next steps to keep the group active and worthwhile. Send monthly notice of Research Alerts.

Status: Monthly research alerts were delivered as scheduled. Planning was initiated for the launch event for the network. The Launch event was held on April 11th, 2012. There were presentations by several IWH researchers, followed by a roundtable discussion regarding research priorities and next steps. Future plans for the network were made based on the feedback from the group (e.g. a private LinkedIn group was formed, exclusive to members and key IWH staff). Discussions were encouraged on the LinkedIn group. Also, members were approached for letters of support for specific grant applications.

Researchers: Ron Saunders (Project Leader), Kristina Buccat, Trevor King, Cindy Moser

Stakeholder Involvement: Partners involved in this project include health and safety association consultants, workplace parties, disability managers, health care and nursing organizations, the Office of the Employer Adviser, the Office of the Worker Adviser, Injured Worker Consultants, the Ontario Network of Injured Workers Groups, Workers United, PSHSA, OSACH, OHSAA and Hospital Employees' Union, and the 60 Summits Group.

Potential Audiences and Significance: Members of the network include professionals from workplace parties, insurers, and clinical care settings and organizations.

Clinical Networks (0617)

Project Status: Ongoing

Introduction: Many clinical provider groups deliver care to populations of interest to IWH (e.g. workers with musculoskeletal disorders). Some practice outside the more traditional clinical settings and focus on the work/health interface. We have targeted these groups as potential audiences for Institute research messages, as providers who work within, or in close association with, workplaces (in primary/secondary prevention roles and/or return to work, delivering treatment and/or disability management) including physiotherapists (PT), kinesiologists (Kin), occupational therapists (OT), chiropractors (Chiro) and ergonomists (Ergo). Many IWH research messages are relevant to these groups (management of back pain, disability management and RTW). Equally, these groups possess a practice expertise and knowledge that is useful and relevant to IWH. This project builds knowledge transfer & exchange infrastructure that can be used over time. Fundamental to this project are partnerships developed with professional bodies who represent or regulate these disciplines. These partners have assisted in identifying those individuals across the province who are informal opinion leaders, i.e. individuals who are identified by their peers as —educationally influential (EI). We have identified EIs across the province in the disciplines described above. Each of these groups has been convened to seek their cooperation in an ongoing role as knowledge brokers. Specifically, we are establishing a two-way exchange: stakeholder information and opinion into IWH (to improve our research and knowledge transfer efforts); and research knowledge out to EIs and, via EIs, to their peers to ultimately assist evidence-based practice. We did not create any new EI networks in 2012.

Objectives:

- To plan and implement annual face-to-face contact with each discipline group.
- To plan and implement projects to bring EIs into IWH's work.
- To disseminate monthly research alerts to all EI groups.
- To remain active contributors to association trade publications.

Methods: We will meet annually with EIs. We will increase the number of articles submitted to professional journals and newsletters. We will evaluate EI interaction via the OT EI network.

Status: Monthly research alerts were delivered as planned. The OT/PT event was held on June 20th, 2012 with 7 attendees. The Chiropractors event was held on October 18th, 2012 with 6 attendees. The Kinesiologists event was held on Nov. 21, 2012 with 10 attendees. The Ergonomists event was held on December 7th, 2012 with 10 attendees. EIs were contacted for letters of support and to participate in various research projects as stakeholders/advisory committee members.

Researchers: Ron Saunders (Project Leader), Kristina Buccat, Trevor King, Sara MacDonald

Stakeholder Involvement: Partners in this project include clinicians/practitioners, professional bodies (associations and regulatory colleges), and the Guidelines Advisory Committee.

Potential Audiences and Significance: This project is of interest to PTs, OTs, Kins, Ergos, and Chiros. Relevant findings will be disseminated to appropriate EI groups. It is anticipated that members of these groups will then further disseminate these findings within their own networks. EIs may also be involved with specific research projects, included as either a partner or co-investigator. Individual partner organizations may also promote IWH through their own events or websites.

Presentations:

Amick BC. The Randomized Control Trial Office Ergonomics Training Study. 7 December 2012; Toronto, Canada: Ergo Educational Influential meeting.

Gignac M. Managing Chronic Physical Diseases in the Workplace: Accommodations, Self-management and Disclosure among employees with Arthritis. 20 June 2012; Toronto, Canada: OT/PT Educational Influential meeting & 21 November 2012; Toronto, Canada: Kin Educational Influential meeting.

Kennedy C, Beaton DE. Presentation/interactive session: Expectations for recovery: How do we tap into the clinician's "gut feel"? 20 June 2012; Toronto, Canada: OT/PT Educational Influential meeting & 18 October 2012; Toronto, Canada: Chiropractic Educational Influential meeting.

King T. The Development and Pilot evaluation of an Online Office Ergonomics Training Program. 21 November 2012; Toronto, Canada: Kin Educational Influential meeting & 7 December 2012; Toronto, Canada: Ergo Educational Influential meeting.

Van Eerd D. Dissemination and uptake of a Participatory Ergonomics Guide for workplaces British Columbia. 7 December 2012; Toronto, Canada: Ergo Educational Influential meeting.

Prevention Partners Networks (0640)

Project Status: Ongoing

Introduction: KTE will continue to build relationships with the prevention partner community through vehicles like the Health and Safety Association Liaison Committee (HSALC). Members of the CREs and OCRC continue as full partners in the HSALC. The "Research Alerts" will continue in 2012, but with a new platform. Capacity building in the use of evidence in programming and planning will continue through the review of evidence from the research organizations. This regular committee work will be supplemented with seminars and presentations in conferences and at the Research Exchange Series of the Centre for Health and Safety Innovation (CHSI).

Objectives:

- To continue to build relationships with prevention partners to take research evidence to Ontario workplaces.
- To continue to develop opportunities for our prevention partners to participate in the research process and review their experience with this participation.
- To coordinate IWH input into the Prevention Partners Conference and assist with research posters.
- To assist IWH researchers to develop and deliver a Measurement workshop geared in part to this audience.

Methods: We will continue to utilize HSA networks for dissemination of IWH research and guides. We will collect feedback on "Research Alerts". We will participate in the Research Exchange Series of the Centre for Health and Safety Innovation (CHSI).

Status: The HSALC met on March 2; June 8; September 7; and December 7, 2012. Research alerts distributed monthly. We developed a plan for IWH participation at the Partners in Prevention Conference. IWH participated in the Partners in Prevention Conference and Trade Show, with our corporate booth (highlighting our research on leading indicators), presentations in the main program, and presentations in the Research Exchange Forum. As well, two presentations were made in the Research Exchange Series at the Centre for Health & Safety Innovation (CHSI).

Researchers: Ron Saunders (Project Leader), Kristina Buccat, Trevor King, Sara MacDonald, Greer Palloo, Janet Brown (CRE-OD), Desre Kramer (OCRC), Richard Wells (CRE-MSD)

Stakeholder Involvement: Partners involved in this project include the health and safety associations, the Ontario Ministry of Labour, the Workplace Safety and Insurance Board, CRE MSD, CRE OD, and other researchers

Potential Audiences and Significance: For HSLAC: HSA consultants, Ministry of Labour, Centres for Research Expertise, WSIB. For the Research Exchange Series and the Partners in Prevention Conference, workplace parties and OHS professionals would also be among the audience.

Publications:

Saunders R, Rhooms R. A toolkit for newcomers on OHS and workers' compensation. HSO website News and Updates Video and story. March 26, 2012:
<http://www.healthandsafetyontario.ca/HSO/Home.aspx>
<http://www.healthandsafetyontario.ca/Resources/Videos/HSO/A-Toolkit-for-Newcomers-on-Occupational-Health-Saf.aspx>

Presentations:

Saunders R, Rhooms R. A toolkit for newcomers on OHS and workers' compensation. 30 January 2012; Mississauga, Canada: Centre for Health & Safety Innovation (CHSI) Research Exchange Series.

Grant K, King T. Alternative methods for reaching vulnerable workers: A pilot evaluation of pictograms and training in the preparation kitchen service sector. 21 February 2012; Mississauga, Canada: Centre for Health & Safety Innovation (CHSI) Research Exchange Series.

Saunders R. A Toolkit for Newcomers on OHS and Workers' Compensation. 1 May 2012; Mississauga, Canada: Partners in Prevention Conference, Research Exchange Forum.

Macdonald S. Cost Benefit Analysis of Health & Safety in a Nutshell. 1 May 2012; Mississauga, Canada: Partners in Prevention Conference, Research Exchange Forum.

Severin C, Macdonald S. Benchmarking leading indicators of workplace injury prevention. 2 May 2012; Mississauga, Canada: Partners in Prevention Conference.

Vulnerable Workers (0619)

Project Status: Completed

Introduction: Institute research has contributed to evidence showing that vulnerable populations, including immigrants, older workers and new workers, have higher than average workplace injury rates. IWH research has also shown that vulnerable workers have difficulty navigating the occupational health and safety (OHS) and workers' compensation systems. IWH is also exploring the relationship between new/growing forms of work (such as temporary work) and the risk of work injury.

Objectives:

- To work with scientists on individual research projects to involve stakeholders as appropriate and to disseminate research messages as they are developed.
- To develop and implement a formal strategy for transfer of messages to immigrant, new and older workers, as these findings become available.

Methods: In 2012, the key focus was on developing a user-friendly toolkit for use by immigrant settlement agencies to inform newcomers of OHS and workers' compensation rights and responsibilities. Feedback from the focus group sessions after pilot testing of a draft kit will be used to inform design of the products.

Status: In 2012, we disseminated the Prevention is the Best Medicine (PBM) toolkit to four new organizations and to six Toronto Public Health nurses. We also disseminated the PBM toolkit via promotion at the Partners in Prevention conference by distributing it on USB keys to delegates, and via promotion at three Workplace Safety & Prevention Services (WSPS) advisory committee meetings. We also followed up on the PBM toolkit with three key organizations after dissemination to determine uptake. We liaised with the Public Services Health & Safety Association (PSHSA) to plan for online training using the PBM toolkit. Also, three PBM articles, authored by IWH, were published in popular press. As well, we recruited stakeholder support for a young workers (12-14 yrs) grant application and helped develop the KTE plan for two applications to CIHR for a chair in gender, work and health. We also revised the communications plan for the temporary work agencies project and provided KTE support to the project as necessary.

Researchers: Ron Saunders (Project Leader), Sara Macdonald

Stakeholder Involvement: Partners in this project include immigrant settlement agencies, newcomer centres, and newcomers to Canada.

Potential Audiences and Significance: This project is of interest to policy makers including the Ontario Ministry of Labour, the Ontario Ministry of Health and Long-Term Care, the Workplace Safety and Insurance Board, health and safety associations, Human Resources and Skills Development Canada (HRSDC), and other workers' compensation boards, and those involved in program development/marketing and awareness campaigns for new and young workers. As well, staff from Ontario's youth employment centres, immigrant worker organizations and advocates, settlement agencies, and employers, unions and vulnerable workers will also be interested.

Publications:

Moser C. Prevention is Best Medicine. Article for Women's Press, publication of the Women's Immigrant Centre in Hamilton, Ont. October 15, 2012 (in print 2013).

Moser C. Plain-language toolkit teaches newcomers about health and safety in the workplace. Contact: Teachers of English as a Second Language Association of Ontario, Vol. 38, No. 3, August 2012, pp. 24-25. PDF version available at:
<http://www.teslontario.net/uploads/publications/contact/ContactSummer2012.pdf>

Macdonald S. Free evidence-based resources for health and safety at work. Health Options at Work: Toronto Public Health, August 28, 2012 [e-bulletin from Toronto Public Health that mention PBM toolkit]

Toolkit teaches newcomers about health and safety in the workplace. HSO Network News: Public Services Health & Safety Association, June 20, 2012 [online article about Prevention is the Best Medicine toolkit]. Available at: <http://www.healthandsafetyontario.ca/Resources/Articles/PHSA/Toolkit-teaches-newcomers-about-health-and-safety.aspx>; included in June 2012 e-newsletter at: <http://www.healthandsafetyontario.ca/HSO/media/PSHSA/Newsletters/June2012issueFINAL.html>

Gorley A. Health and safety training tool kit for immigrants. First Reference Talks: First Reference, April 17, 2012 [posting on Prevention is the Best Medicine toolkit on blog site of Canadian publisher of payroll and employment lay information]. Available at: <http://blog.firstreference.com/2012/04/17/health-and-safety-training-tool-kit-for-immigrants/>

HSO – Toolkit teaches newcomers about health and safety in the workplace. HSE Management Australia: June 21, 2012 [link to PBM toolkit in online news gathering site, picked up from HSO Network News]. Available at: <http://paper.li/HSEManagement/1327808736>

A toolkit for newcomers on occupational health & safety and workers' compensation. Health & Safety Ontario: March 26, 2012 [online announcement about IWH's Prevention is the Best Medicine toolkit, including link to toolkit and embedded video about toolkit that includes interview with KTE Director Ron Saunders]. Available at: <http://www.healthandsafetyontario.ca/Resources/Videos/HSO/A-Toolkit-for-Newcomers-on-Occupational-Health-Saf.aspx>

A toolkit for newcomers on occupational health and workers' compensation. HealthSafetyOntario channel: YouTube, uploaded March 1, 2012 [video introducing IWH's Prevention is the Best Medicine toolkit, produced by Workplace Safety and Prevention Services and including interview with KTE Director Ron Saunders; 110 views as of May 23, 2012]. Available from: https://www.youtube.com/watch?v=hTPB2yP0hmM&lr=1&feature=results_video

CHSI Research Exchange Series: A toolkit for newcomers on OHS and workers' compensation. 2-Minute News: Infrastructure Health & Safety Association, January 2012 [online article about IWH presentation on Prevention is the Best Medicine toolkit]. Available from: http://eusa.informz.net/eusa/archives/archive_1441824.html

Teaching newcomers about health and safety in the workplace. HR Professional. Human Resources Professional Association: February 2012, Vol. 29, No. 1, p. 12 [print article in "Upfront" news section on Prevention is the Best Medicine toolkit] Digital version also available online at: <http://www.nxtbook.com/nxtbooks/naylor/HRPH0212/index.php#/12>

Presentation:

Macdonald S. Prevention is the Best Medicine toolkit and other H&S resources for outreach nurses. 19 September 2012; Toronto, Canada: TO Public Health Nurses Office.

Issue Briefings (0611)

Project Status: Ongoing

Introduction: Research findings of the Institute for Work & Health often have implications for decision-makers in government, the Workplace Safety and Insurance Board (WSIB), health and safety associations, and for employers, labour groups, and clinicians. In this project, Institute staff identify findings that ought to be of particular interest to policy-makers in government and at the WSIB and prepare brief documents that outline the research findings and their implications, in plain language. The Five Year Strategic Plan of the IWH indicates that “We will provide our audiences with opportunities to increase their knowledge about research evidence, using methods tailored to meet the specific needs of stakeholder groups.” This project is an example of the development of a tailored form of knowledge translation.

Objectives:

- To briefly summarize, in plain language, research findings on topics of interest to policy community.
- To identify implications of this research for decision-makers.
- To help foster a continuing conversation on the issues examined.
- To publish one Issue Briefing each quarter, to consult key stakeholders on future topics, and to broaden the distribution of notices about newly published Issue Briefings.

Methods: The work involves briefly summarizing, in plain language, research findings on topics of interest to the policy community and identifies implications for decision-makers. Issue Briefings are designed to give readers a quick overview of key findings on a topic, and to stimulate a continuing conversation on the issues examined. While they do not attempt to be systematic or comprehensive in their review of the relevant literature, they do pay attention to the quality of the research. They also consider existing reviews of the literature when available.

Status: Two issue briefings were published in 2012: 1) “The Canadian recession and the compensation of work-related injury and illness” published in February 2012; and 2) “The effectiveness of targeted labour inspections on occupational health and safety” published in September 2012.

Researchers: Ron Saunders (Project Leader), Philip Kiff, Cindy Moser, Cameron Mustard

Stakeholder Involvement: Advance copies of Issue Briefings are sent to the Chief Strategy Officer at the WSIB. Issue Briefings are sent by email to heads of workers’ compensation boards and senior officials of ministries of labour across Canada. After posting on the IWH website, a link to the Issue Briefings is sent to: senior officials of workers’ compensation boards, public health academics, members of the HSA Liaison Committee, the CCOHS, the Industrial Relations Centre at U of T, and several key Ontario stakeholders. The individuals are invited to post the link to Issue Briefings on their organizations’ websites and/or bulletins.

Potential Audiences and Significance: The main target audience is policy officials at ministries of labour and workers’ compensation boards in Canada. The topics of Issue Briefings will often be of interest to the wider stakeholder community, such as labour groups, employer associations, injured worker organizations, and OHS professionals.

Publications:

Mustard CA, Petch J. (Feb 2012). Issue Briefing: The Canadian recession and the compensation of work-related injury and illness.

Mustard CA. (Sept 2012). Issue Briefing: The effectiveness of targeted labour inspections in occupational health and safety.

KTE Advisory Committee (0646)

Project Status: Completed

Introduction: The KTE Advisory Committee forms part of the accountability framework for KTE by providing expert advice on our KTE activities challenges and accomplishments.

Objectives:

- To obtain expert advice for KTE at IWH to enhance the quality and effectiveness of the programs.
- To continue committee member renewal.
- To balance input from SAC on the measuring the impact of KTE strategies with that from KTEAC on the practice of KTE.

Methods: We will obtain input on KTE projects from expert committee members.

Status: We consulted with the Chair and prepared materials for the meeting. The KTEAC meeting was held on June 14, 2012. The focus of the meeting was on plans for an evaluation of the KTE program, use of social media, and strategies for engaging with intermediary organizations. After the meeting, the KTEAC report was prepared, and distributed and posted on the IWH website. A briefing was prepared for and delivered to the IWH Board of Directors.

Researchers: Ron Saunders (Project Leader), Kristina Buccat, Cindy Moser, Greer Palloo

Stakeholder Involvement: Partners involved in this project include the KTE Advisory Committee Chair, KTE Advisory Committee members, the internal committee, and the IWH Executive Committee.

Potential Audiences and Significance: This project is of interest to KTE practitioners, IWH researchers, the IWH Executive Committee, and the IWH Board of Directors.

Publications:

Report of the Knowledge Transfer & Exchange Advisory Committee of the Institute for Work & Health. Meeting date, June 14, 2012; Publication date, July 27, 2012.

Tool Development and Dissemination (0636)

Project Status: Ongoing

Introduction: Stakeholders have told us that they need “tools” to help them apply research findings in the workplace. Research in knowledge transfer has also shown the advantage of having evidence-based tools (e.g., Prevention is Best Medicine, the PE Guide to reducing MSD Hazards, Red Flags/Green Lights Guide to Return to Work, H&S Smart Planner)). As research continues to develop and mature at the Institute, there will be a need for additional tools to meet the needs of the Institute’s stakeholders and other interested audiences.

Objectives:

- To continue to look for new opportunities for tool development, e.g., from the systematic reviews.
- To update, repackage and market current tools within IWH toolkit as needed.
- To administer and coordinate all procedures related to translations of the DASH, QuickDASH and maintain related database.
- To monitor and maintain database of requests for commercial and non-commercial use of DASH.
- To disseminate and document the uptake of the PE guide across British Columbia and evaluate use of the PE guide with respect to initiating and intent to initiate PE programs in workplaces.

Methods: We will revise and update forms to enable automation of DASH User Profile and Intent to Translate forms posted on DASH website. We will use information garnered from research and surveys to revise DASH Manual and to update FAQ pages on website. We will review user profile form information submitted to determine requests for free or commercial use. We will perform quality control checks on the DASH database to ensure items in the database are accurately entered and reflective of user submissions/requests. Also, we will collaborate with the Smart Planner video development company, and the Manitoba and Ontario advisory committee members to create tutorials. For the Participatory Ergonomics guide, we will work with known stakeholders and we will disseminate the PE guide widely in British Columbia via email and website. Those who download the guide will be asked to consent to being contacted in the future. This open cohort will continue for one year with data collection at 1, 3, 6, and 9 months. Data regarding guide use will be collected.

Status: The DASH translation process was monitored, and a Spanish (Dominican Republic) license was issued and several new languages, such as isi-Xhosa, Albanian, Estonian, Malayalam, and Latvian are in progress. The Translation database was also monitored and updated on an ongoing basis. DASH and QuickDASH commercial and non-commercial databases requests were maintained and all downloads were tracked. Two Dash e-Bulletins were prepared and distributed and posted on the IWH website. The Prevention is Best Medicine (PBM) toolkit was presented at the Centre for Health & Safety Innovation (CHSI) series. We also launched the Manitoba Smart Planner and videos. The Smart Planner and PBM toolkit were presented at the Partners in Prevention conference. We also presented the Smart Planner at four Workplace Safety & Prevention Services (WSPS) advisory committee meetings.

Researchers: Greer Palloo (Project Leader), Kristina Buccat, Carol Kennedy-Yee, Philip Kiff, Trevor King, Sara MacDonald, Ron Saunders

Stakeholder Involvement: Partners involved in this project include the health and safety associations, workplace parties, clinicians, labour and workplace parties, and other stakeholders as appropriate.

Potential Audiences and Significance: This project is of interest to workplace parties, clinicians, and health and safety professionals and practitioners.

Publications:

Moser C. Prevention is Best Medicine. Article for Women’s Press, publication of the Women’s Immigrant Centre in Hamilton, Ont. October 15, 2012 (in print 2013).

