

Institute for Work & Health Accomplishments Report 2015



**Institute
for Work &
Health**

Research Excellence
Advancing Employee
Health



2015 Accomplishments Report

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2015 ACCOMPLISHMENTS REPORT

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Introduction

The Institute for Work & Health promotes, protects and improves the safety and health of working people by conducting actionable research that is valued by employers, workers and policy-makers. 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 professionals, 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 disorders, labour market experiences and health, and disability compensation systems.

The goal of our Knowledge Transfer and Exchange Program builds relationships with stakeholders to enable the ongoing exchange of information and research evidence and to facilitate their participation in research projects. 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. The Corporate Services Program provides facility management services, financial management services, human resource services and support to the Institute's Board of Directors.

Since 1990, we have provided research and other evidence-based products to inform and assist our stakeholders. We also provide evidence to support the policy development processes of federal and provincial institutions, including workers' compensation boards 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.

Research at the Institute

A summary of our 2015 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 2015 are presented in a separate KTE section that describes accomplishments in our stakeholder relationship and exchange activities, as well as our communications activities.

Publications, Awards and Collaborators & Staff

The third and fourth sections report on 2015 publications, 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 2015, as well as IWH adjunct scientists who have contributed to our activities in the past year.

Prevention of Work Related Injury and Illness

Our research on the primary prevention of workplace injury and illness 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 and guides that can be used by stakeholders and workplace parties.

Prevention of Work Related Injury and Illness

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Vulnerable Workers

Protecting vulnerable workers from the risks of work-related injury and illness is a central priority of the Ontario prevention system. New workers, some of whom are in temporary employment arrangements and many of whom are young workers, are most at risk of injury during the first month on a job. Immigrant workers, who make up an increasing segment of the Canadian labour force, may also be more vulnerable to workplace injury or illness. The proportion of workers aged 50+ is increasing and there are growing incentives for older workers to continue employment beyond the age of 65. Finally, not all workers enter the workforce with optimum health. Many have pre-existing physical and mental health conditions or develop health problems that may make them vulnerable to workplace injury or illness. In 2015, the Institute continued work to describe differences in exposures to occupational hazards among workers in 56 economic sectors in the Ontario labour market. In 2015, we also completed a project which sought to develop a measure of OHS vulnerability that moves beyond demographic worker characteristics towards factors that are more proximal to risk of injury or illness at the worker level. Specifically, we conducted a survey of Ontario workers designed to obtain information on workers' perceptions of their OHS vulnerability.

A Descriptive Model for Occupational Health and Safety Risk in Ontario (1175)

Project Status: Ongoing

Introduction: The Expert Advisory Panel on Occupational Health & Safety reported to the Minister of Labour (MOL) 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 MOL with responsibility to develop and execute an integrated occupational health and safety (OHS) strategy for the province. The recommendations of the Expert Advisory Panel also included a charge to improve the indicators of OHS 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. Phase one of the project has been completed resulting in the development of a framework of indicators of OHS performance based on characteristics of key economic sectors in Ontario including measures of numbers of workers, geographic distribution, occupational mix and hazard exposures. The model also includes measures of OHS injury burden, based on the incidence of workers' compensation lost-time and no lost-time claims.

Objectives:

- To support the implementation of Advisory Panel recommendations concerning: health and safety research, enhanced performance measurement data, design of common database for planning and evaluation, to strengthen knowledge management capacity in Ontario prevention system.
- To forecast demand for OHS services and guide the allocation of prevention system resources.
- To work with the MOL in measurement of hazard exposures and OHS risk for Ontario economic sectors.

Status: In 2015, the research team completed the following elements: 1) development of a composite hazard exposure index for 56 economic sectors in Ontario, 2) pilot phase analysis of occupational health and safety enforcement activity in two economic sectors, and 3) preliminary work to develop case definitions for severe traumatic injury to be applied in population-based surveillance data sources.

Researchers: Cameron Mustard (Principal Investigator), Ben Amick, Amber Bielecky, Jacob Etches, Sheilah Hogg-Johnson, Ron Saunders, Peter Smith

Collaboration and Partnerships: A project team within the Ministry of Labour contributes to the definition of objectives and timelines of this project. Contributions are also expected from the Workplace Safety and Insurance Board, the four 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 support the development of a framework for OHS system performance measurement.