Moser C. Plain-language toolkit teaches newcomers about health and safety in the workplace. Contact: Teachers of English as a Second Language Association of Ontario, Vol. 38, No. 3, August 2012, pp. 24-25. PDF available at: <http://www.teslontario.net/uploads/publications/contact/ContactSummer2012.pdf>

Macdonald S. Free evidence-based resources for health and safety at work. Health Options at Work: Toronto Public Health, August 28, 2012 [e-bulletin from Toronto Public Health that mention PBM toolkit]

Toolkit teaches newcomers about health and safety in the workplace. HSO Network News: Public Services Health & Safety Association, June 20, 2012 [online article about Prevention is the Best Medicine toolkit]. Available at: <http://www.healthandsafetyontario.ca/Resources/Articles/PHSA/Toolkit-teaches-newcomers-about-health-and-safety.aspx>; included in June 2012 e-newsletter at: <http://www.healthandsafetyontario.ca/HSO/media/PSHSA/Newsletters/June2012issueFINAL.html>

Gorley A. Health and safety training tool kit for immigrants. First Reference Talks: First Reference, April 17, 2012 [posting on Prevention is the Best Medicine toolkit on blog site of Canadian publisher of payroll and employment lay information]. Available at: <http://blog.firstreference.com/2012/04/17/health-and-safety-training-tool-kit-for-immigrants/>

HSO – Toolkit teaches newcomers about health and safety in the workplace. HSE Management Australia: June 21, 2012 [link to PBM toolkit in online news gathering site, picked up from HSO Network News]. Available at: <http://paper.li/HSEManagement/1327808736>

A toolkit for newcomers on occupational health & safety and workers' compensation. Health & Safety Ontario: March 26, 2012 [online announcement about IWH's Prevention is the Best Medicine toolkit, including link to toolkit and embedded video about toolkit that includes interview with KTE Director Ron Saunders]. Available at: <http://www.healthandsafetyontario.ca/Resources/Videos/HSO/A-Toolkit-for-Newcomers-on-Occupational-Health-Saf.aspx>

A toolkit for newcomers on occupational health and workers' compensation. HealthSafetyOntario channel: YouTube, uploaded March 1, 2012 [video introducing IWH's Prevention is the Best Medicine toolkit, produced by Workplace Safety and Prevention Services and including interview with KTE Director Ron Saunders; 110 views as of May 23, 2012]. Available from: https://www.youtube.com/watch?v=hTPB2yP0hmM&lr=1&feature=results_video

CHSI Research Exchange Series: A toolkit for newcomers on OHS and workers' compensation. 2-Minute News: Infrastructure Health & Safety Association, January 2012 [online article about IWH Prevention is the Best Medicine toolkit]. Available from: http://eusa.informz.net/eusa/archives/archive_1441824.html

Teaching newcomers about health and safety in the workplace. HR Professional. Human Resources Professional Association: February 2012, Vol. 29, No. 1, p. 12 [print article in "Upfront" news section on Prevention is the Best Medicine toolkit] Digital version also available online at: <http://www.nxtbook.com/nxtbooks/naylor/HRPH0212/index.php#/12>

Presentations:

Saunders S. A Toolkit for Newcomers on OHS and Workers' Compensation. 1 May 2012; Mississauga, Canada: Partners in Prevention Conference, Research Exchange Forum.

Macdonald S. Cost Benefit Analysis of Health & Safety in a Nutshell. 1 May 2012; Mississauga, Canada: Partners in Prevention Conference, Research Exchange Forum.

Macdonald S. Prevention is the Best Medicine toolkit and other H&S resources for outreach nurses. 19 September 2012; Toronto, Canada: TO Public Health Nurses Office.

Macdonald S. OHS resource decision making and the Smart Planner. September-October 2013; Mississauga, Canada: WSPS Advisory Committee Meetings.

Tracking KTE/Evaluation (0629)

Project Status: Ongoing

Introduction: KTE has identified activities and indicators to be measured, such as stakeholder participation in meetings to provide advice on research projects and the creation of new networks for knowledge exchange. We also track visits to and downloads from our website and testimonials about our research. We undertake case studies of research impact that involve interviews with key users of research evidence. We also look for methods to evaluate KTE activities.

Objectives:

- To track KTE indicators.
- To track stakeholder engagement in systematic reviews and other KTE activities.
- To use the Contact Relations Management system to track dissemination activities and evaluate research uptake and use.
- To implement an internal evaluation of the KTE program (based on the published SATORI instrument by Gholami et al) in parallel with the Institute for Safety, Compensation and Recovery Research (ISCRR).
- To provide qualitative information (mainly from completed case studies and our ongoing record of testimonials) on the impact of IWH research and KTE for presentation to SAC.

Methods: We will develop and monitor tracking systems.

Status: In 2012, 417 e-alert subscribers were added in Quarter 1, including 264 as a result of outreach efforts; 128 e-alert subscribers were added in Quarter 2; 138 e-alert subscribers were added in Quarter 3; and 84 e-alert subscribers were added in Quarter 4. Work continued on modifying the SATORI survey and a Qualtrics version of the SATORI development was initiated. Summaries of impact case studies were prepared for the IWH Scientific Advisory Committee (SAC), as well as an overview of impact based on the case studies. Our plans to develop a process for tracking KTE activities for evaluation were presented to the KTE Advisory Committee. We then created a KTE Activities Tracking sheet template and KTE activity tracking sheets for each active IWH project. The plan was developed (as part of a grant application) for extending the evaluation to include surveys of and interviews with external stakeholders (to be implemented in 2013). The KTE evaluation project was proposed as part of a PhD thesis for Dwayne Van Eerd.

Researchers: Ron Saunders (Co-Project Leader), Dwayne Van Eerd (Co-Project Leader), Kristina Buccat, Emma Irvin, Trevor King, Sara Macdonald, Cindy Moser

Stakeholder Involvement: Stakeholders involved include participants in systematic review stakeholder committees, other project stakeholder/advisory committees, senior policy officials, and ISCRR.

Potential Audiences and Significance: This project is of interest to our external stakeholders, the Institute's Board of Directors, and other KTE researchers.

Presentations:

Van Eerd D. Self-evaluation of knowledge transfer and exchange practices at IWH. 14 June 2012; Toronto, Canada: KTE Advisory Committee (KTEAC) Meeting.

Van Eerd D. Thesis proposal defense. 24 May 2012; Waterloo, Canada: University of Waterloo.

KTE Partnerships (0652)

Project Status: Completed

Introduction: This project focuses on establishing partnerships with other KTE practitioners as part of our capacity building as a unit and team. The Ontario KTE Community of Practice (KTE C of P) will continue in 2012 and several of IWH KTE staff are members. We will continue to profile the IWH KTE work at appropriate conferences and workshops.

Objectives:

- To attend (and occasionally host) seminars/webinars offered by the Ontario KTE Community of Practice.
- To use the KTE Community of Practice as a venue to share research evidence and best practices on what works in KTE.
- To present IWH KTE work at appropriate conferences.

Methods: We will participate in the KTE Community of Practice and host KTE Hub meetings.

Status: A KTE Community of Practice meeting was held on January 19, 2012 and hosted by IWH. We also participated in another Community of Practice event on February 28, 2012 on "Becoming a KTE Friendly Organization". We also attended a KT Canada seminar entitled "Knowledge Translation to Improve the Health of Vulnerable Populations" on September 13, 2012. We also participated in "Developing Measures for Knowledge Organizations in Health" workshop hosted by Public Health Ontario on October 29-30, 2012.

Researchers: Ron Saunders (Project Leader), Trevor King, Sara MacDonald, Cindy Moser

Stakeholder Involvement: Partners involved in this project include the KTE community in Ontario, and the KTE Hub members (IWH, CREMSD, CREOD, OCRC).

Potential Audiences and Significance: This project is of interest to KTE practitioners, researchers in KTE, and CREs.

Workshops (0643, 0631)

Project Status: Ongoing

Introduction: IWH has considerable expertise in conducting systematic reviews to support evidence-based practice. Many researchers and students at the Institute are involved with the Cochrane Collaboration and the Institute's Systematic Review Program. The Institute has many requests to share its expertise and to contribute to the education and training of educators, researchers, clinicians and students. Institute personnel and colleagues have been offering a series of Systematic Review workshops that range from two hours to two-days since 2001 with plans to continue through 2013. We will also consider offering a measurement workshop again in 2013. This workshop is designed to provide participants with tools and knowledge to identify measures that can provide the best estimate of a given concept in their clinical work or research.

Objectives:

- To build capacity in our audiences to understand, use and conduct research.
- To evaluate and determine lessons learned.

Methods: The format of the Systematic Review workshop combines a series of short lectures and interactive exercises.

Status: Registration and preparation for the Systematic Review workshop was ongoing. We held the workshop on April 18-20, 2012 with a total of 12 participants.

Researchers: Emma Irvin (Project Leader), Ben Amick, Dorcas Beaton, Kristina Buccat, Andrea Furlan, Sheilah Hogg-Johnson, Quenby Mahood, Lyudmila Mansurova, Teresa Marin, Ron Saunders, Ivan Steenstra, Dwayne Van Eerd

Stakeholder Involvement: Participants in the workshop will provide an evaluation which will be used for further development of the existing workshop. In addition, some of our prevention partners may be interviewed so that we can develop a workshop to suit their unique requirements.

Potential Audiences and Significance: The Systematic Review workshop is of particular interest to health-care professional students, educators, clinicians, researchers, insurers and policy makers. The measurement workshop is designed for researchers, research assistants /coordinators, trainees and clinicians who use multi-item measures as part of their research.

Corporate Communications (0690)

Project Status: Ongoing

Introduction: Corporate Communications works with IWH's scientists and KTE professionals to raise the visibility and credibility of the Institute, and to "push" IWH research so that stakeholders know about, consider and use evidence-based practices that protect workers from injury, illness and disability, as well as take part in research studies, where applicable. It seeks to reach these audiences more broadly by preparing materials in plain language and using mass communication tools and tactics – such as newsletters, websites, media releases, articles and mentions in trade and general media, and external events. Corporate Communications also aims to keep Institute staff informed of the research, projects and events going on within IWH in order to improve working relationships and camaraderie, and assist in meeting our corporate goal of "being a model of a healthy workplace."

Objectives:

- To extend reach/audience for IWH research findings.
- To ensure IWH information remains relevant and accessible to external stakeholders in order to help them protect the health and safety of workers.
- To ensure IWH comes to mind among people looking for best evidence in occupational health and safety and return to work.
- To support organizational excellence through strong internal communications.

Methods: We will monitor and complete communication functions on an ongoing basis.

Status: Externally, the entry of IWH into the world of social media, particularly Twitter, was a major accomplishment in 2012 and, within nine months of the launch of the social media plan in April, the Institute had 305 followers. 2012 saw the publication of four At Work issues that maintained its status as a high-quality flagship publication through its strong editorial and design features. The website also continued to improve in quality with a revamped sign-up form, the posting of the Nachemson slidecast (combining slides with synched audio) and the first plenary slidecast, and the creation of web pages to support the Financial Incentives Symposium 2012. As well, the bulk of the work on offering web-based Research Alerts was completed (and this will be formally launched in 2013). A media relations plan to publish more research-based releases was approved in 2012, and media mentions of IWH overall were strong during the year, particularly in the third quarters (with about 90 mentions). Over the course of the year, the number of e-alert subscribers increased from about 2,800 (Winter 2012 issue) to 3,300 (Fall 2012 issue). Also, IWH hosted a successful Nachemson lecture on the changing world of work, given by Dr Michael Silverstein. We were also active participants in the 2012 Partners in Prevention Conference hosted by the Health and Safety Associations. Internally, 2012 was a very active year. The staff newsletter, *thisweek@iwh*, was completely revamped and redesigned to become a much more engaging and informative internal communications vehicle. As well, the intranet (previously called the 'innie') was moved to a wiki platform, to allow for more posting and sharing of information among all staff.

Researchers: Cindy Moser (Project Leader), Kristina Buccat, Lyudmila Mansurova, Megan Mueller, Greer Palloo, Ron Saunders

Stakeholder Involvement: As required.

Potential Audiences and Significance: All external and internal stakeholders.

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2012 Publications

Published

- Abma Femke I, van der Klink Jac JL, Terwee Caroline B, Amick BC, Bültmann U. Evaluation of the measurement properties of self-reported health-related work functioning instruments in workers with common mental disorders: A systematic review. *Scandinavian Journal of Work, Environment and Health* 2012;38(1):5-18. [2013-006]
- Abma Femke I, Amick BC, van der Klink JJ, Bültmann U. Prognostic factors for successful work functioning in the general working population. *Journal of Occupational Rehabilitation* 2012 Dec 18. [Epub ahead of print]
- Ammendolia C, Stuber K, de Bruin L, Furlan AD, Kennedy CA, Rampersaud YR, et al. Non-operative treatment for neurogenic claudication due to lumbar spinal stenosis: A systematic review. *Spine* 2012;37(10):E609-E616. [2011-040]
- Barbosa-Branco A, Bültmann U, Steenstra I. Sickness benefit claims due to mental disorders in Brazil: associations in a population-based study. *Cadernos de saúde pública* 2012;28(10):1854-1866. [2010-091]
- Barrientos-Gutierrez T, Amick BC, Gimeno D, Reynales-Shigematsu LM, Delclos LG, Harrist RB, et al. Mechanical systems vs. smoking bans for second hand smoke control. *Nicotine & Tobacco Research* 2012;14(3):282-289. [2012-018]
- Beaton DE, Sujic R, McIlroy K, Sale J, Elliot-Gibson V, Bogoch ER. Patient perceptions of the path to osteoporosis care following a fragility fracture. *Qualitative Health Research* 2012;22(12):1647-1658.
- Cameron JI, Naglie G, Silver FL, Gignac MAM. Stroke family caregivers' support needs change across the care continuum: a qualitative study using the timing it right framework. *Disability and Rehabilitation* 2013;35(4):315-324. [2012-084]
- Cancelliere C, Cassidy JD, Côté P, Hincapié C, Hartvigsen J, Carroll L, et al. Protocol for systematic review of prognosis after mild traumatic brain injury: An update of the WHO Collaborating Centre Task Force findings. *Systematic Reviews* 2012;1:17. [2012-023]
- Chambers A, Mustard CA, Breslin FC, Holness L, Nichol K. Evaluating the implementation of health and safety innovations under a regulatory context: A collective case study of Ontario's safer needle regulation. *Implementation Science* 2013;8:9. DOI: 10.1186/1748-5908-8-9. [2012-105]
- Chaumont Menéndez C, Amick BC, Jenkins M, Caroom C, Robertson M, Geer F, et al. A validation study comparing two self-reported upper extremity symptom surveys with clinical examinations for upper extremity musculoskeletal disorders. *Work* 2012;43(3):293-302. [2012-019]
- Cole DC, Chen C, Hogg-Johnson S, Van Eerd D, Mazumder A, Wells RP. Multivariate, longitudinal analysis of the impact of changes in office work environments on surface electromyography measures. *International Archives of Occupational and Environmental Health* 2012;85(5):493-503. (Project 430: Star\Song) [2011-041]
- Davis AM, Perruccio AV, Ibrahim S, Hogg-Johnson S, Wong R, Badley EM. Understanding recovery: Changes in the relationships of the International Classification of Functioning components over time. *Social Science and Medicine* 2012;75(11):1999-2006. [2011-105]
- Dunstan DA, MacEachen E. Bearing the brunt: Co-workers' experiences of work reintegration processes. *Journal of Occupational Rehabilitation* 2013;23(1):44-54. [2012-039]
- Englbrecht M, Turner IH, van der Heijde DM, Manger B, Bombardier C, Muller-Ladner U. Measuring pain and efficacy of pain treatment in inflammatory arthritis: a systematic literature review. *Journal of Rheumatology* 2012; Suppl.(90):3-10.

- Furlan AD, Gnam WH, Carnide N, Irvin E, Amick BC, DeRango K, et al. Systematic review of intervention practices for depression in the workplace. *Journal of Occupational Rehabilitation* 2012;22(3):312-321. (Project 3120: Depression in the workplace) [2011-043]
- Gignac MA, Backman CL, Kaptein S, Lacaille D, Beaton DE, Hofstetter C, et al. Tension at the borders: Perceptions of role overload, conflict, strain and facilitation in work, family and health roles among employed individuals with arthritis. *Rheumatology (Oxford)* 2012;51(2):324-332. [2011-114]
- Gignac MA, Jetha A, Bowring J, Beaton DE, Badley EM. Management of work disability in rheumatic conditions: a review of non-pharmacological interventions. *Best Practice & Research Clinical Rheumatology* 2012;26(3):369-386. [2012-076]
- Gignac MAM, Backman CL, Davis AM, Lacaille D, Cao X, Badley EM. Social role participation and the life course in healthy adults and individuals with osteoarthritis: are we overlooking the impact on the middle-aged? *Social Science & Medicine* 2013;81:87-93.
- Griffith LE, Shannon HS, Wells RP, Walter SD, Cole DC, Côté P, et al. Individual participant data of mechanical workplace risk factors and low back pain. *American Journal of Public Health* 2012;102(2):309-328. [2011-103]
- Gross DP, Zhang J, Steenstra IA, Barnsley S, Haws C, Amell T, McIntosh G, Cooper J, Zaiane O. Development of a computer-based clinical decision-support tool for selecting appropriate rehabilitation interventions for injured workers. *Journal of Occupational Rehabilitation* 2013 Mar 7. [Epub ahead of print]
- Ho CP, Furlan AD. Driving following acute lower limb painful events. *Pain Management* 2012; 2(5):437-444.
- Hoang-Kim A, Beaton DE, Bhandari M, Kulkarni AV, Schemitsch E. The need to standardize functional outcome in randomized trials of hip fracture: A review using the ICF framework. *Journal of Orthopedic Trauma* 2013;27(1):e1-8. [2012-072]
- Inrig T, Amey B, Borthwick C, Beaton DE. Validity and reliability of the fear-avoidance beliefs questionnaire (FABQ) in workers with upper extremity disorders. *Journal of Occupational Rehabilitation* 2012;22(1):59-70. [2011-084]
- Jaglal SB, Donescu OS, Bansod V, Laprade J, Thorpe K, Hawker G, et al. (with Beaton DE) Impact of a centralized osteoporosis coordinator on post-fracture osteoporosis management: A cluster randomized trial. *Osteoporosis International* 2012;23(1):87-95. [2011-078]
- Johnston T, Kristman VL and Brison R. Descriptive analysis of work and non-work related motor vehicle collisions in Kingston, Ontario. *Work* 2012;43(2):115-121. [2012-032].
- Kalsi-Ryan S, Beaton DE, Curt A, Duff S, Popovic M, Rudhe C, et al. The Graded Redefined Assessment of Strength Sensibility and Prehension (GRASSP): reliability and validity. *Journal of Neurotrauma* 2012;29(5):905-914. [2011-079]
- Kaptein SA, Backman CL, Badley EM, Lacaille D, Beaton DE, Hofstetter C, Gignac MAM. Choosing where to put your energy: A qualitative analysis of the role of physical activity in the lives of working adults with arthritis. *Arthritis Care & Research* 2013 Jan 17. [Epub ahead of print] DOI: 10.1002/acr.21957.
- King T, Severin C, Van Eerd D, Ibrahim S, Cole DC, Amick III BC, Steenstra IA. A pilot randomized control trial of the effectiveness of a biofeedback mouse in reducing self-reported pain among office workers. *Ergonomics* 2013;56(1):59-68. (Project 129: Measurements in VDU Workers) [2012-088]
- Kosny A, Lifshen M. A national scan of employment standards, occupational health & safety and workers' compensation resources for new immigrants to Canada. *Canadian Journal of Public Health* 2012;103(1):53-58. [2011-036]

- Kosny A, MacEachen E, Lifshen M, Smith PM, Jafri GJ, Neilson C, et al. Delicate dances: Immigrant workers' experiences of injury reporting and claim filing. *Ethnicity and Health* 2012;17(3):267-290. (Project 273: Immigrant Experiences after Injury) [2011-010]
- Kristman VL, Hartvigsen J, Leboeuf-Yde C, Kyvik KO, Cassidy JD. Does radiating spinal pain determine future work disability? A retrospective cohort study of 22,952 Danish twins. *Spine* 2012;37(11):1003-1013. [2012-024]
- Laberge M, Vezina N, Calvet B, Levesque S, Vezina-Nadon L. Supervision of apprentices in semi-skilled trades: Program stipulations and workplace realities. *Relations Industrielles* 2012; 67(2):199-221. [2012-046]
- Laforest, S., Nour, K., Gignac, M.A.M., Gauvin, L., Parisien, M. (2012). The role of social reinforcement in the maintenance of short-term effects after a self-management intervention for frail older adults with arthritis. *Canadian Journal on Aging* 2012;31:195-207.
- MacEachen E, Kosny A, Ferrier S, Lippel K, Neilson C, Franche RL, et al. The 'ability' paradigm in vocational rehabilitation: challenges in an Ontario injured worker retraining program. *Journal of Occupational Rehabilitation* 2012;22(1):105-117. [2011-104]
- Menendez CC, Amick BC, Jenkins M, Caroom C, Robertson M, Gerr F, et al. A validation study comparing two self-reported upper extremity symptom surveys with clinical examinations for upper extremity musculoskeletal disorders. *Work* 2012;43(3):293-302. [2010-034]
- Murray E, Franche RL, Ibrahim S, Smith PM, Carnide N, Côté P, Gibson J, Guzman J, Koehoorn M, Mustard C. Pain-related work interference is a key factor in a worker/workplace model of work absence duration due to musculoskeletal conditions in Canadian nurses. *Occupational & Environmental Medicine* 2013; DOI 10.1007/s10926-012-9408-7 [Epub ahead of print] (Project 134: Multi-morbidity, Depression and Pain) [2011-044]
- Novak CB, Anastakis DJ, Beaton DE, Mackinnon SE, Katz J. Cold intolerance after brachial plexus nerve injury. *Hand* 2012;7(1):66-71. [2012-071]
- Novak CB, Anastakis DJ, Beaton DE, Mackinnon SE, Katz J. Patient specific functional scale: Establishment of validity in patients with upper extremity nerve injury. *Journal of Hand Surgery* 2012;37(8)S1:45. [2012-089]
- Pinsker E, Daniels TR, Inrig T, Warmington K, Beaton DE. The ability of outcome questionnaires to capture patient concerns following ankle reconstruction. *Foot Ankle International* 2013;34(1):65-74. [2012-091]
- Ramsay JT, Smith PM, Thompson A, O'Campo P, Nisenbaum R, Watson P, Park-Wylie L, Bryant T, Tandon R, Farah M. Evaluating perceptions of the effectiveness of the Community Advisory Panel model for enhancing service delivery to marginalized populations. *Public Health Nursing* 2012;29(4):301-312.
- Reme SE, Shaw WS, Steenstra IA, Woiszwilllo MJ, Pransky G, Linton SJ. Distressed, immobilized, or lacking employer support? A sub-classification of acute work-related low back pain. *Journal of Occupational Rehabilitation* 2012;22(4):541-552. [2012-055]
- Robson LS, Macdonald S, Gray GC, Van Eerd DL, Bigelow PL. A descriptive study of public sector organizations providing OHS auditing services to workplaces: Implications for audit reliability and validity. *Safety Science* 2012;50:181-189. (Project 267: Audit tools) [2010-057]
- Robson LS, Stephenson C, Schulte P, Amick BC, Chan S, Bielecky A, et al. A systematic review of the effectiveness of training for the protection of workers. *Scandinavian Journal of Work, Environment and Health* 2012;38(3):93-208. (Project 975: SR: Education & Training) [2009-141]
- Roy JS, MacDermid JC, Tang K, Beaton DE. Construct and predictive validity of the chronic pain grade in workers with chronic work-related upper extremity disorders. *Clinical Journal of Pain* 2013 Jan 30. [Epub ahead of print]

- Rueda S, Chambers L, Wilson M, Mustard CA, Rourke SB, Bayoumi A, et al. Association of returning to work with better health in working-aged adults: a systematic review. *American Journal of Public Health* 2012;102(3):541-556. [2010-102]
- Rueda S, Raboud J, Plankey M, Ostrow D, Mustard CA, Rourke SB, Jacobson LP, Bekele T, Bayoumi A, Lavis J, Detels R, Silvestre AJ. Labor force participation and health-related quality of life in HIV-Positive men who have sex with men: The multicenter AIDS Cohort Study. *AIDS Behaviour Open Medicine* 2012;6(3)e118. <http://dx.doi.org/10.1007/s10461-012-0257-3>. (Project 756: Cohort HIV/AIDS) [2012-080]
- Rueda S, Raboud J, Rourke SB, Bekele T, Bayoumi A, Lavis J, Cairney J, Mustard CA. Influence of employment and job security on physical and mental health in adults living with HIV: cross-sectional analysis. *Open Medicine* 2012;6(3):e118-e126.
- Sale JEM, Gignac MAM, Frankel L, Hawker G, Beaton DE, Elliot-Gibson V, Bogoch E. Patients reject the concept of fragility fracture – a new understanding based on fracture patients' communication. *Osteoporosis International* 2012;23(12):2829-34. [2012-012]
- Sale JE, Beaton DE, Posen J, Elliot-Gibson V, Bogoch E. Key outcomes are usually not reported in published fracture secondary prevention programs: results of a systematic review. *Archives of Orthopaedic and Trauma Surgery* 2011 Dec 11. [Epub ahead of print]. [2012-011]
- Scott-Marshall H. A commentary on "A randomized controlled trial to improve health among women receiving welfare in the U.S: the relationship between employment outcomes and the economic recession". *Social Science and Medicine* 2013;80:141-146.
- Smith BT, Smith PM, Etches J, Mustard CA. Overqualification and risk of all-cause and cardiovascular mortality: evidence from the Canadian census mortality follow-up study. *Canadian Journal of Public Health* 2012; 103(4):297-302.
- Smith PM, Hogg-Johnson S, Mustard CA, Chen C, Tompa E. Comparing the risk factors associated with serious versus less serious work-related injuries in Ontario between 1991 and 2006. *American Journal of Industrial Medicine* 2012;55(1):84-91. (Project 419: No Lost-time Claims) [2010-077]
- Soklaridis S, Cassidy JD, van der Velde G, Tompa E, Hogg-Johnson S. The economic cost of return to work: An employer's perspective. *Work: A journal of prevention, assessment and rehabilitation* 2012;43(3):255-262. (Project 172: Economic Perspectives on RTW Clinical Trial) [2010-084]
- Steenstra IA, Lee H, de Vroome EM, Busse JW, Hogg-Johnson SJ. Comparing current definitions of return to work: A measurement approach. *Journal of Occupational Rehabilitation* 2012;22(3):394-400. [2010-096]
- Tang K, Beaton DE, Amick BC, Hogg-Johnson S, Côte P, Loisel P. Confirmatory factor analysis of the Work Limitations Questionnaire (WLQ-25) in workers' compensation claimants with chronic upper-limb disorders. *Journal of Occupational Rehabilitation* 2012 Nov 2. [Epub head of print] [2012-090]
- Tang K, MacDermid J, Amick BC, Beaton DE. The 11-item Workplace Organizational Policies and Practices Questionnaire (OPP-11): Examination of its construct validity, factor structure, and predictive validity in injured workers with upper-limb disorders. *American Journal of Industrial Medicine* 2012; 54(11):834-846.
- Tolusso D, Wang X. Some properties of the randomized play the winner rule. *The Journal of Statistical Theory and Applications* 2012;11(1):1-8. [2009-139]
- Tompa E. Experience rating in workers' compensation: guest editor editorial. *Policy and Practice in Health and Safety* 2012; Special Issue 10 (1) 1-2. (Project 416: The Behavioral Incentives of Experience Rating)
- Tang K, Beaton DE, Lacaille D, Gignac MAM, Bombardier C. Sensibility of five at-work productivity measures was endorsed by patients with osteoarthritis or rheumatoid arthritis. *Journal of Clinical Epidemiology* 2013 Mar 1. [Epub ahead of print] DOI: 10.1016/j.jclinepi.2012.12.009.

Tompa E, Hogg-Johnson S, Amick BC, Wang Y, Shen E, Mustard CS, Robson LS, Saunders R. Financial incentives of experience rating in workers' compensation: New evidence from a program change in Ontario Canada. *Journal of Occupational and Environmental Medicine* 2013;55(3):292-304. (Project 2135: Critical Reviews) [2012-016]

Tompa E, Dolinschi R, Natale J. Economic evaluation of a participatory ergonomics intervention in a textile plant. *Applied Ergonomics* 2013;44(3):480-487.

Tompa E, Hogg-Johnson S, Amick BC, Wang Y, Shen E, Mustard C, Robson L. Financial Incentives in Workers' Compensation: An Analysis of the Experience Rating in Ontario Canada. *Policy and Practice in Health and Safety* 2012; Special Issue, 10 (1):117-137. (Project 416: The Behavioral Incentives of Experience Rating) [2012-016]

Tompa E, Cullen K, McLeod C. Update on a systematic literature review on the behavioural incentives of experience rating. *Policy and Practice in Health and Safety* 2012;10(2):47-65.

Utterback DF, Schnorr TM, Silverstein BA, Spieler E, Leamon TB, Amick BC. Occupational health and safety surveillance and research using workers' compensation data. *Journal of Occupational and Environmental Medicine* 2012;54(2):171-176. [2012-006]

Van Eerd D, Hogg-Johnson S, Cole DC, Wells R, Mazumder A. Comparison of occupational exposure methods relevant to musculoskeletal disorders: Worker-workstation interaction in an office environment. *Journal of Electromyography Kinesiology* 2012;22(2):176-185. (Project 430: Star/Song) [2012-009]

Forthcoming

Beaton DE, Bombardier C, Cole DC, Hogg-Johnson S, Van Eerd D, and the Clinical Expert Group. Validity of a classification system for upper-limb musculoskeletal disorders in workers. *Forthcoming: Arthritis Care & Research* (Project 430: Star/SONG) [2001-004]

Bombardier C, Mian S. Quality indicators in rheumatoid arthritis care: using measurement to promote quality improvement. *Forthcoming: Annals of the Rheumatic Diseases*

Escott B, Beaton DE, Campbell RA, Galet D, Manno M, Zevin B, et al. The impact of efficiency initiatives on health outcomes in total hip arthroplasty. *Forthcoming: Clinical Orthopaedics and Related Research*. [2008-061]

MacEachen E, Kosny A, Ferrier S, Lippel K, Neilson C, Franche RL, Pugliese D. What is choice? Rhetoric and conditions of choice in a vocational retraining program. *Forthcoming: Disability and Rehabilitation* (Project 0247: LMR) [2011-009]

Martino R, Beaton DE, Diamant NE. Patients', caregivers' and clinicians views about medical consequences related to oropharyngeal dysphagia. *Forthcoming: Journal of Clinical Epidemiology*. [2009-023]

Mustard CA, Bielecky A, Etches J, Wilkins R, Tjepkema M, Amick BC, et al. Cancer mortality by occupation in Canada, 1991-2001. *Forthcoming: Journal of Occupational and Environmental Medicine* (Project 461: Mortality Follow-up) [2009-078]

Shim MJ, Gimeno D, Pruitt SL, McLeod CB, Anderson MJ, Amick BC. Retirement as a risk factor for mortality: A Systematic Review. *Forthcoming: Social Science & Medicine*. [2009-076]

Submitted

Ahmed FS, Delclos G, Amick BC, Gimeno D. Work-related asthma among dental and radiography professionals. *Submitted: Occupational and Environmental Medicine*. [2012-021]

Ahmed F, Hogg-Johnson S. Impact of interactive computer-screening on partner violence and mental health. Submitted: Canadian Family Physician. [2011-054]

Bielecky A, Mustard CA, Breslin FC. Predictors of occupational and non-occupational injury in early adulthood. Submitted: Injury Prevention [2009-077]

Bielecky A, Smith P. Methods of soliciting self-reported chronic conditions in population surveys: Don't ask, don't report. Submitted: Survey Methodology

Breslin FC. The prevalence of mental health conditions among Canadian college and university students. Submitted: Journal of American College Health (Project 423: Young Workers Using Employment Centres) [2009-090]

Breslin FC. The prevalence of mood and anxiety disorders and hazardous drinking among Canadian college/university students. Submitted: Chronic Diseases in Canada (Project 423: Young Workers Using Employment Centres) [2010-041]

Cancelliere C, Kristman VL, Cassidy JD, Hincapié C, Côté P, Boyle E, Carroll L, Stålnacke B-M, Nygren-de Boussard C, Borg J. A systematic review of return to work after mild traumatic brain injury: Results of the International Collaboration on MTBI Prognosis (ICoMP). Submitted: Archives of Physical Medicine & Rehabilitation. [2013-009]

Côté P, Yang X, Kristman VL, Hogg-Johnson S, Van Eerd D, Rezai M, Vidmar M. The association between workers' compensation claims involving neck pain and future health care utilization: a population-based cohort study. Submitted: JOOR (Project 370: Occupational Neck Pain Claims) [2012-066]

Dollard MF, Taylor AW, Hall GB, Winefield TH, Gill TK, LaMontagne AD, Bakker A, Mustard CA. Cohort profile: The Australian Workplace Barometer (AWB). Submitted: International Journal of Epidemiology. [2010-009]

Ebrahim S, Busse JW, Guyatt GH, Birch S. Managing moral hazard in motor vehicle accident claims. Submitted: Journal of Public Health Policy. [2012-060]

Etches J, Mustard CA. Education and mortality in Canada: Mediation by behavioural and material factors. Submitted: Journal of Epidemiology and Community Health (Project 461: Mortality follow up) [2004-027]

Etches J, Mustard CA. Income dynamics and adult mortality: Associations in Canada and the United States. Submitted: Social Science and Medicine. [2010-008]

Femke AI, Amick BC, van der Klink JL, Bültmann U. Prognostic factors for successful work functioning. Submitted: Occupational and Environmental Medicine. [2010-033]

Gensby U, Lund T, Kowalski K, Saidj M, Jørgensen AK, Filges T, Irvin E, Amick BC, Labriola M. Workplace Disability Management Programs promoting return-to-work. Submitted: Campbell Systematic Reviews. (Project 237: Workplace disability management benchmarking) [2012-020]

Hogg-Johnson S, Lee H, Cole DC et al. Trends in pharmaceutical use for musculoskeletal disorders in a workforce: Who should cover what? Submitted: Work (Project 430: Star\SONG) [2005-086]

Hogg-Johnson S, Chen C, Tolusso D, Tompa E, Davilmar A, Amick BC. Did changes in workers' compensation policy and practice drive increasing long duration of claims? Findings from the Ontario Long Duration Claim Study. Submitted: Journal of Occupational Rehabilitation (Project 0327: WSIB Claims Persistence) [2012-108]

Holness L, Switzer-McIntyre S, Harniman E, Dekoven J, Skotnicki S, Nixon R, Beaton DE. Hand and upper extremity function in workers with hand dermatitis. Submitted: Dermatology. [2012-093]

Ibrahim S, Breslin FC, Hogg-Johnson S. Job strain and trajectories of activity limitation and depression in a longitudinal Canadian National sample. Submitted: Occupational Health Psychology (Project 309: Work Stressors and Mental Health) [2008-035]

- Jolles B, Beaton DE, Gross D, Bogoch ER. Patient specific indices provide additional understanding of the outcome of total hip arthroplasty in patients with juvenile idiopathic arthritis. Submitted: *Journal of Rheumatology*. [2012-092]
- Kendzerska T, Smith PM, Leung R, Tomlinson G. Descriptive ability of the Epworth Sleepiness Scale for the obstructive sleep apnea population. Submitted: *Sleep*
- Kim I-H, Muntaner C, Carrasco C, Ibrahim SA. A dynamic pattern in declining new immigrants' health advantage by gender and ethnicity: Results from a Canada-wide longitudinal new immigrants study. Submitted: *Social Science & Medicine*. [2010-083]
- King T, Steenstra IA, Van Eerd D, Ibrahim S, Amick BC. The effectiveness of a tactile feedback mouse on upper extremity pain and discomfort; results from a randomised controlled trial. Submitted: *Applied Ergonomics* (Project 129: Measurement in VDU workers) [2010-094]
- Mailis-Gagnon A, Lakha F, Furlan AD, Nicholson K, Yegneswaran B, Sabatowski R. Systematic review of the quality and generalizability of studies on the effects of opioids on driving and cognitive/psychomotor performance. *Clinical Journal of Pain* 2012;28(6):542-555. [2010-069]
- Morassaei S, Breslin FC, Shen M, Smith PM. Examining job tenure and lost-time claim rates in Ontario, Canada over a 10-year period, 1999-2008. *Occupational and Environmental Medicine* 2013;70(3):171-178.
- Mustard CA, Chan S, Dickie C. Disability income security benefits for working age Canadians. Submitted: *Healthcare Policy* (Project 404: Universal Disability Insurance Program) [2005-045]
- Mustard CA, Bielecky A, Etches J, Wilkins R, Tjepkema M, Amick BC, Smith PM, Aronson K. Mortality following unemployment in Canada, 1991-2001. Submitted: *Scandinavian Journal of Work, Environment & Health* (Project 461: Mortality Follow-up) [2011-071]
- Mustard CA, Bielecky A, Etches J, Wilkins R, Tjepkema M, Amick BC, Smith PM, Aronson K. Cancer mortality by occupation in Canada: 1991-2001. Submitted: *Journal of Occupational and Environmental Medicine* (Project 0461: Census Mortality Follow-up) [2009-078]
- Nolet PS, Côté P, Kristman VL, Rezai M, Carroll LJ, Cassidy JD. Is prevalent neck pain associated with worse health related quality of life six months later? A population-based cohort study. Submitted: *Spine*. [2012-067]
- Ramada JM, Serra C, Amick BC, Castaño JR, Delclos GL. Cross cultural adaptation of the work role functioning questionnaire to Spanish spoken in Spain. Submitted: *Journal of Occupational Rehabilitation*. [2012-096]
- Robson LS, Schulte PA, Amick BC, Stephenson CM, Irvin E. Response to Weinstock and Slatin's critique of the IWH-NIOSH systematic review of the effectiveness of OHS training. Submitted: *New Solutions* (Project 0975: SR: Education & Training) [2013-008]
- Shulte F, Smith PM, Beaton DE, Dewey D, Barrera M. Social adjustment in pediatric brain tumor survivors: Evaluating the psychometric properties of assessment tools. Submitted: *Journal of Pediatric Psychology*. [2011-035]
- Skakon J, MacEachen E, Labriola M. The effect of cultural management on manager and employee stress - Results from a qualitative study. Submitted: *European Journal of Work and Organizational Psychology*. [2009-148]
- Smith B, Smith PM, Harper S, Manuel D, Mustard CA. Reducing social inequalities in health: The role of simulation modeling in evaluating the impact of population health interventions. Submitted: *Preventative Medicine*. [2012-028]

Smith PM, Chen C, Hogg-Johnson S, Mustard C, Tompa E. (order to be determined, alphabetical at present). Comparing the factors associated with lost-time versus no-lost-time claims in Ontario between 1991 and 2006. Submitted: Injury Prevention (Project 419: No lost-time claims) [2010-024]

Smith PM, Mustard CA. The many faces of under-employment among immigrants to Canada: 1993 – 2005. Submitted: Work & Stress (Project 413: Work Related Injuries-Immigrant Workers) [2009-015]

Smith PM, Mustard CA, Chen C, Tompa E, Hogg-Johnson S. Comparing the factors associated with lost-time versus no-lost-time claims in Ontario between 1991 and 2006. Submitted: Injury Prevention (Project 0419: No Lost Time Claims) [2010-077]

Tompa E, de Boer H, Macdonald S, Alamgir H, Koehoorn M, Guzman J. Perspectives and priorities in the measurement of resources and outcomes in health and safety program evaluation in healthcare. Submitted: Healthcare Policy

Tompa E, Hogg-Johnson S, Amick B, Wang Y, Shen E, Mustard CA, Robson LS. Financial incentives in workers' compensation: An analysis of the experience rating in Ontario Canada. Submitted: Policy and Practice in Health and Safety Special Issue (Project 416: Experience Rating) [2012-016]

Tompa E, Scott-Marshall HK, Fang M. Does permanent impairment from workplace accident increase the risk of marital breakup? Submitted: Social Indicators Research (Project 406: WSIB lost-time injuries) [2006-061]

Tompa E, Scott-Marshall H, Fang M, Mustard CA. Comparative benefit adequacy and equity of three Canadian workers' compensation programs for long-term disability. Submitted: Canadian Public Policy. (Project 0416: ER and OHS Studies) [2010-022]

Tullar JM, Amick BC, Brewer SR, Diamond PM, Kelder SH, Harrist RB. The effect of the sacred vocation program on injury: A controlled longitudinal evaluation of hospital employees. Submitted: Health Care Administration. [2012-022]

Tullar JM, Diamond PM, Harrist RB, Kelder SH, Amick BC. The sacred vocation program self-reported questionnaire psychometric evaluation. Submitted: Journal of Organizational Change Management. [2010-035]

William S, Glen P, Mary Jane W, Steenstra IA, Steven L, Silje R. The PRICE (Pain Recovery Issues, Concerns, and Expectations) questionnaire: A brief psychosocial screening instrument to identify intervention needs among patients at elevated risk of back disability. Submitted: Journal of Clinical Epidemiology. [2012-107]

Books/Chapters

Kristman VL, Shaw WS, Williams-Whitt K. Supervisors' perspectives on work accommodation for the chronically ill. In: Working Bodies: Chronic Illness in the Workplace. Stone SD, editor. [2013-012]

Van Eerd D, Cole D, Steenstra IA. Chapter 17: Participatory ergonomics for return to work. In: Handbook on Return-to-Work. Schultz IZ, Gatchel R, editors. [2012-109]

Shaw WS, Kristman VL, Vezina N. Workplace Issues. In: Handbook of Work Disability. Loisel P, Anema H editors. [2012-049]

Tompa E, Lund J, Yabroff R. Chapter 7: Health economics and cancer survivorship. In: Quality Health Care for Cancer Survivors: Practice, Policy and Research. Feuerstein E, Ganz P, eds. Springer, pp. 299-329. [2009-095]

Books/Chapters Forthcoming:

Amick BC, Hogg-Johnson S. Managing prevention with leading and lagging indicators in the workers' compensation system. In: Using Workers' Compensation Data for Occupational Injury and Illness Prevention. Utterback D, Russer J, editors. NIOSH/BLS Publication

- Ammendolia C, Furlan AD, Imamura M, Irvin E, Van Tulder M. Chapter 20: Needle acupuncture. In: Evidence-Based Management of Low Back Pain. Dagenais S, Haldeman S, editors. St. Louis: Elsevier Mosby.
- Brewer S, Tullar J, Amick BC. Using employee records: Pitfalls and opportunities. In: Using Workers' Compensation Data for Occupational Injury and Illness Prevention. Utterback D, Russer J, editors. NIOSH/BLS Publication
- Furlan AD, Pennick V, Ammendolia C, Hayden J. Conservative treatments for chronic non-specific low-back pain. In: Evidence-based Orthopaedics. Bhandari M, editor. BMJ Publishing. [2011-005]
- Hogg-Johnson S, MacEachen E. Methodological issues in work disability prevention research. In: Handbook of Work Disability: Prevention and Management. Loisel P, Anema H, Costa-Black K, Feuerstein M, MacEachen E, Pransky G, editors. New York: Springer (Project 144: Training Initiatives) [2011-048]
- Imamura M, Furlan AD, Dryden T, Irvin E. Chapter 16: Massage therapy. In: Evidence-Based Management of Low Back Pain. Dagenais and Haldeman, editors. St. Louis: Elsevier Mosby
- Kosny A. Work and health in non-profit organizations. In: Handbook of Stress in the Occupations (UK) Elgar E, editor. [2011-047]
- Kristman VL, Shaw WS, Williams-Whitt K. Supervisors' perspectives on work accommodation for the chronically ill. In: Working Bodies: Chronic Illness in the Workplace. Stone SD, editor.
- Loisel P, Anema H, MacEachen E, Pransky G, editors. Managing work disability in the 21st century. Springer Press [2010-081]
- MacEachen E, Polzer J. Governing worker productivity and health through flexibility and resilience. In: Risky Subjects, Healthy Citizens: Studies in Canadian Governmentality. Polzer J, Power E, editors. [2010-047]
- Tompa E. Chapter 4: Measuring the burden of work disability: A review of methods, measurement issues, and evidence. In: Handbook of Work Disability: Prevention and Management. Loisel P, Anema H, editors. Springer.
- Tompa E, Foley M, Van Eerd D. Chapter 37: Economic analysis of ergonomic interventions. In: Evaluation of Human Work, 4th edition. Wilson J, Sharples S, editors. Taylor & Francis. [2012-102]
- Tompa E, Lund J, Yabroff R. 2011. Chapter 15: Economics matters in cancer survivorship. In: Quality Health Care for Cancer Survivors. Feuerstein E, Ganz P, editors. [2010-103]
- Tompa E, van der Beek A, van Tulder M. Chapter 22: Disability management: Economic Considerations. In: Handbook on Return to Work. Schultz IZ, Gatchel R, editors. Springer.
- van der Velde G. Non-operative management of whiplash-associated disorders. In: Evidence-based Orthopaedics. Bhandari M, editor. Wiley-Blackwell, Oxford, UK. [2010-030]
- van der Velde G. Non-operative management of non-specific (mechanical) neck pain. In: Evidence-based Orthopaedics. Bhandari M, editor. Wiley-Blackwell, Oxford, UK. [2010-085]

Other Papers, Unpublished Reports and Reviews

- Boden L, Bushnell T, Leigh P, McLeod C, Pana-Cryan R, Tompa E (in alphabetical order). The total burden of work-related injuries and illnesses: a White Paper developed for the Workshop on the Use of Workers' Compensation Data, June 2012.
- Breslin FC, Smith PM. Risk factors for nonfatal work injury for young workers: A review of two relevant literatures. Proceedings of a U.S. - Canadian Series of Symposia. NIOSH 2012, pp. 60-83. (Forthcoming)

Kosny A, Breslin FC, Saunders R, Smith PM. Prevention is the best medicine: Developing a tool to share information about workplace rights, occupational health and safety and workers' compensation with new immigrant workers in Ontario. Final report to Workplace Safety & Insurance Board 2012. (Project 1155: Prevention is the Best Medicine)

Smith PM, Breslin FC. A review of the research on how work-based injury risks are distributed across youth's jobs in Canada. Proceedings of a U.S. - Canadian Series of Symposia. NIOSH 2012, pp. 106-115 (Forthcoming)

Tompa E, Amick BC, Hogg-Johnson S, Robson LS. The behavioural incentives of experience rating: An investigation into the health and safety consequences of the new experimental experience rating program in Ontario. Final Report to Workplace Safety & Insurance Board 2012. (Project 416: Experience Rating) [2012-034]

Tompa E, Amick BC, Keown K, Dubey A, Irvin E. Economic evaluation software for Manitoba workplaces: Final report for WCB of Manitoba 2012. (Project 1180: Manitoba Economic Evaluation Software) [2012-056]

Media and Web

Media coverage received for the article by Smith PM, Glazier RH, Lu H, Mustard CA. The psychosocial work environment and incident diabetes in Ontario, Canada. *Occupational Medicine* 2012;62(6):413-419.