Funding:

Mustard CA, O'Grady J, Stokes E, Leading Indicators for Occupational Health & Safety: A Forecasting Model for Ontario. Ministry of Labour Supplemental Funding: \$26,807 (2013-2014)

Developing a Conceptual Framework for Understanding and Measuring Occupational Health and Safety Vulnerability (1240)

Project Status: Completed

Introduction: Vulnerability is defined as the potential openness to attack, or physical or emotional wounding. In the area of occupational health and safety (OHS) vulnerability can be defined as an increased risk of experiencing a work-related injury or illness compared to some reference standard. Often subgroups of labour market participants, for example younger workers, new workers, immigrants or visible minorities are labelled as vulnerable. Yet, this categorization of workers does not identify the specific characteristics that place these workers at higher risk of experiencing a work-related injury. The purpose of this project was to build on a conceptual framework of OHS vulnerability which had been developed by the research team to generate a set of domains and pool of potential items within each domain that can form a feasible measure of OHS vulnerability.

Objectives:

- To develop a measure of OHS vulnerability among labour market participants that moves beyond demographic worker characteristics towards factors more proximal to risk of injury at level of the worker.
- To develop and refine a measure of OHS vulnerability to be used for public health surveillance purposes.

Status: This project concluded in 2015 with the publication of two papers, one in Accident Analysis and Prevention and one in the American Journal of Industrial Medicine. Funding was secured through CIHR and the Ontario Ministry of Labour to continue using this measure to evaluate the impact of Mandatory Awareness Training in Ontario.

Researchers: Peter Smith (Principal Investigator), Curtis Breslin, Morgan Lay, Marni Lifshen, Ron Saunders, Emile Tompa, A Lamontagne (Deakin University)

Collaboration and Partnerships: This project is supported by the Workplace Safety & Prevention Services, and the Public Services Health & Safety Association.

Potential Audiences and Significance: This project allowed for new knowledge to be generated about factors relevant to OH&S primary prevention of work injuries in Canada. The development of the measure led to a greater understanding of what factors create increased risk of work injury; broadening the focus from identifying the types of workers who are likely to sustain injuries, to understanding and measuring the work, and workplace. Results are of interest to prevention authorities, workers' compensation boards, OHS practitioners and researchers.

Publications:

Lay M, Smith PM, Saunders R, Lifshen M, Breslin FC, LaMontagne, AD and Tompa E. The relationship between individual, occupational and workplace factors and type of occupational health and safety vulnerability among Canadian employees. Submitted to Journal of Epidemiology and Community Health.

Smith PM, Saunders R, Lifshen M, Black O, Lay M, Breslin FC, LaMontagne AD, and Tompa E. The development of a conceptual model and self-reported measure of occupational health and safety vulnerability. Accident Analysis and Prevention. 2015; 82:234-243.

Presentations:

Smith PM. Developing a measure of OHS vulnerability. 20 Jan 2015; Toronto, ON: Institute for Work & Health Plenary Series.

Funding:

Smith PM, Breslin FC, LaMontagne A, Saunders R, Tompa E. Developing a Conceptual Framework for Understanding and Measuring Occupational Health and Safety Vulnerability. Canadian Institutes of Health Research (CIHR): \$173,975 (2012-2015)

Effective Occupational Health and Safety Practice

IWH has a number of research projects examining the measurement of organizational policies and practices that support optimal workplace practices. In 2015, we initiated a project that seeks to identify workplace policies and practices associated with lower rates of work-related injury and disease among construction workers in Ontario. We also continued work on a project that is benchmarking leading organizational indicators for the prevention and management of injuries and illnesses. In 2015, we continued our examination of the need of workplaces to better understand the degree to which large and intentional improvement in a workplace's rate of injury and illness, i.e. "breakthrough change" (BTC), is possible and what factors are critical to making such change.

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 to better understand the processes and critical factors involved in making large and intentional improvement in a workplace's rate of injury and illness, i.e. "breakthrough change" (BTC). The first project (P1) involved screening Workplace Safety and Insurance Board (WSIB) claim statistics to find firms that underwent BTC and then studying four of them 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 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)

Status: For Phase 1: A manuscript on the case study results was revised and resubmitted to a peer-reviewed journal. Dissemination of the study results to academic and lay audiences continued in 2015. For Phase 2: Coding, thematic analysis, and case summary synthesis of interview data continued in 2015.

Researchers: Lynda Robson (Principal Investigator), Ben Amick, Siobhan Cardoso, Sheilah Hogg-Johnson, Emile Tompa, M Pagell (University of Dublin), H Shannon (McMaster University)

Collaborations and Partnerships: 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 Ontario Ministry of Labour, and researchers.

Publications:

Robson LS, Amick BC, Moser C, Pagell M, Mansfield E, Shannon HS, Swift MB, Hogg-Johnson S, Cardoso S, South H. What factors do organizations making large improvement in OHS performance share? Results of an exploratory multiple case study. Accepted: Safety Science.