- Institute for Work & Health. www.iwh.on.ca Work environment may put women at risk of diabetes. Aug 21, 2012. *Picked up by Heath & Healthcare News; Canadian Occupational Safety: Thomson Reuters Canada; Canadian Safety Reporter, etc.*
- Institute for Clinical Evaluative Sciences. www.ices.on.ca Work environment may put women at risk of diabetes. Aug 21, 2012. *The release resulted in, to date, interviews with CBC, Agence France-Press (AFP) and Sarnia Observer*
- Habib, M. CBC News: Health. www.cbc.ca Diabetes risk higher in women than men with no job control. Toronto study recommends giving workers more say on the job may curb stress. Aug 21, 2012. CBC news clip/release picked up by at least 35 other organizations/websites
- Agence France-Press (AFP) Job stress doubles diabetes risk in women. AFP press release also picked up by at least 35 other organizations/websites.
- Revay V. Global News. www.globalnews.ca Work environment may put women at risk of diabetes: study. Aug 21, 2012
- Moore A. Medical Daily. www.medicaldaily.com Low job control doubles the risk of diabetes in women. Aug 22, 2012
- Kula, T. Theobserver: News Local. www.theobserver.ca Low job control linked to diabetes: Study. Aug 21, 2012
- <https://divabetic.wordpress.com> Worrying about work? It could give you diabetes. Aug 22, 2012
- <http://scienceindex.com> The psychosocial work environment and incident diabetes in Ontario, Canada. Aug 22, 2012
- www.prediabetics.org The stresses at work and its link with diabetes. Aug 23, 2012 etc.

Institute for Work and Health. (2012) Study finds persistence of higher injury risk for new workers. [Featuring research on injury rates for newly hired workers by FC Breslin] *At Work*, Issue 69, p. 3.

Institute for Work and Health. (2012) Change with the times: Chronic conditions hint at the need for tailored injury prevention efforts. [Featuring research by PM Smith] *At Work*, Issue 69, p. 4.

Institute for Work & Health. Symposium considers implications of financial incentives (highlighting Financial Incentives Symposium [Organized by E Tompa and E MacEachen] *AtWork*, Issue 71, Winter 2013 (forthcoming). p. 7.

Mancini M. Head west, more injuries: Study (about the project of FC Breslin). *Canadian Safety Reporter*, Dec 12, 2012.

The Guide, Christian Labour Association of Canada magazine. Age doesn't matter (about the project of FC Breslin) Vol 60, # 6, December 2012.

"Asking for help can make some sad." (Dec, 2012) Daily Rx. <http://www.dailyrx.com/disability-osteoarthritis-linked-depression-when-patients-feel-independence-lost>

Furlan AD. OMNI TV Portuguese Edition. "Corpo e Alma" (Chronic Pain): January 15, 2012 & January 18, 2012. <http://www.omnitv.ca/ontario/tv/corpoelma/>

External Scientific & Academic Presentations/Conferences 2012

International

Amick BC . Research opportunities in voluntary protection programmes. 20-23 Aug 2012; Anaheim, CA: 28th Annual National VPPPA Conference.

Amick BC. Lost productivity at work metrics: Conceptual and methodological issues in the new labour market. 22-24 Oct 2012; Groningen, The Netherlands: 2nd Scientific Conference on Work Disability Prevention & Integration.

Berolo S, Amick BC, Steenstra IA, Wells RP. A comparison of two methods to assess mobile hand-held communication device use. 28-31 Aug 2012; Utrecht, The Netherlands: Proceedings of Measuring Behavior 2012. (Project 203: Blackberry Thumb)

Bigelow P, Betts D, Amick BC, Sieber K, Hogg-Johnson S, Skinner M, Jakubicek P. Health, safety and wellness of truck drivers in Canada: Results of a pilot study. 8-10 Nov 2012; Baltimore MD: International Conference on Commercial Driver Health and Wellness.

Breslin FC. Ensuring healthy experienced employees tomorrow by focusing on preventing youth work injuries today. 7-8 Jun 2012; Colorado State University: Invited presentation: Workshop on Research Translation with Vulnerable Worker Populations. (Project 451: Work Injuries and Teens)

Burton K, Beaton DE. An assessment of the modified Rankin Scale as a stroke outcome measure in economic analyses of acute ischemic stroke outcomes. 2-6 Jun 2012; Washington, DC: ISPOR 17th Annual International Meeting.

Busse JW, Riva JJ, Ebrahim S, Steenstra IA, de Bruin L, Zhou Q, Couban R, Mijovic H, Guyatt GH. Methodological quality of studies exploring the prognosis of disabled workers: An overview. 2nd Scientific Conference on Work Disability Prevention and Integration: Healthy ageing in a Working Society. 22-24 Oct 2012; Groningen, The Netherlands: University Medical Center

Colantonio A, Vernich L, Salehi S, Carter A, Vartanian O, Bayley M, Lewko J, Kristman VL, Cassidy D. Poster: Mild to moderate work-related traumatic brain injury: A pilot study. 21-25 Mar 2012; Edinburgh, Scotland: 9th Annual World Congress on Brain Injury.

Ebrahim S, Busse JW, Walter SD, Heels-Ansdell D, Patelis-Siotis I, Hanna S, Guyatt GH. Association of psychotherapy with disability benefit claim closure among patients disabled due to depression. 8 Nov 2012; Amsterdam, Netherlands: The Dutch International Congress on Insurance Medicine.

Ebrahim S, Montoya L, Hsu S, Kamal el Din M, Truong W, Carrasco-Labra A, Busse JW, et al. Poster: Effectiveness of cognitive behavioural therapy for depression in patients receiving disability benefits: A systematic review and individual patient data meta-analysis. 30 Sep-3 Oct 2012; Auckland, New Zealand: 20th Cochrane Colloquium.

Ebrahim S, Montoya L, Hsu S, Kamal el Din M, Truong W, Carrasco-Labra A, Busse JW, et al. Effectiveness of cognitive behavioural therapy for depression in patients receiving disability benefits: A systematic review and individual patient data meta-analysis. 8 Nov 2012; Amsterdam, Netherlands: The Dutch International Congress on Insurance Medicine.

Ebrahim S, Montoya L, Busse JW, Carrasco-Labra A, Guyatt GH for the Medically Unexplained Syndromes Study Group. Poster: Is splint therapy effective in patients with temporomandibular disorders? A systematic review and meta-analysis. Oct 2012; Auckland, New Zealand: 20th Cochrane Colloquium.

Femke A, van der Klink JJJ, Hogg-Johnson S, Bültmann U. Validation of the work role functioning questionnaire: Reliability, validity and responsiveness. 22-24 Oct 2012; Groningen, The Netherlands: 2nd Scientific Conference on Work Disability Prevention and Integration Healthy Ageing in a Working Society.

Gensby U, Lund T, Kowalski K, Saidj M, Jergense A-M K, Filges T, Irvin E, Amick BC, Labirola M. Workplace disability management programs promoting return to work – A systematic Campbell review. 29-31 May 2012; Copenhagen, Denmark: The 2012 Campbell Colloquium: The Methodology Behind the Review.

Gignac MAM, Backman C, Lacaille D, Beaton DE, Cao X, Badley EM. Poster: Perceptions of role conflict and facilitation in work, health, and family roles and its relationship to employment among middle-aged and older workers with arthritis. 22-24 Oct 2012; Groningen, The Netherlands: 2nd Scientific Conference on Work Disability Prevention and Integration Healthy Ageing in a Working Society.

Gignac MAM, Cao X. Poster: Factors associated with perceived job lock in middle- and older-aged workers with arthritis. 22-24 Oct 2012; Groningen, The Netherlands: 2nd Scientific Conference on Work Disability Prevention and Integration Healthy Ageing in a Working Society.

Gross DP, Zhang J, Steenstra IA, Cooper J, Barnsley S, Haws C, McIntosh G, Amell T, Zaiane O. Development of a computer-based decision-support tool using machine-learning strategies for selecting appropriate rehabilitation interventions. 16-19 Oct 2012; Odense, Denmark: Odense International Forum XII Primary Care Research on Back Pain.

Gross DP, Shaw WS, Heymans MW, Busse JW, Steenstra IA. Topical seminar on methodological issues in prognostic research on work disability. 22-24 Oct 2012; Groningen, The Netherlands: 2nd Scientific Conference on Work Disability Prevention and Integration Healthy Ageing in a Working Society.

Gross DP, Zhang J, Steenstra IA, Cooper J, Barnsley S, Haws C, Amell T, McIntosh G, Zaiane OR. Development of a computer-based decision-support tool using machine learning strategies for selecting appropriate return-to-work interventions. 22-24 Oct 2012; Groningen, The Netherlands: 2nd Scientific Conference on Work Disability Prevention and Integration Healthy Ageing in a Working Society.

Hogg-Johnson S, Chen C, Tolusso D, Tompa E, Amick BC. Relationship between claims management/adjudication and long claim duration before and after policy change. 22-24 Oct 2012; Groningen, The Netherlands: 2nd Scientific Conference on Work Disability Prevention and Integration Healthy Ageing in a Working Society. (Project 327: Long Duration Claim)

Irvin E, Furlan A, Gnam W, Carnide N, Amick BC, DeRango K, McMaster R, Cullen K, Slack T, Brouwer S, Bültmann U. Interventions for depression in the workplace: A systematic review. 22-24 Oct 2012; Groningen, The Netherlands: 2nd Scientific Conference on Work Disability Prevention and Integration Healthy Ageing in a Working Society. (Project 3120: Depression in The Workplace)

Jetha A, Cao X, Gignac MAM. Poster: Health-work spillover: Comparing the employment experiences of younger and older adults living with rheumatic disease. Nov 2012; Washington, D.C. USA American College of Rheumatology Annual Meeting.

Jetha A, Badley EM, Beaton DE, Fortin PR, Shiff NJ, Rosenberg AM, Tucker LB, Mosher D, Gignac MAM. Poster: Transitioning to adulthood: Employment experiences of young adults with lupus and juvenile arthritis. Nov 2012; Washington, D.C. USA American College of Rheumatology Annual Meeting.

Kalsi-Ryan S, Fehlings M, Verrier M, Beaton DE, Popovic M, Curt A. Responsiveness and sensitivity of a clinical impairment measure specific for tetraplegia: An international multi-center study of the GRASSP. 3-5 Sept 2012; London, UK: ISCoS – 51st Annual Scientific Meeting of the International Spinal Cord Society.

Kristman VL, Hartvigsen J, Leboeuf-Yde C, Kyvik KO, Cassidy JD. Does radiating spinal pain determine future work disability? A retrospective cohort study of 22,952 Danish twins. 22-24 Oct 2012; Groningen, Netherlands: 2nd Scientific Conference on Work Disability Prevention and Integration.

MacEachen E. (Chair) Work disability prevention and intervention symposia. 18-23 Mar 2012; Cancun, Mexico: 30th International Congress on Occupational Health.

Novak CB, Anastakis DJ, Beaton DE, Mackinnon SE, Katz J. Patient specific functional scale: Establishment of validity in patients with upper extremity nerve injury. 8 Sept 2012; Chicago, IL: American Society for Surgery of the Hand 67th Annual Meeting.

Park K, Gignac MAM, Badley E. Physical disability, perceived dependence and depression in older women with osteoarthritis. Nov 2012; Washington, D.C. USA American College of Rheumatology Annual Meeting.

Salbach NM, O'Brien K, Brooks D, Irvin E, Martino R, Takhar P, Chan S, Howe J. Speed and distance requirements for community ambulation: A systematic review. May 9-11, 2012; Atlanta, GA: Quality of Care and Outcomes Research 2012 Scientific Sessions.

Sankar A, Gignac MAM, Palaganas MP, Badley EM, Beaton DE, Davis AM. Return to work and work activity limitations following total hip and knee replacement. 26-29 Apr; Barcelona, Spain: 2012 World Congress on Osteoarthritis.

Schandelmaier S, Ebrahim S, Burkhardt SCA, De Boer WEL, Zumbunn T, Guyatt GH, Busse JW, Kunz R. Return to work coordination programs or work disability: Systematic review of randomised controlled trials. 15 Jun 2012; Padova, Italy: 14th Congress of the European Union of Medicine in Assurance in Social Security.

Shaw WS, Reme SE, Pransky G, Steenstra IA, Linton SJ. The Pain Recovery Concerns questionnaire: A 46-item patient-centered screening measure to guide early intervention strategies for preventing back disability. 22-24 Oct 2012; Groningen, The Netherlands: 2nd Scientific Conference on Work Disability Prevention and Integration: Healthy Ageing in a Working Society. University Medical Center.

Steenstra IA, Tolusso D, Hogg-Johnson S, Busse JW, Furlan A, Franche RL, Amick BC. Development of a decision-support tool using administrative data augmented with data from the R-RTW cohort study. 22-24 Oct 2012; Groningen, The Netherlands: 2nd Scientific Conference on Work Disability Prevention and Integration: Healthy Ageing in a Working Society.

Sujic R, Beaton DE, Slater M, Bogoch E and The Ontario Osteoporosis Strategy Fracture Clinic Screening Program Evaluation Team. Predicting patient's readiness to accept osteoporosis treatment: Application of the stages of change model to post fracture context. 19-23 May 2012; Stockholm, Sweden: ECTS – European Calcified Tissue Society 39th Annual Congress.

Tompa E. Work disability trajectories under three workers' compensation programs. Jan 2012; Amsterdam, The Netherlands: Vrije Universiteit.

Tompa E. Health economics and its application in the evaluation of occupational health and safety interventions. Jan 2012; The Netherlands: SHARE Seminar Series

Tompa E. Economic evaluation of occupational health and safety interventions: Methods and applications. Jan 2012; Groningen, The Netherlands: TNO Seminar Series.

Van Eerd D, Cole DC, Chen C, Hogg-Johnson S, Wells R, Mazumder A. Longitudinal analysis of changes in office work environments on sEMG measures. 8-10 Jun 2012; Holland, Michigan, USA: Office Ergonomics Research Committee (OERC) - Marconi at Marigold Meeting. (Project 430: StarSong)

Van Eerd D, Brouwer S, Syres G. Topical Seminar: Roundtable on knowledge transfer in work and health research. 22-24 Oct 2012; Groningen, The Netherlands: 2nd Scientific Conference on Work Disability Prevention and Integration Healthy Ageing in a Working Society.

Van Eerd D, Brouwer S, Syres G. Topical Seminar: Lost productivity at work metrics: Conceptual and methodological issues in the new labour market. 22-24 Oct 2012; Groningen, The Netherlands: 2nd Scientific Conference on Work Disability Prevention and Integration Healthy Ageing in a Working Society.

National

Amick BC. Labor market interventions in population health: A view from Texas. 8 Feb 2012; Vancouver, BC: Green College Lecture Series in Population Health, University of British Columbia.

Amick BC, Collie A. Challenges and opportunities in cross-jurisdictional comparative research. 31 May-2 Jun 2012; Vancouver, BC: 2012 Canadian Association for Research on Work and Health Conference.

Beaton DE, Bogoch ER, Sujic R, Sale J, Kimber M, Linton D, Nedanovski P, Zheng H. Evaluation of the Ontario Osteoporosis Strategy Fracture Clinic Screening Program. 8-10 Jun 2012; Ottawa, ON: Canadian Orthopaedic Association.

Eakin J, MacEachen E, Mansfield E. Discretionary practices on a professional assembly line: Work at the frontlines of a compensation board. 1-2 June 2012; Vancouver, BC: Canadian Association for Research on Work and Health Conference.

Franche R-L, Murray E, Ibrahim S, Smith P, Carnide N, Côté P, Gibson J, Koehoorn M. The impact of worker and workplace factors on prolonged work absences among Canadian nurses. 1-2 Jun 2012; Vancouver, BC: CARWH 2012 Conference: Innovation in Worker Health and Safety Research. (Project 134: Exploring Multimorbidity – Nurses)

Furlan A, Chaparro LE, Irvin E, Mailis-Gagnon A. Poster: A comparison between enriched and non-enriched enrolment randomized withdrawal trials of opioids for chronic non-cancer pain. 10-11 Jun 2012; CIHR IMHA The Institute of Musculoskeletal Health and Arthritis) Days.

Gotay C, Amick BC, Corbett K, Storoschuk S. Who joins a worksite health promotion intervention? 1-2 Jun 2012; Vancouver, BC: Canadian Association for Research on Work & Health Conference.

Hogg-Johnson S, Chen C, Tolusso D, Tompa E, Amick BC. Relationship between claims management/adjudication and long claim duration before and after policy change. 31 May- 2 June 2012; Vancouver, BC: Canadian Association for Research on Work and Health Conference. (Project 327: Long Duration Claim)

King TK, Amick BC, Fernley M, Ibrahim S, Robertson M, Robson LS, Steenstra IA, Van Eerd D, MacGregor C. The development and pilot evaluation of an online office ergonomics training program. 14-16 Aug 2012; Halifax, Nova Scotia: Proceedings of the 43rd Annual Conference 2012, Association of Canadian Ergonomists.

Mustard CA, Petch J, Saunders R. The Canadian recession and the compensation of work-related injury and illness. 1-2 Jun 2012; Vancouver, BC: Canadian Association for Research on Work & Health Conference.

Mustard CA, Bielecky A, Etches J, Wilkins R, Tjepkema M, Amick B, Smith PM, Aronsen K. Mortality following unemployment in Canada, 1991-2001. 1-2 Jun 2012; Vancouver, BC: Canadian Association for Research on Work & Health Conference. (Project 461: Mortality follow-up)

Reade CJ, Riva JJ, Busse JW, Goldsmith CH, Guyatt GH, Elit L. Risks and benefits of screening asymptomatic women for ovarian cancer: A systematic review and meta-analysis. 13-16 Oct 2012; Vancouver, Canada: 14th Biennial Meeting of the International Gynecologic Cancer Society.

Robson LS, Ibrahim S, Amick BC, Hogg-Johnson S, Subrata P, Steenstra I, Van Eerd D. Establishing the factor structure and predictive validity of OHS management audit data. 1-2 Jun 2012; Vancouver, BC: CARWH 2012 Conference: Innovation in Worker Health and Safety Research. (Project 267: OHS management audit tools)

Smith B, Smith PM, Harper S, Manuel D, Mustard CA. Reducing social inequalities in health: The role of simulation modeling in evaluating the impact of population health interventions. 11-14 Jun 2012; Edmonton, AB: Canadian Public Health Association 2012 Conference.

Tang K, Beaton DE, Hogg-Johnson S, Cote P, Loisel P. Poster: Confirmatory factor analysis of the 25-item Work Limitations Questionnaire (WLQ-25) in workers' compensation claimants with chronic upper-limb disorders. 1-2 Jun 2012; Vancouver, BC: CARWH 2012.

Tompa E. Economic evaluation of a ceiling lift coaching program at Vancouver Coastal Health Authority, Canadian Association for Research on Work & Health. 1-2 Jun 2012; Vancouver, BC: CARWH 2012.

Tompa E. Impact of the NEER Experience Rating Programs on compensation claim rates. 27 June 2012; Toronto, ON: Presentation to the Workers' Compensation Committee, Canadian Manufacturers and Exporters.

Van Eerd D, King T, Slack T, Keown K, Cole DC, Irvin E, Amick BC, Bigelow P. Dissemination and uptake of an evidence-based guide for participatory ergonomics. 14-16 Aug 2012; Halifax, NS: Association of Canadian Ergonomists, 43rd Annual Conference "Ergonomics - Land, Sea and in the Air" .

Local and Provincial

Beaton DE, Bogoch ER, Sujic R, Sale J. Outcomes of the Multi-centre Ontario Fracture Clinic Screening Program. 23 May 2012; Markham, ON: Osteoporosis Canada Coordinator Annual Meeting.

Boot C, Amick BC, Hogg-Johnson S, Bültmann U. Poster: Predictors of return to work following musculoskeletal injury in workers with and without comorbidity: A 12 month longitudinal study.

Burton K, Beaton DE. An assessment of the modified Rankin Scale as a stroke outcome measure in economic analyses of acute ischemic stroke outcomes. 2-6 Jun 2012; Washington, DC: ISPOR 17th Annual International Meeting.