Vu U, Robson LS. The breakthrough change project. OOHNA Journal: Ontario Occupational Health Nurses Association (Etobicoke, Ont.), Spring/Summer 2015, Vol. 34, No. 1, pp. 43-45. Available as pdf at: <http://harmonyprintingdev.com/oohna/2015springsummer/#p=44>.

Kanadische Forscher finden Schlüsselfaktoren für Fortschritte im Arbeitsschutz [trans: Canadian researchers find key factors for progress in OSH]. Steine+Erden [trans: Stones+Earth], January 2015 [online article in German bi-monthly magazine for construction materials sector, circulation 8,500, about breakthrough-change case studies and model]. Article available at: <http://www.die-industrie-der-steine-und-erden.de/se115/iwh.html>.

Presentations:

Robson LS, Amick BC, Moser C, Pagell M, Mansfield E, Shannon HS, Swift MB, Hogg-Johnson S, Cardoso S, South H. A model of "breakthrough change" in workplace OHS performance: results of an exploratory multiple case study. 23 - 25 Sept 2015; Porto, Portugal: Workingonsafety.net (WOS.net), 8th International Conference.

Funding:

Robson LS, Amick BC, Hogg-Johnson S, Mansfield L, Pagell M, Shannon HS. Breakthrough change in workplace OHS performance. Workplace Safety & Insurance Board RAC: \$57,668 (2010-2012)

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

Robson LS, Amick BC, Pagell M, Mansfield L, Shannon H, Hogg-Johnson S. Testing a Model of Breakthrough Change in Workplace Occupational Health & Safety. MOL Supplemental Funding: \$104,000 (2013-2014)

How are Leaders using Benchmarking Information on Occupational Health and Safety?)

Project Status: Ongoing

Introduction: There has been a great interest in Ontario in developing a knowledge base for leading indicators of occupational health and safety (OHS) performance. Researchers produce information that is potentially useful for organizations in improving OHS such as the benchmarking reports provided by IWH's Ontario Leading Indicators Project (OLIP) and Organizational Performance Metric Project (OPM). Despite this growing knowledge base and growing awareness of the importance of transferring research to practice in OHS, little attention has been paid to whether this information is applied to organizational decision making. The distribution by IWH in partnership with HSAs of over 2000 benchmarking reports creates a unique opportunity to examine how evidence affects organizational decision-making. This study will develop a leading indicator and benchmark dashboard. The web-based application will allow companies, across all sectors, to improve or adjust existing OHS programs to achieve efficiencies or increased effectiveness. This will be of particular value to small and medium sized organizations.

Objectives:

- To determine how organizational leaders use the benchmarking data in making OHS decisions.
- To identify the facilitators and barriers to using the benchmarking data and how can this be improved, and what other types of information leaders use to inform OHS decisions.
- To identify the knowledge and features that a performance dashboard should have in order to engage leaders to make decisions to support change, reduce hazards, and improve OHS.
- To identify information that an app with follow-up activities should have in order to engage leaders to make decisions to support change, reduce hazards, and improve OHS.

Status: In 2015, we recruited participants and conducted all the interviews and focus groups with WSPS and IHSA firms. We completed the transcription and de-identification of all the transcripts from focus groups and interviews. We hired a student to lead the app/dashboard development work. We developed the design/technology and knowledge use coding frameworks for analysis, and completed the thematic analysis of the interviews and focus groups. We completed a summary of the design/technology information to guide the App design process, and began development of an Alpha version of the App. We also prepared and submitted a progress report on study results for submission to the funder.

Researchers: Ben Amick (Principal Investigator), Dwayne Van Eerd (Principal Investigator), Colette Severin, I Lambraki (University of Waterloo), J Village (Ryerson University)

Collaborations and Partnerships: This is an active collaboration with the Workplace Safety and Prevention Services (WSPS) and Public Services Health and Safety Association (PSHSA). The WSPS will help develop a dashboard using the information from OLIP, and the PSHSA will help develop an app for using the OPM and a series of follow-on games to engage leaders and the organization in a decision-making process to improve OHS.

Potential Audiences and Significance: The results of this research are directly relevant to all stakeholders in Ontario, including WSIB, MOL, and the HSAs.

Presentations:

Amick BC. The Ontario Leading Indicators Project (OLIP): Building the evidence base for choosing the right tools and benchmarking OHS performance. 19-21 May 2015; Kingwood, West Virginia, USA: National Occupational Injury Research Symposium.

Severin CN, Hogg-Johnson S, Ibrahim S, Robson L, Steenstra I, Swift M, Smith P, Mustard C, Amick BC. Distribution of disability management policies and practices in a representative sample of employers in Ontario, Canada. 23-29 April 2015; Mississauga, Canada: Partners in Prevention 2015 Health & Safety Conference.