MacEachen E. The challenges with injured worker retraining services and outcomes. 27 Apr 2012; Toronto, ON: Injured Workers Outreach Services Semi-annual Meeting. (Project 243: IWOS)

Tompa E. Impact of the NEER Experience Rating Programs on compensation claim rates. 19 Jun 2012; Toronto, ON: Presentation to the Business Council on Occupational Health and Safety.

Educational, Professional, Policy

Quarterly IWH-MOL Policy Forum. Robson LS. Interim findings from an exploratory study of "breakthrough change" in workplace OHS. 4 Oct 2012 (Project 1145)

Guest lecture, Public Health Research Methods. Saunders R. Knowledge transfer and exchange: Developing a KTE plan. Dalla Lana School of Public Health, University of Toronto, 22 Nov 2012.

Presentation in Knowledge Translation Professional Certificate program. Saunders R. KT and the policy community. 17 Oct 2012: SickKids Learning Institute.

Systematic Review Workshop, April 18 - 20, 2012. This 2.5 day Systematic Review Workshop is presented by Claire Bombardier, Emma Irvin, Andrea Furlan, George Tomlinson and Maurits Van Tulder (Netherlands) at the University of Toronto.

Emma Irvin. Presented “Evidence-based medicine, systematic reviews and the Cochrane collaboration.” IWH Systematic Review Workshop, Toronto. April 18, 2012.

Quenby Mahood. Presented “Literature Searching for Systematic Reviews.” IWH Systematic Review Workshop, Toronto. April 18, 2012.

Scientific Advisory Committee Meeting, May 7 and 8, 2012 held at The Keenan Research Center, Li Ka Shing Knowledge Institute, Toronto. Presented by Cam Mustard, Ben Amick, Sheilah Hogg-Johnson, Emma Irvin and Ron Saunders.

Privacy Policy Training Session, March 15, 2012. The Privacy Policy Training Session was presented to new Staff by Sheilah Hogg-Johnson (Privacy Officer), Emma Irvin, Mary Cicinelli and Cindy Moser.

Emma Irvin. Presented “Evidence-based medicine, systematic reviews and the Cochrane collaboration.” IWH Systematic Review Workshop, Toronto. April 18, 2012.

Quenby Mahood. Presented “Literature Searching for Systematic Reviews.” IWH Systematic Review Workshop, Toronto. April 18, 2012.

Plenaries

January

- Repeat workers' compensation claims. (Jan 31, 2012)
Jacob Etches, Institute for Work & Health
- Pictograms development and evaluation project. (Jan 24, 2012)
Trevor King (Kim Grant and Dr. Ben Amick III), Institute for Work & Health

February

- Reflecting on a program of participatory ergonomics interventions: A multiple case study. (Feb 28, 2012)
Dr. Richard Wells, University of Waterloo, Department of Kinesiology
- Health and wellness of southern Ontario truck drivers. (Feb 21, 2012)
Beatrice McDonough and Michelle Howard, McMaster University, Department of Family Medicine

March

- Is safe production an oxymoron? (Mar 6, 2012)
Dr. Mark Pagell, York University, Schulich School of Business
- Supporting employees dealing with chronic diseases: Emerging issues among workers with arthritis. (Mar 20, 2012)
Dr. Monique Gignac, Toronto Western Research Institute, University Health Network, Toronto

April

- The management of OHS and return-to-work issues in temporary work agencies. (Apr 10, 2012)
Dr. Ellen MacEachen, Scientist, Institute for Work & Health
- New models for occupational cancer surveillance in Canada. (Apr 17, 2012)
Dr. Paul Demers, Occupational Cancer Research Centre

May

- Towards a transformative view of evaluation. (May 22, 2012)
Dr. Sanjeev Sridharan, Evaluation Centre for Complex Health Interventions, St. Michael's Hospital

June

- Developing a consensus statement on the use of research evidence in injury compensation systems.

(Jun 6, 2012)

Alex Collie, Chief Research Officer, Institute for Safety, Compensation and Recovery Research (ISCRR)

September

- Sparenberg S, Amick BC. Influencing factors on expectations of patients that receive treatment in the form of total knee arthroplasty (TKA), in the context of return to work (RTW). (25 Sep 2012)

October

- Measuring workplace psychological health and safety. (Oct 9, 2012)
John Oudyk, Hamilton Clinic of the Occupational Health Clinics for Ontario Workers Inc.
- Implementing a global ergonomics program and metric system at Magna International Inc.(Oct 16, 2012)
Gary Au ,Manager, Global Ergonomics Program, Magna International
- Occupational exposure to ultraviolet radiation: Current knowledge and future challenges. (Oct 23, 2012)
Thomas Tenkate, Director, School of Occupational and Public Health, Ryerson University
- Supervisors' perspectives on work accommodation: The case of cancer. (Oct 30, 2012)
Dr. Ziv Amir, Professor of Cancer Rehabilitation at the University of Salford (UK)

November

- Understanding "under-reporting" in occupational health and safety. (Nov 14, 2012)
Dr. Joan Eakin and Dana Howse, Dalla Lana School of Public Health, University of Toronto
Dr. Linn Holness, Centre for Research Expertise in Occupational Disease, St. Michael's Hospital, Toronto
- Bearing the brunt: Co-workers' experiences of work reintegration processes. (Nov 20, 2012)
Dr. Debra Dunstan, University of New England, Armidale, Australia

December

- Occupational health and safety learning processes among young, inexperienced apprentices: A socioecological approach. (Dec 4, 2012)
- Dr. Marie Laberge, Associate Professor at University of Montreal, Rehabilitation School of the Medicine
- Leading indicators project. (Dec 5, 2012)
Dr. Ben Amick, IWH
- Systematic review on chronic low back pain (LBP). (Dec 11, 2012)
Dr. Ivan Steenstra and Claire Munhall, IWH

Workshops

Systematic Review Workshop, April 18 - 20, 2012

This 2.5 day Systematic Review Workshop was presented by Claire Bombardier, Emma Irvin, Andrea Furlan, Quenby Mahood, George Tomlinson and Maurits Van Tulder (Netherlands) at the University of Toronto.

Emma Irvin. Presented "Evidence-based medicine, systematic reviews and the Cochrane collaboration." IWH Systematic Review Workshop, Toronto. April 18, 2012.

Quenby Mahood. Presented "Literature Searching for Systematic Reviews." IWH Systematic Review Workshop, Toronto. April 18, 2012.

2012 Funded Grants

Research Project Funding - Awarded

Amick BC, Beaton DE, Churchill D, Hogg-Johnson S, Robson L, Van Eerd D, Riahi S Assessing the validity and reliability of a tool to support reducing patient on staff violence-related injuries. WSIB RAC: \$59,720. (1 year)

Beaton DE, Tang K, Smith PM, Lacaille D, Escorpizo R, Hofstetter C, Montie P, Verstappen S, Boonen A. Interpretability of measures of worker productivity: A study defining meaningful benchmarks and changes in scores for use in clinical trials and clinical practice in arthritis. Canadian Arthritis Network: \$50,000 (1 year)

Beaton DE, Kennedy C, Tang K, MacRitchie I, Richards R, Gignac AM. Factors at the transition: Understanding RTW decisions in injured workers, and comparing those to people managing chronic conditions at work. WSIB RAC: \$59,988 (1 year)

Furlan A, Irvin E, Carnide N, Van Eerd D, Macdonald S, Radhakrishnan A, Hitzig S. Strategies to support the appropriate use of prescription opioids. CIHR: \$96,496 (1 year)

Kristman V, Shaw W, Loisel P, Amick BC, Boot C, Tulusso D, Hogg-Johnson S. A supervisor training program for work disability prevention: a Cluster Randomized Controlled Trial. Resubmission: CIHR: \$100,000 (1 year)

Laberge M, MacEachen E, Vazina N. Program to support research and development in special education. Education Quebec: \$75,000. (1 year)

Mustard CA, Amick BC, Van Eerd D. Organizational change to protect worker health. CIHR: \$306,706 (3 years)

Smith PM. Examining gender/sex differences in the relationships between work stress and disease, work injury and the consequences of work injury. CIHR Chair: \$300,000 (5 years)

Smith PM, Saunders R, LaMontagne AD. Developing a framework for understanding and measuring occupational health and safety vulnerability. ISCRR: \$49,653 (1 year)

Steenstra I, Amick BC, Busse JW, Furlan AD, Hogg-Johnson S, Tulusso D. Predicting successful return to work in worker on disability due to low back pain. CIHR: \$322,946 (4 years)

Tompa E, MacEachen E. Challenges of workplace injury prevention through financial incentives in a global economy. CIHR: \$25,000 (1 year)

Tompa E, Saunders R, Mustard C. Impairment and work disability of workers' compensation claimants in Ontario, a cohort study of new claimants from 1998-2006. CIHR: \$204,580 (2 years)

Van Eerd D, King T, Amick BC, Robson LS, MacGregor C. eLearning for office ergonomics. WSIB RAC: \$39,718 (1 year)

Van Eerd D, Irvin E, King T, Saunders R, Brenneman-Gibson J. An assessment of knowledge transfer and exchange: researcher and stakeholder perspectives. WSIB RAC: \$38,030 (1 year)

Van Eerd D, Chan V, Colquhoun H, Cornelissen E, Jenkins E, Klein G, Lal S, Prasanna S, Richmond S, Urquart R. KT research development within a national knowledge translation trainee collaborative. CIHR: \$24,937 (1 year)

Non-IWH Research Funding – Awarded

Badley E, Gignac M, Hogg-Johnson S, Peruccio A. In sickness or in health? How well are the baby boomers aging compared to older generations: an analysis of age, period and cohort effects. CIHR: \$99,967 (2011-2013)

Bültmann U, Amick BC. Work functioning among cancer survivors. Dutch Cancer Foundation: 439,100 Euro (4 years)

Demers P, Grant H, Kramer D, Tompa E (Project Leads) Hyatt D, McLeod C Assessment of the human and economic burden of workplace cancer, multi-sector team grants in prevention research. Canadian Cancer Society Research Institute (CCSRI): \$1,000,000 (4 years).

Dennerlein J, Cavallari J, Amick BC. Randomized controlled trial of whole body vibration intervention in truck drivers. NIOSH: \$81,805 (4 years).

Dunstan D, MacEachen E, Kosny A. Testing a socially-enhanced workplace rehabilitation intervention. University of New England; \$15,000 (AUD) (1 year)

Gignac MAM, Backman C, Lacaille D, Beaton DE, Badley EM. Striking a balance: Health and employment outcomes related to role overload and role balance among people with arthritis. (CIHR) \$357,564 (3 years)

Gross D, Steenstra IA, Williams-Whitt K; Shaw N, Shaw W. Clinical decision-support tools for managing disabling musculoskeletal disorders. WCB Manitoba: \$88,085 (2 years)

Hunt C, Breslin FC. Bridging the safety gap for post-secondary student workers. WSIB RAC: \$69,453 (1 year)

Koehoorn M, Hogg-Johnson S, Lippel K, McLeod C. Gender, sex and work injury, illness and disability. CIHR: \$436,884 (3 years)

Koehoorn M, McLeod C, Hogg-Johnson S, Mustard C, Amick BC, Kraut A. Comparative analysis of severe work-related injuries and long duration claims in three Canadian provinces. WCB Manitoba: \$199,246 (2 years)

Kramer D, Bigelow P, Aversa T, McMillan K, Naqvi S, Steenstra I, Van Eerd D, Wells R. Evaluation of a workplace-level MSD-prevention knowledge transfer intervention, and the creation of an on-line MSD prevention planning tool. WSIB RAC: \$134,292 (2 years)

Kristman V, Bedard M, Chisholm S, Brison R. Prognosis for mild traumatic brain injury in the elderly population: A pilot cohort study. Ontario Neurotrauma Foundation: \$96,424 (2 years)

Loisel P, Breslin FC, Hogg-Johnson S, MacEachen E, Tompa E, et al. CIHR Strategic Training Program in Work Disability Prevention. CIHR: \$1,950,000 (6 years)

Nichol K, Holness L, Kudla I, Robson LS. The development and testing of a tool to assess joint health and safety committee functioning and effectiveness. WSIB RAC: \$39,999 (1 year)

Salbach N, Brooks D, O'Brien K, Martino R, Irvin E, Howe J. Quality and clinical utility of functional walk tests among people with stroke: a systematic review. CIHR Knowledge Synthesis Grant: \$95,794 (1 year)

Sears JM, Bowman SM, Hogg-Johnson S. Using injury severity to improve occupational traumatic injury trend estimates. National Institute for Occupational Safety and Health Development Grant: \$174,684 US (2 years)

Smith PM, Saunders R, LaMontagne AD. Developing a framework for understanding and measuring occupational health and safety vulnerability. ISCR: \$49,653 (1 year)

Sorensen G, Amick BC, et al. Harvard School of Public Health Center for Work, Health and Wellbeing. NIOSH: \$6,540,213 (5 years)

Viikari-Juntura E. Solovieva S, Martimo KP, Kivekäs T, Kausto J, Virta L, Laaksonen M, Burdorf A, MacEachen E. Effects of temporary work modifications on work disability related to musculoskeletal pain and depressive symptoms. Academy of Finland: 220,000 EURO (2 years)

Wells R, McMillan K, Kramer D, Bigelow P, Naqvi S, Steenstra I. Developing and evaluating a workplace-level MSD physical risk factor survey: A researcher-labour collaborative project. WSIB RAC: \$83,947 (2 years)

Submitted

Beaton D, Gignac MAM, Richards R, MacRitchie I, Switzer-McIntyre S. Expectations for recovery: How do we tap into the clinician's "gut feel"? WSIB RAC: \$59,997 (1 year)

Furlan AD, Kennedy C, MacEachen E, Van Eerd D, Buckley N, Allen A, Cooper L, Gromala D, MacDougall P, Sumpton J, Flannery J. My Opioid Manager - A tool for patients with chronic non-cancer pain considering treatment with opioids. CIHR: \$200,000 (2 years)

Furlan AD, Wickens C, Mann R, Campos J, Sproule B, Hebert D, Naglie G. The effects of prescribed opioid analgesics on driving. Physician's Services Inc Foundation: \$130,000 (2 years)

Gignac MAM, Del Bianco A, Sale J. Striking a balance: Perceptions of quality of life in employment, health and personal roles among nurses with breast cancer. Canadian Cancer Society: \$194,785 (2 years)

Gignac MAM. Employment and chronic disease: New perspectives on women and mens work-health balance across the work course. CIHR Chair: \$300,000 (5 years)

King T, Amick BC, Steenstra I, Van Eerd D, MacGregor C. Apps for office hazard identification: Development of easy to use and high quality tools. WSIB RAC: \$39,464 (1 year)

Scott-Marshall H, Mustard C, Tompa E. The impact of work disability on older workers. CIHR: \$118,280 (2 years)

Steenstra I, Hogg-Johnson S, Amick B, Busse J, Furlan A, McIntosh G. Predicting successful return to work in worker on disability due to low back pain: A collaborative project between IWH and CBI health. WSIB RAC: \$55,515 (1 year)

Steenstra I, Lowe G, McIntosh G, Beaton DE, Gignac MAM, Irvin E, Puts M, Scott-Marshall H, Wilkie R. A review of the role of aging in return to work and stay at work. CIHR Knowledge Synthesis: \$89,622 (1 year)

Non-IWH Research Funding – Submitted

Davis AM, Perruccio AV, Hogg-Johnson S, Mahomed NN, Gandhi R. Determining good outcome following total knee replacement. CIHR: \$301,711 (3 years)

Davis AM, Perruccio AV, Hogg-Johnson S, Mahomed NN, Gandhi R. Determining good outcome following total knee replacement. Resubmission: CIHR: \$325,484 (3 years)

Dunstan D, MacEachen E. The personal helpers and mentors service model: How does it support recovery from mental illness in rural Australia? Australian Research Council Linkage Project: \$355,656 (3 years)

Dunstan D, MacEachen E. Manager's perspectives on the role of co-workers in workplace reintegration processes. University of New England: \$8,815 (1 year)

Gross D, Steenstra IA, Williams-Whitt K, Shaw N, Shaw W, Seale L, Amell T, Woodhouse L, Niemelainen R. Clinical Decision-Support Tools for Managing Disabling Musculoskeletal Disorders: A Transdisciplinary Scoping Review. CIHR: \$46,195 (1 year)

Kristman V, Shaw W, Loisel P, Amick BC, Boot C, Tolusso D, Hogg-Johnson S. A supervisor training program for work disability prevention: a Cluster Randomized Controlled Trial. CIHR: \$346,380 (3 years)

Mahomed N, Davis A, Gandhi R, Hogg-Johnson S, Perruccio AV, Waddell JP. Defining good outcome following hip replacement surgery. PSI Health Systems Research: \$170,000 (2 years)

McLeod C, Amick BC, Scott-Marshall H. The health and well-being consequences of the great recession: A comparative and cross-jurisdictional analysis. CIHR: \$492,887 (3 years)

McLeod C, Collie A, Amick BC, et al. An international collaboration on comparative, inter-jurisdictional research in occupational health and safety and workers compensation. CIHR: \$24,998 (1 year)

Ray J, Roche-Nagle G, Waddell J, Beaton DE. Incidence, risk factors & outcomes of surgical amputation of a contralateral lower limb -- a population-based study. CIHR: \$49,745.

Sale J, Beaton DE, Bogoch E, Gignac MAM, Ho J. How do fracture patients with co-morbidities manage bone health treatment? CIHR: \$272,714 (3 years)

Sears J, Hogg-Johnson S. Using injury severity to improve occupational traumatic injury trend estimates. NIOSH: \$174,684 (2 years)

Smith PM, Sim M, Hogg-Johnson S, Lilley R, Lamontagne T. Understanding individual, workplace and system level influences on return to work in a changing Australian labour market. Australian Research Council.

Taskila T, Grunfeld E, Louise L, MacEachen E, Powell T. Improving return to work in people with acquired brain injury through participation in evidence based vocational rehabilitation program. National Institute for Health Research: \$420,639 (2.5 years)

Research Personnel Funding & Other Awards

Busse JW. CIHR New Investigator Award 2008-2012: Trial to re-evaluate ultrasound in the treatment of tibial fractures.

Carnide N. Vanier Canada Graduate Scholarship 2010-2013. CIHR: Analgesic prescriptions for work-related musculoskeletal disorders: Understanding utilization patterns, determinants, and impact on work disability.

Carnide N. The Queen Elizabeth II/C.P. Shah Award of \$15,000, 2012-2013.

Furlan A, Amick B, Bombardier C, Reardon R. My Opioid Manager - A point of care tool for patients with chronic non-cancer pain considering opioids. CIHR: New Investigator (5 years)

Smith PM. CIHR New Investigator Award 2008-2012: Examining labour market changes and their consequences on injury and illness in Canada: A focused examination of their effects on recent immigrants.

Tang K. CIHR PhD Fellowship 2010-2014.

Institute for Work & Health Staff – 2012

* denotes staff no longer at the IWH

Research

Amick, Benjamin; PhD, Associate Scientific Director, Senior Scientist
Beaton, Dorcas; PhD, Scientist
Bielecky, Amber; MSc, Research Coordinator
Bombardier, Claire; MD, FRCP(C) Senior Scientist
Breslin, Curtis; PhD, Scientist
Busse, Jason; PhD, Scientist*
Canga, Albana; BA, Administrative Assistant
Christine Carrasco; MPH, Project Coordinator
Cardoso, Siobhan; BA, Research Associate
Carnide, Nancy; MSc, Research Associate, PhD Student
Chambers, Andrea; PhD Student
Chen, Cynthia; MSc, Research Associate, Analyst
Chesser, Stephanie; MA, Research Associate*
Cheung, James; Systems Support
Couban, Rachel; MA, MIST, Library Technician
Cullen, Kim; Research Associate, PhD Student
Davilmar, Arold; MSc, Research Associate, Analyst
Etches, Jacob; PhD, Post-Doctoral Fellow
Fortune, Melanie, MPH Student, Research Assistant
Furlan, Andrea; MD, PhD, Associate Scientist
Gignac, Monique; PhD, Senior Scientist
Harlowe, Linda; Research Operations Administrative Coordinator
Heath, Charmaine; Dip. Business Administration, Administrative Assistant
Hogg-Johnson, Sheilah; PhD, Interim Scientific Director, Senior Scientist
Ibrahim, Selahadin; MSc, Associate Scientist
Irvin, Emma; BA, Director, Research Operations
Kelly, Allison; Dip. S.T. Administrative Editorial Assistant
Kennedy-Yee, Carol; MSc, Research Associate
Kristman, Vicki; PhD, Associate Scientist
Latour-Villamil, Desiree; MA, Research Assistant
Lee, Hyunmi; MSc, Programmer Analyst
Liao, Qing; MSc, Research Associate, Analyst
Lifshen, Marni; MA, Project Coordinator
Liu, Joanna; BA, Diploma Library and Information Technology, Library Technician
MacEachen, Ellen; PhD, Scientist

Mahood, Quenby; BA, Manager, Library Services
Mansfield, Liz; PhD, Research Associate*
Mansurova, Lyudmila; BSc, Administrative Assistant
Marin, Teresa; PhD, Managing Editor, Cochrane Back Review Group
Maselli, Paolo; Network Administrator/Systems Analyst
Morassaei, Sara; BSc, Coordinator, Research Operations
Munhall, Claire; MA, Project Coordinator
Padkapayeva, Kathy; BA, Administrative Assistant
Raktoe, Shanti; BSc, Administrative Assistant
Robson, Lynda; PhD, Associate Scientist
Sarnocinska-Hart, Anna; MA, Research Associate
Scott-Marshall, Heather; PhD, Post-Doctoral Fellow
Severin, Colette; MSc, Project Coordinator
Shervani, Sharma; PhD Student, Research Associate
Smith, Brendan; PhD Student
South, Harriet; BA, Administrative Assistant
Steenstra, Ivan; PhD, Associate Scientist
Subrata, Peter; MSc, Research Associate
Swift, Michael; MSc, Research Associate, Data Manager/Programmer
Tang, Ken; PhD Student
Tomba, Emile; PhD, Scientist
Turner, Karen; MA, Project Coordinator
Van Eerd, Dwayne; MSc (Kin), MSc (HRM), PhD (c), Associate Scientist
Wang, Ying; MSc, Research Associate/Analyst
Yao, Grant; BComm, Network Administrator/Systems Analyst

Knowledge Transfer & Exchange

Buccat, Kristina; Dip. Radio and Television Production, Administrative Assistant
Dvorak, Jan; BA, Web & Design Coordinator
Kiff, Philip; MA, Web & Design Coordinator*
King, Trevor; MA, KTE Associate
Macdonald, Sara; QEHS Management Diploma, KTE Associate
Moser, Cindy; BA, Communications Manager
Mueller, Megan; BA, Communications Associate
Palloo, Greer; BSc, Information & Events Coordinator
Saunders, Ron; PhD, Director of Knowledge Transfer and Exchange, Senior Scientist

Corporate Services

Cicinelli, Mary; CHRP, Director, Human Resources & Corporate Services

Maccarone, Dylan; Accounting Clerk

Mustard, Cameron; ScD, President, Senior Scientist

Sir, Cathy; CMA, Manager, Financial Services

Stevens, Alexandra; Administrative Coordinator, Office of the President

Research/Professional Collaborations and Networks, Appointments and Offices 2012

AMICK, Benjamin

Member: NIOSH Board of Scientific Councillors

Member: American Public Health Association

Member: American Society for Safety Engineers

Member: Human Factors and Ergonomics Society

Member, Steering Committee, Second Conference on Workers Compensation as a Surveillance Tool

Member, International Review Panel for the Institute for Compensation and Rehabilitation Research

Member, Editorial Board of Journal of Occupational Rehabilitation

BEATON, Dorcas

Chair: Meeting Planning, Policy and Evaluation committee at ISOQOL

Chair: Outcome Measures in Rheumatology (OMERACT)

Founding Member: Canadian Society of Hand Therapists

Member: American Society of Shoulder and Elbow Therapists, Member of Research Committee,

Member: Canadian Association of Occupational Therapists

Member: College of Occupational Therapists of Ontario

Member: Upper Extremity Collaborative Group (IWH, American Academy of Orthopaedic Surgeons)

Member: The Arthritis Society of Canada, Medical Advisory Committee

Member: International Society of Quality of Life Research

Member: American Society for Bone and Mineral Research (ASBMR)

Member: Associate Rheumatology Health Professional (ARHP)

Member: Canadian Arthritis Network (CAN) - Training and Education committee

BOMBARDIER, Claire

Fellow: Royal College of Physicians of Canada F.R.C.P.(C)

Member: Advisory Board, SONORA Study, Abbott Pharmaceutical Company, 2000 –

Member: AMGEN - Kineret Registry Steering Committee, 2002 –

Member: Merck -Etoricoxib Outcomes Study Steering Committee, 2002 –

Member: Merck Frosst Rheumatology Medical Advisory Council (MEDAC), 2002 –

Member: AMGEN Global Advisory Board in Inflammation, 2003 –

Member: COX-2 International Lifecycle Advisory Board, 2004 –

Member: Canadian Arthritis Network - Research Management Committee, 2005 –

Chair: Aleve Advisory Board (Bayer), 2006 –

Member: CORRONA Board of Directors, 2007 –

Member: Advisory Board, WHO International Task Force on Neck Pain, 1999 –

Member: American Federation for Clinical Research (AFCR)

Member: Canadian Society for Clinical Investigation (CSCI)

Member: Society for Medical Decision Making (SMDM)

Member: Canadian Rheumatism Society (CRS)

Member: American Public Health Association (APHA)

Member: American Rheumatism Association (ARA)

Member: Canadian Medical Association (CMA)

BRESLIN, Curtis

Member: Ontario College of Psychologists

Member: Canadian Psychological Association

Member: Work Disability Prevention CIHR Strategic Training Program, University of Toronto
Professor, Seneca College Applied Arts and Technology, School of English and Liberal Studies
Member: Work Disability Prevention CIHR Strategic Training Program, University of Toronto

BUSSE, Jason

Certified Fellow of the American Board of Disability Analysts
Consultant: ATF Canada Corp; Prisma Health Canada Inc.
Member: Canadian Chiropractic Association
Member: Canadian Chiropractic Protective Association
Member: Canadian Chiropractic Research Association
Member: Canadian Pain Society
Member: College of Chiropractors of Ontario
Member: CLARITY (Clinical Advances through Research and Information Translation)
Member: Ontario Chiropractic Association
Member: Vocational Rehabilitation Association of Canada
Member: Medical Reform Group of Ontario

CARRASCO, Christine

Member: Women's College Hospital Network for the Uninsured
Member: IUHPE Student and Early Career Network (ISECN), International Union for Health Promotion and Education
Member: Association of Latin American Researchers of Ontario (LARO)

CARNIDE, Nancy

Member: Canadian Association for Research on Work and Health
Member: Canadian Society for Epidemiology and Biostatistics
Member: International Society for Pharmacoepidemiology

COUBAN, Rachel

Member: Ontario Library Association (OLA), Ontario Health Library Associations (OHLA)

DAVILMAR, Arold

Member: American Society of Clinical Oncology

FORTUNE, Melanie

Member: Ontario Public Health Association
Member: Association of Public Health Epidemiologists in Ontario

FURLAN, Andrea

Staff Physician: Physiatry, Toronto Rehabilitation Institute
Assistant Professor: Department of Medicine, Division of Physiatry, University of Toronto
Associate Member: Institute of Medical Science, University of Toronto
Associate Scientist: Health Services Research, Monitoring and Evaluation, Institute for Work & Health
Advisory member: BestLifeRewarded™
Member: Admissions Committee, Medical School, Faculty of Medicine, University of Toronto
Member: Canadian Association of Physical Medicine and Rehabilitation
Member: Canadian Pain Society
Member: Canadian Academy of Pain Medicine
Member: Cochrane Collaboration Non-randomised studies Methods Group
Member: International Society of Physical & Rehabilitation Medicine (ISPRM)
Member: Residency Program Committee, University of Toronto, Division of Physiatry
Member: WSIB Drug Advisory Committee

GIGNAC, Monique

Member: American Psychological Association (APA)
Member: Canadian Association on Gerontology (CAG)
Member: Gerontological Society of America (GSA)
Member: Association of Rheumatology Health Professionals (ARHP)

Chair: Institute Advisory Board (IAB), Institute for Musculoskeletal Health and Arthritis (IMHA), Canadian Institutes of Health Research (CIHR), 2011 to present
Co-Scientific Director: Canadian Arthritis Network (CAN), Networks of Centres of Excellence (NCE), 2008 to present
Director: Board of Directors, Canadian Arthritis Network (CAN), A Network of Centres of Excellence (NCE), 2008 to present
Member: Advisory Board, Conference Board of Canada, "Managing the Drivers of Absenteeism and Lost Productivity," 2013 to present
Member: Scientific Advisory Committee (SAC), The Arthritis Society (TAS), 2011 to present
Member: Technical Advisory Group (TAG) on Data Strategy on People with Disabilities, Human Resources & Skills Development Canada (HRSDC) in partnership with Statistics Canada, 2011 to present
Member: Centre for Research in Women's Studies (CRWS), Toronto, Ontario, 2005 to present.

HOGG-JOHNSON, Sheila

Member: Statistical Society of Canada
Professional Statistician: Statistical Society of Canada
Member: Admissions Committee, Work Disability Prevention CIHR Work Disability Training Program
Member: Canadian Association for Research on Work and Health
Member: Workers' Compensation Research Group

IBRAHIM, Selahadin

Member: Statistical Society of Canada.
Professional Statistician (recognized by Statistical Society of Canada).

IRVIN, Emma

Convenor: Cochrane Library User Group Meeting; Cochrane Colloquium

KENNEDY-YEE, Carol

Member: College of Physiotherapists of Ontario

KING, Trevor

Canadian Certified Professional Ergonomist
Member: Association of Canadian Ergonomists

KRISTMAN, Vicki

Member: Canadian Association for Research on Work and Health
Member: Canadian Society for Epidemiology and Biostatistics
Member: American College of Epidemiology
Member: International Society for Violence and Injury Prevention
Member: Society for Epidemiologic Research
Member: Editorial Board, Journal of Occupational Rehabilitation
Member: Editorial Board, Conference Papers in Medicine

LIFSHEN, Marni

Member: Canadian Knowledge Transfer and Exchange Community of Practice

MACEACHEN, Ellen

President, Board of Directors, Canadian Association for Research on Work and Health 2009-2012
Member: Academic Council, Pacific Coast University, British Columbia 2012-
Member: Dalla Lana School of Public Health Council, University of Toronto 2012-
Chair, SSHRC Review Committee. Dalla Lana School of Public Health, University of Toronto 2012
Member: Program Executive Committee, Work Disability Prevention CIHR Strategic Training Program, University of Toronto 2005-
Member: Program Advisory Committee, Work Disability Prevention CIHR Strategic Training Program, University of Toronto 2005-
Fellow: Steering Committee, Centre for Critical Qualitative Health Research, University of Toronto 2009-
Associate Editor, Editorial Board, Journal of Occupational Rehabilitation 2007-
Member: Canadian Association for Research on Work and Health 2009-

Member: Canadian Anthropology and Sociology Association 2005-
Member: British Sociological Association 2004-
Member: RAACWI-WSIB Return to Work Blue Sky Group 2009-2012
Member: Conference Scientific Organising Committee, Canadian Association for Research on Work and Health 2012
Member, Abstract Review Committee, Canadian Association for Research on Work and Health Conference, Vancouver, 2012
Member, Liberty Mutual Work Disability Research Award Committee 2012
Member, Abstract Review Committee, 2nd Scientific Conference on Work Disability Prevention and Integration (WDPI), Groningen, The Netherlands. 2012

MAHOOD, Quenby

Member: Special Libraries Association, 2011 –

MOSER, Cindy

Member: International Association of Business Communicators (IABC)

MUSTARD, Cam

Member: Scientific Advisory Committee, Veterans Affairs Canada, 2012 –
Member: Editorial Board, Canadian Journal of Public Health, 2010 –
Member: Advisory Committee, Lancaster House Health and Safety Conference, 2008 –
Affiliate: Centre for Health Services and Policy Research, University of British Columbia, 2008 –
Member: Advisory Board International Journal of Social Security and Workers Compensation, 2008 –
Member: Performance Measurement Peer Review Panel, Ontario Health Quality Control, 2008 –
Member: Board of Advisors, RAND Center for Health and Safety in the Workplace, 2008 –
Member: Board of Directors, Ontario Neurotrauma Foundation, 2008 –
Member: Health Reports Editorial Board, Statistics Canada, 2007 –
Member: Scientific Visitors Advisory Board, Liberty Mutual Research Institute for Safety, 2007 –
Vice-President: Board of the International Social Security Association (ISSA) Research Section, 2006 –
Member: Steering Committee: Toronto Region Research Data Centre, 2005 –
Member: Editorial Advisory Board, Longwoods Review, 2003 –
Member: Occupational Health and Safety Council of Ontario, 2002 –
Member: Medical Advisory Board, Health News, University of Toronto, 2002 –
Member: Passport to Safety Standards and Advisory Board, 2002 –
Member: Research Advisory Council, Workplace Safety and Insurance Board of Ontario, 2001 – 2012

ROBSON, Lynda

Member: Canadian Association for Research on Work and Health
Member: Canadian Evaluation Society

SAUNDERS, Ron

Member: American Economic Association
Member: Canadian Association for Research on Work and Health
Member: Community & Healthcare Advisory Council, Public Services Health & Safety Association
Member: Education and Culture Advisory Council, Public Services Health & Safety Association
Member: Editorial Advisory Board, Canadian Occupational Safety Magazine

SCOTT-MARSHALL, Heather

Member: Canadian Association for Research on Work and Health

SEVERIN, Colette

Member: Canadian Public Health Association

SMITH, Brendan

Member: Social Inequalities Group, Simulation Technology for Applied Research (STAR) Team, Canadian Institute of Health Research (CIHR) Team in Microsimulation Modeling of the Impact of Health Interventions and Policy

Member: Society for Epidemiologic Research

Member: Canadian Public Health Association

STEENSTRA, Ivan

Member: Workers' Compensation Research Group

Member: Dutch Society of Epidemiology (VVE)

Member: Dutch Society for Human Movement Sciences (VvBN)

Member: Scientific Committee, 3rd ICOH International Conference on Psychosocial Factors at Work

TANG, Ken

Member: College of Physiotherapists of Ontario

TOMPA, Emile

Member: Canadian Association for Research on Work and Health

Member: Workers' Compensation Research Group

Member: International Health Economics Association

Member: Mentorship Committee, Work Disability Prevention CIHR Strategic Training Program, University of Toronto

Member: Editorial Board, Journal of Occupational Rehabilitation

Member: Bancroft Institute for Studies in Workers' Compensation and Work Injury

WONG, Imelda

Member: International Commission on Occupational Health: Scientific Committee on Shiftwork and Working Time

Teaching, Educational and Service Activities

AMICK, Ben

Teaching/Educational Role

Society and Health; Social Epidemiology/Social Justice; Research Design and Analysis in Behavioural Sciences, University of Texas School of Public Health, 2010 –

Professor: Behavioural Sciences, Epidemiology and Occupational Safety and Health, University of Texas Health Science Centre, 2007 –

Service Activities

Ad-Hoc Reviewer: Workers Compensation Board, British Columbia

Ad-Hoc Reviewer: Workers Compensation Research Advisory Committee

Ad-Hoc Reviewer: Workers Compensation Board, Saskatchewan

Ad-Hoc Reviewer: Marsden Foundation, New Zealand, 2010 –

Editorial Board: Journal of Occupational Rehabilitation, 2010 –

BEATON, Dorcas

Teaching/Educational Role

Scientist and Director: Mobility Program Clinical Research Unit, St. Michael's Hospital, Toronto

Associate Professor: Department of Occupational Sciences and Occupational Therapy, Faculty of Medicine, University of Toronto

Full Member: School of Graduate Studies (SGS), Graduate Department of Rehabilitation Sciences, University of Toronto, Ontario; Institute of Health Policy, Management and Evaluation, Clinical Epidemiology Program, University of Toronto, Ontario.

Lecturer: Advanced Measurement course, University of Toronto

Coordinator and lecturer: Introduction to Measurement, University of Toronto

Lecturer: Advanced Quantitative Methods in Epidemiology, University of Toronto
Lecturer: Research Methods for Rehabilitation Science, University of Toronto

Service Activities

Grant Committees: CIHR, The Arthritis Society, Hospital for Sick Children Foundation, SSHRC, WSIB Research Advisory Council

Journal Referee: Journal of Clinical Epidemiology, Medical Care, JAMA, International Journal of Epidemiology, Quality of Life Research, Spine, Journal of Rheumatology, Journal of Shoulder and Elbow Surgery, Journal of Bone and Joint Surgery

BOMBARDIER, Claire

Teaching/Educational Role

Co-Scientific Director: Canadian Arthritis Network (CAN)

Director: Division of Rheumatology, University of Toronto

Director: Clinical Decision Making and Health Care, Toronto General Research Institute

Staff Physician: Rheumatic Disease Unit, Mount Sinai Hospital, Toronto

Professor: Medicine/Health Administration, University of Toronto

Guest Professor: University of Toronto, MSc, HAD 5302: Measurement in Clinical Research

Guest Lecturer: University of Toronto, Clinical Epidemiology Students - PhD Thesis Course

Instructor: IWH Systematic Reviews Workshop

MSc Thesis Supervisor: Bindee Kuriya, Roberta Berard, Wanruchada Katchamart

PhD Thesis Supervisor: Joel Gagnier

Post Doctoral Fellowship Supervisor: Carine Salliot, Judith Trudeau, Edith Villeneuve (co-supervisor)

Member: School of Graduate Studies, Division of Community Health, University of Toronto

Member: School of Graduate Studies, Institute of Medical Science, University of Toronto

Service Activities

Chair: Government of Canada, Canada Research Chair in Knowledge Transfer for Musculoskeletal Care, Tier I Award – Renewal 2009-2016

Member: Multidisciplinary Clinical Research Center in Musculoskeletal Diseases

Member: Canadian Arthritis Network Disease Management Core Instrument Committee@, 2001 –

Chair, Data Safety and Monitoring Board (DSMB) “Study to Prospectively Evaluate Reamed Intramedullary Nails in Tibial Shaft Fractures Trial” (SPRINT). National Institute of Musculoskeletal and Skin Diseases (NIAMS), 2002 –

Member: Multidisciplinary Clinical Research Center in Musculoskeletal Diseases (MCRC) Scientific Advisory Board, Dartmouth Medical School, 2003 –

Member, Canadian Council of Academic Rheumatologists (CCAR) [as Director, Division of Rheumatology, University of Toronto] 2003 –

Team Leader, Effectiveness Task Force, 2004 –

Member: Journal of Clinical Epidemiology Policy Advisory Board, 2004 –

Member: Pfizer - OSCARE Scientific Committee Meeting 2004 –

Member: American Pain Society Clinical Guidelines Project – Low Back Pain Panel 2005 –

Member: Canadian Rheumatology Association (CRA) Therapeutics Committee “Creating Canadian Guidelines for Treatment of Rheumatoid Arthritis [RA]”, 2005 –

Member: Expert Task Force “Recommendations for the use of Biological (and Nonbiological) Agents in the Treatment of Rheumatoid Arthritis” for American College of Rheumatology (ACR), 2006 –

Chair (International): Abbott 3E Initiative in Rheumatology – Phase III, 2008 –

UCBeyond Rheumatoid Arthritis Scholarship Program, Toronto Arthritis Society, 2008 –

Member: Alliance for the Canadian Arthritis Program (ACAP) Government Relations Committee [as CAN representative] 11/2007-current; Business Case Steering Committee 2008 –

Panellist: American Pain Society Clinical Guidelines Project – Low Back Pain, 2005 –

Review Committee: Best Research on Low Back Pain Commission de la santé et de la sécurité du travail

Editorial Boards: American Journal of Medicine; Arthritis Care and Research

Co-ordinating Editor: Cochrane Collaboration Back Review Group, Joint Bone Spine, International Edition;

Nature Clinical Practice Rheumatology Journal Advisory Board; Journal of Clinical Epidemiology Advisory Board, 2004 –

Journal Referee: Annals of Internal Medicine; Annals of Rheumatic Disease; Arthritis and Rheumatism; Arthritis, Care and Research; Canadian Medical Association Journal; JAMA; Journal of Rheumatology; Journal of Clinical Epidemiology; Journal of the Society for Medical Decision Making; Medical Care; New England Journal of Medicine

BRESLIN, Curtis

Teaching/Educational Role

Associate Professor: Dalla Lana School of Public Health, University of Toronto

Member: School of Graduate Studies, University of Toronto

PhD Thesis Co-supervisor: Andrea Chambers, Safer Needle Regulation in Ontario, 2010 –

Co-supervisor for Post-doctoral fellow, Marie Laberge

Guest Lecturer: CHL 5804, Health Behavior Change, University of Toronto

Guest Lecturer: Vulnerable Worker, Summer 2012, Dalla Lana School of Public Health, Work Disability Prevention Program

Invited presentation: Ensuring healthy workers tomorrow by preventing youth work injuries today. Workshop on Research Translation with Vulnerable Worker Populations, Colorado State University, June 7-8, 2012

Co-supervisor for Post-doctoral fellow, Marie Laberge

Service Activities

Editorial Board: Journal of Studies on Alcohol Journal of Occupational Health Psychology

Guest reviewer for the CIHR peer review committee for Chair: Gender, Work and Health funding opportunity. December 2012

Reviewer: Journal of Adolescent Health Social Science and Medicine Journal; American Journal of Industrial Medicine; Occupational & Environmental Medicine

BUSSE, Jason

Teaching/Educational Role

Assistant Professor: Clinical Epidemiology & Biostatistics, McMaster University, 2008 –

Service Activities

Editorial Board: Journal of Occupational Health Psychology

Editorial Board: Journal of the Canadian Chiropractic Association

Grant Reviewer: Sick Kids Foundation

Journal Referee: Annals of Internal Medicine; Archives of Medical Research; British Journal of Sports Medicine;

British Medical Journal; Canadian Medical Association Journal; Journal of the American Medical Association;

Journal of General Internal Medicine; Journal of Manipulative and Physiological Therapeutics; Journal of the

Canadian Chiropractic Association; Medical Care; Vaccine; Social Science and Medicine

CARRASCO, Christine

Teaching/Educational Role

Roundtable Facilitator, International Symposium on the Challenges of Workplace Injury Prevention through Financial Incentives, November 29-30, 2012, Toronto, Canada

CARNIDE, Nancy

Teaching/Educational Role

Teaching Assistant: Human Biology Department, University of Toronto

Teaching Assistant: University College, University of Toronto

Service Activities

Senior Editor: Health Science Inquiry

Managing Editor: Health Science Inquiry

Committee Member: Curriculum Review Committee, Epidemiology Division, Dalla Lana School of Public Health, University of Toronto

ETCHES, Jacob

Service Activities

Assistant IWH Research Ethics Co-ordinator
Assistant IWH Privacy Agreement Co-ordinator
Journal Referee: International Journal of Epidemiology, Journal of Health Economics

FORTUNE, Melanie

Teaching/Educational Role

Teaching Assistant: School of Environment, University of Toronto

Service Activities

Member: Burlington Sustainable Development Committee, City of Burlington
Member: Curriculum Review Committee, Epidemiology Division, Dalla Lana School of Public Health, University of Toronto
Co-chair: New Professionals Working Group, Ontario Public Health Association

FURLAN, Andrea

Teaching/Educational Role

Assistant Professor: Department of Medicine, Faculty of Medicine, University of Toronto
Staff Physician: Musculoskeletal Program, Toronto Rehabilitation Institute – Hillcrest Centre
Instructor: IWH Systematic Reviews Workshop
PhD Thesis Committee member: N. Carnide, C. Daly, F. Lakha
MSc Thesis Committee member: B. Rafat
MSc Thesis Examiner (External Reviewer): A. Borwein, Dalhousie University
Undergraduate Supervisor: W. Wang, I. Famiyeh
Post-graduate Supervisor: K Coros, C Ho

Undergraduate teaching:

Low-back pain and Whiplash, Mechanisms, Manifestations and Management of Diseases – Department of Medicine - Faculty of Medicine - University of Toronto
Pharmacological treatment of pain, Mechanisms, Manifestations and Management of Diseases – Department of Medicine - Faculty of Medicine - University of Toronto

Graduate teaching:

Opioids for chronic non-cancer pain, Graduate nursing course on advanced pain management across clinical settings

Post-graduate teaching:

Research methodology: Measurements, Residents and clinical fellows of Radiology, University of Toronto
Myofascial Pain Syndrome: Epidemiology, Assessment, Diagnosis and Treatment, Residents of Physiatry. University of Toronto

Service Activities

Journal Referee: American Journal of Physical Medicine & Rehabilitation, BMC Medical Research Methodology, Clinical Journal of Pain, CMAJ – Canadian Medical Association Journal, Cochrane Back Review Group, Pain Management, Journal of Occupational and Environmental Medicine, Journal of Rheumatology, Pain, Pain Research & Management, Spine
Editorial Board: Journal Rehabilitation Medicine, Cochrane Back Review Group
Postgraduate Medicine: Grant Reviewer
CIHR Grant Review Panel Chair: Gender Work and Health

GIGNAC, Monique

Teaching/Educational Role:

Senior Scientist: Division of Health Care & Outcomes Research, University Health Network
Associate Professor: Dalla Lana School of Public Health, Faculty of Medicine, University of Toronto
Full Member: Graduate Department of Public Health Sciences, University of Toronto
Course Co-instructor: CHL5203H: Public Health Research Methods. Dalla Lana School of Public

Health, University of Toronto
Lecturer: HAD5302H: Measurement in Clinical Research. University of Toronto
Research Mentor, Health Care, Technology & Place (HCT&P) Transdisciplinary Research Training Program, University of Toronto
Post Doctoral Fellowship Advisor: Imelda Wong, Ph.D.
Ph.D. Supervisor: Arif Jetha
M.Sc. Co-Supervisor (with D. Beaton): Stacey Morrison

Service Activities:

Associate Editor: Arthritis Care & Research, 2011 to present
Member: Arthritis Research Foundation (ARF) strategic research planning committee for Autoimmune Diseases in Women, University Health Network, 2011 to present
Member: Research, Education, and Practice Advisory Committee (REPAC), Canadian Working Group on HIV and Rehabilitation (CWGHR), 2010 to present
Member: Toronto Western Research Institute, Space Committee, 2005 to present
Member: Finance Committee, Institute for Musculoskeletal Health and Arthritis (IMHA), Canadian Institutes of Health Research (CIHR)
Member: Research Committee, Arthritis Alliance of Canada (AAC), November 2011 to present
Member: Expert Advisory Panel (EAP) on Exploring the Commonalities between Mental Health and Disability, Elizabeth (Betty) Lin (PI)

HOGG-JOHNSON, Sheilah

Teaching/Educational Role

Assistant Professor: Public Health Sciences, Faculty of Medicine, University of Toronto, 1995 –
Assistant Professor: Health, Policy, Management and Evaluation, University of Toronto, 2001–
Core Faculty Member: Graduate Program in Clinical Epidemiology and Health Services Research, University of Toronto, 1998 –
Chair Mentor: CIHR Work Disability Training Program
Instructor: Qualitative and Quantitative Methods Workshop, CIHR Work Disability Training Program
Teaching: CHL 7001 Advanced Quantitative Methods in Epidemiology, Module on Survival Analysis – Extending the COX Model/Advanced Methods in Epidemiology - Survival Analysis. University of Toronto
Instructor: Privacy Policy Training, IWH
PhD Thesis Committee Member: Gayane Hovhannisyanyan, Ken Tang, Orit Schieir
PhD Thesis Supervisor: Nancy Carnide

Service Activities

Journal Referee: Canadian Medical Association Journal, Occupational and Environmental Medicine, Scandinavian Journal of Work, Environment and Health. BMC Musculoskeletal, American Journal of Public Health
Special Consultant to the Editorial Board: The Spine Journal
Assistant Editorial Board: European Spine Journal
Editorial Board: Journal of Occupational Rehabilitation

IBRAHIM, Selahadin

Teaching/Educational Role

Lecturer: University of Toronto, Dalla Lana School of Public Health, 2002 –
Teaching: Module on Exploratory and Confirmatory Factor Analysis, Path Analysis and Structural Equation Modeling, CHL 5424 Advanced Quantitative Methods in Epidemiology, Dalla Lana School of Public Health.
PhD Thesis Committee Member: for Mana Rezai and Alanna Mihic- Dalla Lana School of Public Health.
Guest Lecturer: Factor Analysis and Structural Equation Modeling- Faculty of Nursing University of Toronto.

IRVIN, Emma

Teaching/Educational Role

Instructor: IWH Systematic Reviews Workshop

Instructor: Privacy Policy Training

Instructor: Systematic Reviews Course, University of Toronto, Health Policy, Management and Evaluation Graduate Program

Service Activities

Convenor: Cochrane Library User Group Meeting; Cochrane Colloquium

Reviewer, 2012 CADTH Abstract Reviewer, 2012 AHRQ Reviewer

KENNEDY-YEE, Carol

Teaching/Educational Role

Lecturer: Physical Therapy, University of Toronto: 1996 –

Service Activities

Patient Safety Champion: College of Physiotherapists of Ontario, 2010 –

Arthritis Health Professionals Association, Research Committee, 2008 –

KRISTMAN, Vicki

Teaching/Educational Role

Assistant Professor, Department of Health Sciences, Lakehead University

Assistant Professor (status-only), Dalla Lana School of Public Health, University of Toronto

Assistant Professor, Northern Ontario School of Medicine

Instructor, Epidemiology I, Department of Health Sciences, Lakehead University

Instructor, Epidemiology II, Department of Health Sciences, Lakehead University

MPH Committee Member: Ashley Czerkas, Nathan Smith, Lakehead University

MPH Supervisor: Brandy Tanenbaum, Lakehead University

PhD Committee Member: Mana Rezai, Dalla Lana School of Public Health

Service Activities

Member, CIHR Population Health Review Committee

Journal Reviewer: Journal of Occupational and Environmental Medicine; Journal of Occupational Rehabilitation;

BMC Musculoskeletal Disorders; BMC Medical Research Methodology; Pain; Arthritis Care & Research;

Neuroepidemiology; Archives of Physical Medicine and Rehabilitation; Social Science & Medicine; Annals of

Epidemiology; Spine; American Journal of Epidemiology; Journal of Epidemiology and Community Health;

Occupational and Environmental Medicine

MACEACHEN, Ellen

Teaching/Educational Role

Associate Professor (Status): Dalla Lana School of Public Health, University of Toronto

Associate Professor (Status Cross Appt), Graduate Dept. of Rehabilitation Sciences, University of Toronto

Post-doctoral supervisor, Marie Laberge, Institute for Work & Health

PhD Supervisor, Margaret Oldfield, Graduate Dept. of Rehabilitation Sciences, University of Toronto

PhD Thesis committee member: Dana Howse, Dalla Lana School of Public Health, University of Toronto

PhD Thesis committee member: Ida Seing, National Centre for Work and Rehabilitation, Department of Medical and Health Sciences, Linköping University, Sweden

PhD Thesis committee member, Sara Saunders, School of Occupational and Physical Therapy, McGill University

PhD Thesis committee member, Rebecca Penn, Dalla Lana School of Public Health, University of Toronto

Mentor, Sara Saunders, PhD Candidate, McGill University, Quebec. Work Disability Prevention CIHR Strategic Training Program: The meaning of work for long-time unemployed disabled workers.

Instructor: CHL5122H. Qualitative Research Practice, Dalla Lana School of Public Health, University of Toronto, 2005 –

Instructor, IRE2715H Occupational Health and Safety, Centre for Industrial Relations and Human Resources 2012

Instructor: Methodology in Work Disability Prevention, Work Disability Prevention CIHR Strategic Training Program, University of Toronto, 2003 –

Guest Lecturer, Labour Studies 3D03 Occupational Health and Safety, McMaster University

Chair Mentor: Work Disability Prevention CIHR Strategic Training Program, University of Toronto

Service Activities

Member: Academic Council, Pacific Coast University, British Columbia 2012-

Member: Dalla Lana School of Public Health Council, University of Toronto 2012-

Chair, SSHRC Review Committee. Dalla Lana School of Public Health, University of Toronto 2012

Member: Program Executive Committee, Work Disability Prevention CIHR Strategic Training Program, University of Toronto 2005-

Member: Program Advisory Committee, Work Disability Prevention CIHR Strategic Training Program, University of Toronto 2005-

Fellow: Steering Committee, Centre for Critical Qualitative Health Research, University of Toronto 2009-

Associate Editor, Editorial Board, Journal of Occupational Rehabilitation 2007-

Member: Canadian Association for Research on Work and Health 2009-

Member: Canadian Anthropology and Sociology Association 2005-

Member: British Sociological Association 2004-

Member: RAACWI-WSIB Return to Work Blue Sky Group 2009-2012

Member: Conference Scientific Organising Committee, Canadian Association for Research on Work and Health 2012

Member, Abstract Review Committee, Canadian Association for Research on Work and Health Conference, Vancouver, 2012

Member, Liberty Mutual Work Disability Research Award Committee 2012.

Member, Abstract Review Committee, 2nd Scientific Conference on Work Disability Prevention and Integration (WDPI), Groningen, The Netherlands. 2012

Chair, Socio-political challenges Symposium Planning Committee, Work Disability Prevention CIHR Strategic Training Program

Member: Program Executive Committee, Work Disability Prevention CIHR Strategic Training Program, University of Toronto

Member: IWH Plenary Committee

Member, Abstract Review Committee, 2nd Scientific Conference on Work Disability Prevention and Integration (WDPI), Groningen, The Netherlands.

Reviewer: Journal of Occupational Rehabilitation, BMC Public Health, European Journal of Work and Organisational Psychology, Safety Science, Scandinavian Journal of Work, Environment and Health

MAHOOD, Quenby

Teaching/Educational Role

Instructor: IWH Systematic Reviews Workshop

Guest Lecturer: Literature Search for Systematic Reviews (Webinar). International Society of Physical and Rehabilitation Medicine. June 5, 2012.

MARIN, Teresa

Service Activities

Reviewer: Health Psychology, Psychosomatic Medicine

MUSTARD, Cam

Teaching/Educational Role

Professor: Public Health Sciences, University of Toronto, July 2002 –

University of Toronto Dalla Lana School of Public Health

Review Panel Member: Comparative Program in Health and Society, Munk Centre for International Studies, University of Toronto

Faculty: CHL5426 Population Perspectives in Epidemiology, Fall 2012 –

Service Activities

Promotion Review, Faculty of Medicine, University of Toronto

Journal Referee: Editorial Advisory Board, Longwoods Review; Journal of Epidemiology and Community Health; Health Services Research Journal; American Journal of Public Health; Medical Care; Injury Prevention; Journal of Psychosomatic Research; Social Science and Medicine; Health Reports; HealthCare Policy; Canadian Medical Association

ROBSON, Lynda

Teaching/Educational Role

PhD Thesis Committee Member: Sharvani Sharma, Schulich School of Business, York University

Sessional Instructor: OHS 818 – System Management II, School of Occupational and Public Health, Ryerson University

Service Activities

Grant Reviewer: Workers Compensation Board, Manitoba

Ad-Hoc Reviewer: British Journal of Economics, Management & Trade, Journal of Clinical Nursing, Journal of Occupational and Environmental Medicine, Safety Science

IWH Joint Health and Safety Committee

IWH Plenary Committee

SAUNDERS, Ron

Teaching/Educational Role

Associate Professor: School of Public Policy and Governance, University of Toronto

Instructor: CHL 5308, Tools and Approaches for Public Health Policy Analysis and Evaluation (Dalla Lana School of Public Health, University of Toronto)

Instructor: Knowledge Translation Professional Certificate Program

Service Activities

Chair, IWH Plenary Committee

SCOTT-MARSHALL, Heather

Teaching/Educational Role

Assistant Professor (Status Only): Dalla Lana School of Public Health, University of Toronto

Service Activities

Scientific reviewer: Social Science & Medicine, Social Indicators Research, Social Forces

Mentor: PHAA/DLSPH Mentorship Program, Mentee: Linda Chan, MSc student, Health Promotion program, DLSPH, University of Toronto.

STEENSTRA, Ivan

Teaching/Educational Role

Mentor: Esther van Kleef MSc Student Management, Policy-Analysis and Entrepreneurship in Healthcare VU University, Amsterdam, The Netherlands

Committee Member: Rhysa Leyshon PhD Candidate, School of Rehabilitation Sciences, University of Western Ontario

Service Activities

Reviewer: Spine and Occupational and Environmental Medicine, BioMed Central
Participant: CIHR Work Disability Program

SMITH, Brendan

Teaching/Educational Role

Teaching Assistant: CHL 5105H Social Determinants Of Health, Dalla Lana School of Public Health, University of Toronto

Teaching Assistant: CHL5402H Epidemiologic Methods II, Dalla Lana School of Public Health, University of Toronto

Service Activities

Member: PhD Admissions Committee, Division of Epidemiology, Dalla Lana School of Public Health, University of Toronto

Member: Curriculum Committee, Division of Epidemiology, Dalla Lana School of Public Health, University of Toronto

Journal Referee: British Medical Journal Open, Nutrition, Metabolism & Cardiovascular Diseases

SWIFT, Michael

Service Activities

Journal Reviewer: Communications in Statistics – Theory and Methods

TANG, Ken

Teaching/Educational Role

Guest Lecturer, Measurement in Clinical Research (Topic: Theory of Sensibility), Institute of Health Policy, Management and Evaluation, University of Toronto, Toronto, ON

Teaching Assistant, Biostatistics for Health Researchers II, Institute of Health Policy, Management and Evaluation, University of Toronto, Toronto, ON

Service Activities

Journal Reviewer: BioMed Central Health Services Research, Journal of Rheumatology, Arthritis Care & Research, General Hospital Psychiatry, Spine, Journal of Clinical Epidemiology

TOMPA, Emile

Teaching/Educational Role

Adjunct Assistant Professor: Public Health Sciences, University of Toronto. 2004 –

Adjunct Assistant Professor: Economics, McMaster University, 2001 – May 2012

Adjunct Associate Professor: Economics, McMaster University, May 2012 -

Post-doctoral Mentor for Scott-Marshall, funded by a SSHRC CURA, 2011-2013

Co-Instructor, Advanced Topics in Health Economics, McMaster University, 2012

Lecturer, Economic evaluation of work disability prevention programs. Work Disability Prevention Program (June 2012), University of Toronto, Ontario

Lecturer, Introduction to health economics and its application in the evaluation of measures to prevent work disabilities. Work Disability Prevention Program (June 2012), University of Toronto, Ontario

Guest Lecturer, Lecture on Economic Evaluation of Health Interventions, Theory and Practice of Program Evaluation, Department of Public Health Sciences, University of Toronto, Fall 2012

Co-chair of Symposium: An economic evaluation framework: Building rigour and comparability in occupational health and safety decisions in healthcare sector. CARWH 2012, Vancouver, June 1-2, 2012

Mustard Fellowship Committee, Institute for Work & Health

Service Activities

Manuscript reviewer: Canadian Public Policy; Journal of Occupational Rehabilitation; Occupational and Environmental Medicine; Social Science and Medicine; Scandinavian Journal of Work, Environment and Health
External Grant/Report Referee: CIHR; Rand Institute for Justice (Summer 2012); SafeWork Manitoba

WONG, Imelda

Service Activities

Reviewer: Journal of Occupational and Environmental Medicine, Work, Stress and Health Conference, Scandinavian Journal of Work, Environment and Health, Industrial Health, Accident Analysis and Prevention, Canadian Journal of Public Health, BioMed Central Public Health

Adjunct Scientists

Dr. Peri Ballantyne – Associate Professor, Department of Sociology, Trent University (since 2001)

Dr. Peri Ballantyne is an associate professor in the Department of Sociology at Trent University in Peterborough, Ontario. A health sociologist, she has ongoing affiliations with the Institute for Work and Health, the Leslie Dan Faculty of Pharmacy at the University of Toronto and the Department of Sociology at McMaster University in Hamilton. She currently teaches sociology research methods, the sociology of health and illness, and the sociology of medicine. Her current research is focused on the lay experience of illness (with a particular interest in pharmaceutical use) and the sociology of work and health.

Dr. Philip Bigelow – Associate Professor, Department of Health Studies and Gerontology, University of Waterloo (since 2008)

Dr. Philip Bigelow is an associate professor in the Department of Health Studies and Gerontology at the University of Waterloo in Waterloo, Ontario, and has an appointment in the Dalla Lana School of Public Health at the University of Toronto. Bigelow teaches courses in occupational health, risk assessment and epidemiology, and is a faculty member in the Collaborative PhD Program in Work and Health. He has extensive field experience in occupational health and safety. His research is in the area of risk assessment and on the effectiveness of interventions to prevent occupational injuries and disease.

Dr. Cécile Boot – Senior Scientist, Department of Public and Occupational Health, EMGO+ Institute for Health and Care Research, VU University Medical Center in Amsterdam, the Netherlands (since 2011)

Dr. Cécile Boot is a senior scientist in the Department of Public and Occupational Health / EMGO+ Institute for Health and Care Research at the VU University Medical Center in Amsterdam, the Netherlands. Her research interests include work and health, in particular maintaining working with chronic conditions. She is involved in collaborative projects in Canada (IWH), the United States (Liberty Mutual & Harvard School of Public Health) and Denmark (National Research Centre for the Working Environment).

Dr. Sandra Brouwer – Assistant Professor in the Department of Health Sciences, Community & Occupational Medicine at the University Medical Center in Groningen (UMCG), the Netherlands

Dr. Sandra Brouwer is an assistant professor in the Department of Health Sciences, Community & Occupational Medicine at the University Medical Center in Groningen (UMCG), the Netherlands. Her current research work focuses on work (dis)ability assessments and return to work outcomes among disabled workers, and on sustainable labour market participation of older workers and young adults with disabilities.

Dr. Ute Bültmann – Professor of Work and Health in the Department of Health Sciences, Community & Occupational Medicine at the University Medical Center in Groningen (UMCG), the Netherlands (since 2007)

Dr. Ute Bültmann is a professor of Work and Health in the Department of Health Sciences, Community & Occupational Medicine at the University Medical Center in Groningen (UMCG), the Netherlands. Her research interests include the epidemiology of work and health, the impact of the psychosocial work environment on workers' health, the measurement of functioning at work, and the prevention of work disability. Her research focuses in particular on workers with mental health problems. She is involved in collaborative projects on work and health in Denmark and Canada.

Dr. Linda J. Carroll – Associate Professor, associate professor of epidemiology in the Department of Public Health Sciences at the University of Alberta in Edmonton. (since 2004)

Dr. Linda J. Carroll is an associate professor of epidemiology in the Department of Public Health Sciences at the University of Alberta in Edmonton. She holds a Health Scholar Award from the Alberta Heritage Foundation for Medical Research. Her research focuses on psychological aspects of musculoskeletal disorders, with an emphasis on examining the interface between depression, coping, chronic pain disability and recovery from soft-tissue injuries.

Dr. J. David Cassidy – Senior Scientist, Division of Healthcare Outcomes Research, University Health Network (since 2001)

Dr. J. David Cassidy is an epidemiologist and senior scientist in the Division of Health Care and Outcomes Research within Toronto's University Health Network, and a professor of epidemiology and clinical epidemiology at the University of Toronto. In September 2011, he was awarded a Danish Government Globalization Professorship in the Faculty of Health at the University of Southern Denmark. He currently splits his time between Denmark and Canada, and is focused on international research collaborations in occupational health, musculoskeletal disorders and neuro-epidemiology.

Alan Clayton – Adjunct appointment, Institute for Safety, Compensation and Recovery Research (ISCRR), Melbourne, Australia (since 2011)

Alan Clayton is an independent research consultant working primarily in the field of accident compensation and injury prevention and, for three decades, has been involved in the design and review of accident compensation schemes in Australasia. He is also an adjunct associate professor at Monash University (associated with the Institute for Safety, Compensation and Recovery Research), an honorary associate at the Centre for Employment and Labour Relations Law at the University of Melbourne, an honorary associate at the National Research Centre for Occupational Health and Safety Regulation at the Australian National University, and an honorary senior research fellow at the Victorian Institute of Occupational Safety and Health at the University of Ballarat.

Dr. Anthony (Tony) Culyer – Ontario Research Chair in Health Policy and System Design, HPME, University of Toronto (since 2007)

Dr. Tony Culyer holds the Ontario Research Chair in Health Policy and System Design in the Faculty of Medicine at the University of Toronto, and he is also a part-time professor of economics at the University of York in England. He is also chair of NICE (National Institute for Health & Clinical Excellence) International and a member of NICE's Citizens Council Committee. From 2003 to 2006, he was the chief scientist at the Institute for Work & Health in Toronto and, from 2006 to 2009, chair of the Workplace Safety & Insurance Board's Research Advisory Council. His current research interests relate to problems in thinking about how equity in health is best achieved and how decisions about cost-effective technologies are best arrived at.

Dr. Paul Demers – Professor, Dalla Lana School of Public Health, University of Toronto and Clinical Professor, School of Population and Public Health, University of British Columbia

Dr. Paul Demers is the director of the Occupational Cancer Research Centre in Toronto, based at Cancer Care Ontario. He is also the scientific director of CAREX Canada, a national workplace and environmental carcinogen surveillance program, as well as a professor with the Dalla Lana School of Public Health at the University of Toronto and a clinical professor with the School of Population and Public Health at the University of British Columbia. He is an epidemiologist whose research focuses on occupational cancer and other chronic diseases.

Dr. Carolyn Dewa – Senior Scientist, Health Systems Research and Consulting Unit, Social and Epidemiological Research Department

Dr. Carolyn Dewa currently heads the Work and Well-being Research and Evaluation Program at the Centre for Addiction and Mental Health (CAMH), where she is a senior scientist in the Health Systems Research and Consulting Unit in the Social and Epidemiological Research Department. She currently holds a Canadian Institutes of Health Research/Public Health Agency of Canada Applied Public Health Chair to develop effective interventions for mental illness and mental health in the working population. Her research focuses on three major themes: workplace disability associated with mental illness, access and use of pharmacotherapeutics, and the provision of mental health services and support to individuals with severe mental illness.

Dr. Joan Eakin – Sociologist, Dalla Lana School of Public Health, University of Toronto (since 2001)

Dr. Joan Eakin is a sociologist and qualitative research methodologist in the Dalla Lana School of Public Health at the University of Toronto. Her research focuses on work and health, particularly the relationship between health and the social relations of work. Most of her research has centred on prevention and return to work in small workplaces. Recent studies include home health-care work, return-to-work policy and practice, front-line service work in Ontario's Workplace Safety and Insurance Board, and physicians' role in compensation.

Dr. Renée-Louise Franche – Clinical Psychologist and Researcher, British Columbia (since 2008)

Dr. Renée-Louise Franche is a clinical psychologist and consultant in work disability prevention and occupational health. She is an adjunct professor in the Faculty of Health Sciences at Simon Fraser University, in the School of Population and Public Health at the University of British Columbia, and in the Dalla Lana School of Public Health at the University of Toronto. Her research focuses on developing a better understanding of how organizational, health-care and individual factors contribute to safe, sustainable and healthy return to work following injury or ill health.

Dr. David Gimeno – Associate Professor, Division of Occupational and Environmental Health Sciences, University of Texas School of Public Health (since 2008)

Dr. David Gimeno is an associate professor of occupational and environmental health sciences at the San Antonio campus of the University of Texas School of Public Health. He is also an honorary senior research associate in the Department of Epidemiology & Public Health at University College in London, U.K. His research focuses on occupational and social epidemiology, with an emphasis on the measurement of employment status, work organizational exposures and workers' health and health-related productivity, social inequalities in health and aging, and the use of multi-level statistical models. He is involved in collaborative projects on work and health in Spain, Central America and Colombia.

Dr. Jaime Guzmán – Rheumatologist, British Columbia Children's Hospital (since 2006)

Dr. Jaime Guzman is a rheumatologist at B.C. Children's Hospital in Vancouver, as well as an assistant clinical professor of medicine at the University of British Columbia and an adjunct scientist at Toronto Rehab. His research interests relate to preventing disability in people with musculoskeletal injuries. His most recent publications deal with how to obtain sustainable disability prevention through collaborative action and how to best integrate the perspectives of different stakeholders into research.

Dr. Jill Hayden – Assistant Professor, Dalhousie University (since 2007)

Jill Hayden is an assistant professor in the Department of Community Health & Epidemiology, Dalhousie University, Halifax, Nova Scotia. Her research experience and expertise includes systematic review and meta-analysis methods, prognostic research, and musculoskeletal health - specifically low back pain.

Dr. C. Gail Hepburn – Assistant Professor, Department of Psychology, University of Lethbridge (since 2004)

Dr. Gail Hepburn is an assistant professor in the Department of Psychology at the University of Lethbridge in Alberta. She also holds an associate graduate faculty appointment in the Department of Psychology at the University of Guelph. Hepburn specializes in organizational psychology. Her research interests include the impact of workplace factors—such as perceptions of justice or fairness, safety climate, workplace aggression and work-family balance—on employee well-being

Dr. Linn Holness – Director of the Centre for Research Expertise in Occupational Disease (CREOD) (since 2001)

Dr. Linn Holness is Director of the Centre for Research Expertise in Occupational Disease (CREOD) and Chief of the Department of Occupational and Environmental Health, both at St. Michael's Hospital in Toronto. She is also the director of the Division of Occupational Medicine, a professor in the Department of Public Health Sciences and a professor in the Department of Medicine, all at the University of Toronto. Her main research

interests are occupational skin and lung disease, the delivery of occupational health services, and workplace health and safety issues

Dr. Mieke Koehoorn – Assistant Professor, Department of Health Care & Epidemiology, University of British Columbia (since 2004)

Dr. Mieke Koehoorn is an assistant professor in the Department of Health Care and Epidemiology at the University of British Columbia (UBC) and a Michael Smith Foundation for Health Research Scholar. She also holds an appointment with the School of Occupational and Environmental Hygiene at UBC. Her research interests focus on the epidemiology of work-related musculoskeletal injuries, in particular among health-care workers. Koehoorn also conducts research on the relationship between work organization and the health of health-care workers, and the epidemiology of injuries among young workers.

Dr. Agnieszka Kosny – Research Fellow, Monash University, Australia

Dr. Agnieszka Kosny is a research fellow at Monash University in Australia. A former scientist at the Institute for Work & Health, she holds a PhD in public health sciences from the University of Toronto. Her research interests focus on new immigrant workers, return to work after injury and the functioning of workers' compensation systems.

Dr. (Desre) Dee Kramer – Associate Director, Occupational Cancer Research Centre (since 2005)

Dr. Deskre Kramer is associate director of the Occupational Cancer Research Centre in Toronto, housed at Cancer Care Ontario. She is also an adjunct professor at the University of Waterloo and in the School of Public and Occupational Health at Ryerson University. Until the end of 2011, she was the associate director of the Centre of Research Expertise for the Prevention of Musculoskeletal Disorders (CRE-MSD) at the University of Waterloo. Her research interests focus on knowledge transfer, knowledge mobilization, social network analysis, diffusion of innovation and workplace interventions.

Dr. Marie Laberge – Assistant Professor, Faculty of Medicine, University of Montreal

Dr. Marie Laberge is an assistant professor in the Faculty of Medicine at the University of Montreal and a scientist at the CHU Ste-Justine research centre (mother, child and adolescent health). She is also a member of the Centre for Interdisciplinary Research Center on Biology, Health, Society and Environment (CINBIOSE), a Collaborating Centre of the World Health Organization and the Pan American Health Organization (WHO-PAHO). Her primary disciplinary fields are ergonomics and occupational therapy. Her current research activities concern adolescent occupational injuries and disability prevention. Dr. Laberge is interested in the development and implementation of novel interventions in order to facilitate the workplace integration of pediatric populations for whom entering the workforce represents a challenge. She is also interested in sex/gender differences in work and health paths.

Prof. Louise Lemieux-Charles – Associate Professor and Chair, Department of Health Policy, Management & Evaluation, University of Toronto (since 2000)

Prof. Louise Lemieux-Charles is an associate professor in and chair of the Department of Health Policy, Management and Evaluation (HPME) at the University of Toronto, where she is also the program director of the Hospital Management Research Unit. Her current research focuses on performance management, human resources management, organizational learning, knowledge transfer and service delivery networks, all within the context of health care.

Prof. Katherine Lippel – Professor of Law, Faculty of Law (Civil Law Section), University of Ottawa (since 2006)

Prof. Katherine Lippel is professor of law in the Faculty of Law (Civil Law Section) at the University of Ottawa, where she holds the Canada Research Chair in Occupational Health and Safety Law. She is also an associate professor of law at the Université du Québec à Montréal and an adjunct professor in Carleton University's School of Social Work. She specializes in legal issues relating to occupational health and safety (OHS) and workers' compensation, and her research interests include work and mental health, the health effects of

compensation systems, precarious employment and occupational health policy, interactions between law and medicine in OHS, disability prevention and compensation systems, and more. She was made a fellow of the Royal Society of Canada in 2010.

Dr. Carles Muntaner – Chair in Psychiatry and Addictions Nursing Research, Social Policy and Prevention Research Department, CAMH (since 2004)

Dr. Carles Muntaner is the Psychiatry and Addictions Nursing Research Chair in the Social Equity and Health Section at the Centre for Addiction and Mental Health (CAMH) in Toronto. He is also a professor of nursing, public health sciences and psychiatry at the University of Toronto. His research focuses on social class, politics, work organization and health within a global perspective. He is the recipient of the Wade Hampton Frost Award of the American Public Health Association and a chair of the Employment Conditions HUB of the WHO Commission on Social Determinants of Health.

Dr. W. Patrick Neumann – Associate Professor, Department of Mechanical and Industrial Engineering, Ryerson University (since 2006)

Dr. W. Patrick Neumann runs the Human Factors Engineering Lab in Ryerson University's Department of Mechanical and Industrial Engineering in Toronto. A certified ergonomist, Dr. Neumann was once based at the former Swedish National Institute for Working Life in Gothenburg. His work emphasizes both the technical and organizational aspects of operation design, and his research looks at the application of human factors science to achieve design solutions with competitive advantages that are sustainable in both technical and human terms.

Dr. Aleck Ostry – Tier 2 Canada Research Chair in the Social Determinants of Community Health, University of Victoria (since 2003)

Dr. Aleck Ostry is an assistant professor in the Faculty of Social Sciences at the University of Victoria in British Columbia. He is a Canada Research Chair (Tier 2) in the Social Determinants of Community Health and Michael Smith Foundation for Health Research Scholar. Ostry conducts research on the social determinants of health with a focus on workplace health, nutrition policy and health, and rural and northern health.

Dr. Mark Pagell – Associate Professor, Schulich School of Business, York University

Dr. Mark Pagell is an associate professor of operations management and information systems at the Schulich School of Business at York University in Toronto. He is also a visiting professor at University College Dublin in Ireland. His research focuses on sustainable supply chain management, with a focus on creating supply chains that are both environmentally and socially sustainable.

Dr. Glenn Pransky – Director, Center for Disability Research, Liberty Mutual Research Center for Safety & Health (since 2001)

Dr. Glenn Pransky is director of the Center for Disability Research at the Liberty Mutual Research Center for Safety and Health in the United States. He is also an associate professor in the Department of Family Medicine and Community Health at the University of Massachusetts Medical School and is a visiting lecturer at the Harvard School of Public Health and the University of Massachusetts/Lowell. His research interests include disability and outcome measurement, particularly for work-related musculoskeletal disorders.

Dr. Sergio Rueda – Director, Health Research Initiatives, Ontario HIV Treatment Network

Dr. Sergio Rueda is Director of the Health Research Initiatives at the Ontario HIV Treatment Network, as well as an assistant professor of psychiatry at the University of Toronto. He is leading a population health research program that situates labour force participation, working conditions and income security as fundamental determinants of health in HIV/AIDS. He also conducts policy-relevant research on the impact of psychosocial stressors on the mental health of people living with HIV.

Dr. Harry Shannon – Professor, Department of Clinical Epidemiology and Biostatistics, McMaster University (since 2004)

Dr. Harry Shannon is a professor in the Department of Clinical Epidemiology and Biostatistics at McMaster University in Hamilton, Ontario, where he has been a faculty member since 1977. He also has an appointment in the Dalla Lana School of Public Health at the University of Toronto. His research interests include workplace health and safety, specifically the role of organizational factors and interventions to create safe workplaces. He is currently chair of the Methodology Working Group for the Canadian Longitudinal Study on Aging, and he is involved in several global health projects, including surveys in Lebanon, Palestine and Haiti.

Dr. Nancy Theberge – Professor, Department of Kinesiology and Sociology, University of Waterloo (since 2003)

Dr. Nancy Theberge is a professor in the Departments of Kinesiology and Sociology at the University of Waterloo in Waterloo, Ontario. She teaches courses in the sociology of health, work and health, and social aspects of injuries in sport and work. Theberge conducts research on participatory ergonomics (PE) and the social factors related to successful implementation of PE programs. She has a related research program on the professional practices of ergonomists and human factors engineers.

Dr. Gabrielle van der Velde – Scientist, Toronto Health Economics & Technology Assessment Collaborative (since 2008)

Dr. Gabrielle van der Velde is a scientist at the Toronto Health Economics and Technology Assessment (THETA) Collaborative. Her work focuses on health technology assessment, including economic evaluation (cost-effectiveness analysis) of health technologies, mostly in the area of musculoskeletal conditions. She is a member of the core scientific team and guideline expert panel working on the development of the Minor Injury Guideline for minor traffic injuries in Ontario. Her research expertise also includes the measurement of health-related quality-of-life and measurement in health care research, including Rasch analysis of health instruments.

Dr. Richard Wells – Professor, Department of Kinesiology, University of Waterloo (since 2001)

Dr. Richard Wells is a professor in the Department of Kinesiology, Faculty of Applied Health Sciences, at the University of Waterloo in Waterloo, Ontario. He is also director of the Centre of Research Expertise for the Prevention of Musculoskeletal Disorders (CRE-MSD), a multi-university centre hosted at the University of Waterloo. His research focuses on work-related musculoskeletal disorders of the upper limb and back.

Glossary

A

- AAOS** American Academy of Orthopaedic Surgeons
- AASCIF** American Association of State Compensation Insurance Funds
- ACE** Association of Canadian Ergonomists
- ACGIH** American Conference of Governmental Industrial Hygienists
- ACOEM** American College of Occupational and Environmental Medicine
- ACRSPS** Association Canadienne pour la recherche sur les services et les politiques de la santé
- ADL** activities of daily living
- AHCPR** Agency for Health Care Policy and Research
- AHFMR** Alberta Heritage Foundation for Medical Research
- AJIM** American Journal of Industrial Medicine
- AJPH** American Journal of Public Health
- ALTENS** acupuncture-like transcutaneous electrical nerve stimulation
- AMA** American Medical Association
- AOOP** Academy of Organizational and Occupational Psychiatry
- APA** American Psychological Association
- AWCBC** Association of Workers' Compensation Boards of Canada

B

- BMJ** British Medical Journal
- BoD** Board of Directors
- BRG** Cochrane Back Review Group

C

- CADMC** Canadian Association of Disability Management Coordinators
- CAHSPR** Canadian Association for Health Services and Policy Research
- CAMH** Centre for Addiction & Mental Health
- CANOSH** Canada National Occupational Safety & Health Information Centre
- CAOT** Canadian Association of Occupational Therapists
- CARP** Canadian Association of Rehabilitation Professionals
- CARWH** Canadian Association for Research on Work and Health (formerly CHERA)
- CAVEWAS** Canadian Assessment, Vocational Evaluation and Work Adjustment Society
- CAW** Canadian Auto Workers
- CCA** Canadian Chiropractic Association
- CCDP** Centre for Chronic Disease Prevention
- CCHS** Canadian Community Health Survey

CCOHS Canadian Centre for Occupational Health and Safety
CCOHTA The Canadian Coordinating Office for Health Technology Assessment
CCRW Canadian Council on Rehabilitation and Work
CCS Canadian Cancer Society
CDC U.S. Centers for Disease Control
CEFRIO Centre francophone d'informatisation des organisations
CES Canadian Evaluation Society
CERF Canadian Employment Research Forum
CFI Canada Foundation for Innovation
CHEPA Centre for Health Economics and Policy Analysis
CHRC Canadian Human Rights Commission
CHSRF Canadian Health Services Research Foundation
CIAR Canadian Institute for Advanced Research
CIBC Canadian Imperial Bank of Commerce
CIHI Canadian Institute of Health Information
CIHR Canadian Institutes of Health Research
CIRPD Canadian Institute for the Relief of Pain and Disability
CIWA Canadian Injured Workers Alliance
CJPH Canadian Journal of Public Health
CLC Canadian Labour Congress
CMA Canadian Medical Association
CMAJ Canadian Medical Association Journal
CMCC Canadian Memorial Chiropractic College
CMDB Canadian Mortality Database
CMPA Canadian Medical Protective Association
COHNA Canadian Occupational Health Nurses Association
CPA Canadian Physiotherapy Association
CPHA Canadian Public Health Association
CPHI Canadian Population Health Initiative
CPO College of Physiotherapists on Ontario
CPSA Canadian Political Science Association
CREIDO Centre of Research Expertise in Improved Disability Outcomes
CRE-MSD Centre of Research Expertise for the Prevention of Musculoskeletal Disorders
CREOD Centre of Research Expertise in Occupational Disease
CSAO Construction Safety Association of Ontario
CSIH Canadian Society for International Health
CSME Canadian Society of Medical Evaluators
CSPDM Canadian Society of Professionals in Disability Management
CSSE Canadian Society of Safety Engineering

CSST Commission de la santé et de la sécurité du travail (Quebec)
CURA Community-University Research Alliance
CWGHR Canadian Working Group on HIV and Rehabilitation

D

DAC Designated Assessment Centre
DASH Disabilities of the Arm, Shoulder and Hand
DMEC Disability Management Employer Coalition (U.S.)

E

EAC Employers' Advocacy Council
EBP Evidence-based Practice
ECC Early Claimant Cohort Study
EPICOH Epidemiology in Occupational Health
ERI Effort-reward Imbalance
ESAO Education Safety Association of Ontario
ESWE Employee Survey of the Working Environment (IWH)
EUSA Electrical & Utilities Safety Association

F

FSA Farm Safety Association

G

GLADnet Global Applied Disability Research and Information Network on Employment & Training

H

HCHSA Health Care Health and Safety Association
HEALNet Health Evidence, Application and Linkage Network of the Centre of Excellence
HIRU Health Information Research Unit
HMOs health maintenance organizations
HRDC Human Resources Development of Canada
HRPA Human Resources Professional Association (Ontario)
HSA health and safety association
HWW Health Work & Wellness Conference

I

IAB Institute Advisory Board (IAPH)
IADPM International Association of Professionals in Disability Management
IAIABC International Association of Industrial Accident Boards & Commissions
IAPA Industrial Accident Prevention Association
IAPH Institute of Aboriginal Peoples' Health
IARP International Association of Rehabilitation Professionals
IBC Insurance Bureau of Canada
ICES Institute for Clinical Evaluative Sciences
ICOH International Commission of Occupational Health
IHPM Institute for Health and Productivity Management
IHSA Infrastructure Health & Safety Association (amalgamation of CSOA, EUSA and THSAO)
IHSPR Institute of Health Services and Policy Research
IJDCR International Journal of Disability, Community & Rehabilitation
ILO International Labour Organization
INCLIN International Clinical Epidemiology Network
IPPH Institute of Population and Public Health (see **CIHR**)
IWH Institute for Work & Health
IRSST L'institut de recherche en santé et en sécurité du travail

J

JAMA The Journal of the American Medical Association
JAN Job Accommodation Network (U.S.)
JANCANA Job Accommodation Network in Canada
JCE Journal of Clinical Epidemiology
JHSC Joint Health and Safety Committee (**IWH**)
JOEM Journal of Occupational and Environmental Medicine

K

KT knowledge transfer
KSTE knowledge synthesis, transfer and exchange
KTE Knowledge, Transfer & Exchange (**WH**)

L

LAD Longitudinal Administrative Databank
LBP Low-back pain
LFDI Listening for Direction on Injury (CIHR Advisory Committee)
LTD Long-Term Disability

M

MASHA Mines and Aggregates Safety and Health Association

MDD Major Depressive Disorder

MHCC Mental Health Commission of Canada

MHSA Municipal Health and Safety Association (Ontario)

MOH Ministry of Health (Ontario)

MOH-LTC Ministry of Health, Long-Term Care (Ontario)

MOL Ministry of Labour (Ontario)

MSD Musculoskeletal Disorder

N

NAOSH North American Occupational Safety and Health

NBGH National Business Group on Health (U.S.)

NCE Networks of Centres of Excellence

NEJM New England Journal of Medicine

NHS National Health Service

NIDMAR National Institute of Disability Management and Research

NIH The National Institutes of Health

NICE National Institute for Clinical Excellence

NICHD National Institute for Child Health and Development

NIOSH National Institute for Occupational Safety and Health (USA.)

NOIRS National Occupational Injury Research Symposium (USA)

NORA National Occupational Research Agenda (USA)

NPHS National Population Health Survey

NQI National Quality Institute

O

OCHS Ontario Child Health Study

OEA Office of the Employer Adviser

OECD Organization for Economic Cooperation and Development

OEMAC Occupational & Environmental Medical Association of Canada

OFL Ontario Federation of Labour

OFSWA Ontario Forestry Safe Workplace Association

OHCO Occupational Health Clinic for Ontario Workers

OHRC Ontario Human Rights Commission

OHS occupational health and safety

OHSAH Occupational Health & Safety Agency for Healthcare in British Columbia

OHSCO Occupational Health and Safety Council of Ontario

OHSMS occupational health and safety management system

OHIP Ontario Health Insurance Plan
OMA Ontario Medical Association
OMSOC Occupational Medicine Specialists of Canada
OOHNA Ontario Occupational Health Nurses Association
OSACH Ontario Safety Association for Community & Healthcare
OSHA Occupational Safety and Health Administration (U.S.)
OSSA Ontario Service Safety Alliance
OWA Office of the Worker Adviser (Ontario)

P

PHS Public Health Sciences, University of Toronto
PPHSA Pulp and Paper Health and Safety Association
PREMUS Prevention of Work-Related Musculoskeletal Disorders (scientific Conference)
PSHSA Public Services Health & Safety Association (amalgamation of ESAO, MHSA and OSACH in Ontario)

R

RAC Research Advisory Council (WSIB)
RCT randomized controlled trial
RFP request for proposals
RNAO Registered Nurses Association of Ontario
RSI repetitive strain injury
RTW return to work

S

SAC Scientific Advisory Committee (IWH)
SARS Severe Acute Respiratory Syndrome
SHARP Safety and Health Assessment and Research for Prevention
SLID Survey of Labour and Income Dynamics
SRC Systems Review Committee (IWH)
SRDC Social Research and Demonstration Corporation
SSHRC Social Sciences and Humanities Research Council of Canada
STAR/Song Star/Southern Ontario Newspaper Guild
STD Short-Term Disability
SWPSO Safe Workplace Promotion Services Ontario (the amalgamated IAPA, OSSA and FSA)

T

TDHC Toronto District Health Council
TSAO Transportation Safety Association of Ontario

U

UBC University of British Columbia

UHN University Health Network

UNITE Union of Needle Trades, Industrial & Textile Employers

UQAM Université du Québec à Montréal

V

VRAC Vocational Rehabilitation Association of Canada (or VRA Canada)

W

WCB workers' compensation board (generic reference)

WCHSB Workers' Compensation Health and Safety board (Yukon)

WCRI Workers Compensation Research Institute (U.S.)

WELCOA Wellness Council of American (U.S.)

WHSC Workers Health & Safety Centre

WHSCC Workplace Health, Safety & Compensation Commission (Newfoundland & Labrador)

WHO World Health Organization

WMSD work-related musculoskeletal disorder

WSCC Workers' Safety and Compensation Commission (Northwest Territories and Nunavut)

WSIB Workplace Safety and Insurance Board (Ontario)

WSPS Workplace Safety & Prevention Services (the amalgamation of IAPA, OSSA and FSA in Ontario)

WSN Workplace Safety North (the amalgamation of MASHA, OFSWA and PPHSA in Ontario)