Funding:

Amick BC (Co-PI), Van Eerd D (Co-PI), Village J, Lambraki I. How Are Leaders Using Benchmarking Information on Occupational Health and Safety? MOL ROP R4W: \$257,795 (2014-2016)

Determinants of Health and Safety in Ontario's Construction Sector (1256)

Project Status: Ongoing

Introduction: This project seeks to identify workplace policies and practices associated with lower rates of work-related injury and disease among construction workers in Ontario. It spawned from earlier research in partnership with the Ontario Construction Secretariat (OCS) where Workplace Safety and Insurance Board (WSIB) data was linked to comprehensive lists of union-certified firms provided by the OCS and which found that union certified firms in the construction sector have 20% fewer lost-time, musculoskeletal and critical injury workers' compensation claims, compared to non-union firms. At the moment there is no research in the area of occupational health and safety workplace policies and practices in construction and the role of unions in Ontario or Canada and there is only a weak and conflicting body of evidence in the US. This research is needed because of the high rates of injury, death, and disability that are sustained by construction workers in Ontario and elsewhere, as well as the overwhelmingly high prevalence of small businesses and hazards in this industry. Moreover, from a policy standpoint, there is a need for scientific evidence to support public discourse on whether certain public-sector construction projects should continue to be restricted to union-certified firms in Ontario.

Objectives:

- To understand the union and employer drivers of injuries and illnesses.
- To describe how union organizations and union certified firms contribute to lower lost time injuries and illnesses, and critical injuries and musculoskeletal injuries.

Status: In 2015, we began developing a communication plan with OCS for the survey implementation. We prepared and submitted and received ethics approval. We also prepared and later submitted a Data Access Request form to the WSIB on July 16th. Approval was received and data was extracted in October 2016. In addition, we submitted a data request to the Ontario Labour Relations Board (OLRB) to request OLRB certification and de-certification data for the years 2013 and 2014 (without this data we would not be able to capture changes in unionization status of construction firms). While awaiting the receipt of the WSIB data, we supplemented the lists of unionized companies with data received from the OLRB. Specifically, the 2013-2014 OLRB data that was specific to the trades in our study was extracted from the dataset and we filled in missing outcome and firm-contact information. With regards to the survey we contacted stakeholders and OCS partners. We collected and reviewed their comments and edited the survey. Furthermore, we conducted a focus group with field inspectors from the Ontario College of Trades to test the survey. We collected their information and finalized the survey. Survey administration began at the end of 2015.

Researchers: Ben Amick (Principal Investigator), Sheilah Hogg-Johnson (Principal Investigator), Desiree Latour-Villamil, Ron Saunders, P Demers (Cancer Care Ontario), C McLeod (University of British Columbia)

Collaborations and Partnerships: This project is in collaboration with the OCS, and other partners include the WSIB, the construction sector, various union organizations, and policy-makers.

Potential Audiences and Significance: The results of this research project will be relevant to the construction sector, unions, the MOL, the WSIB, policymakers, and other prevention partners.

Publications:

Amick BC, III, Hogg-Johnson S, Latour-Villamil D, and Saunders R. Protecting construction worker health and safety in Ontario, Canada: identifying a union safety effect. *Journal of Occupational & Environmental Medicine*. 2015; 57(12):1337-1342. Amick BC, III, Hogg-Johnson S, Latour-Villamil D, and Saunders R. Protecting construction worker health and safety in Ontario, Canada: identifying a union safety effect. *Journal of Occupational & Environmental Medicine*. 2015; 57(12):1337-1342.

Presentations:

Amick BC, Hogg-Johnson S. Health and Safety in Construction: Evidence of a Union Safety Effect. 19 - 21 May 2015; Kingwood, West Virginia, USA: NIOSH - 6th National Occupational Injury Research Symposium (NOIRS 2015) - Advancing Occupational Injury Research through Integration and Partnership.

Funding:

Amick BC (Co-PI), Hogg-Johnson S (Co-PI), Saunders R, Demers P, McLeod C. Determinants of Health and Safety in Ontario's Construction Sector. MOL ROP R4W: \$296,908 (2014-2016)

Evaluation of Caregiver-Friendly Workplace Policy Interventions on the Health of Full-Time Caregiver-Employees: Implementation and Cost-Benefit Analysis (1325)

Project Status: Ongoing

Introduction: Caregiver-friendly workplace policies (CFWPs) are “deliberate organizational changes – in policies, practices, or the target culture – to reduce work-family conflict and/or support employees’ lives outside of work”. This project is a CFWP intervention evaluation that includes an economic evaluation. There are three components to the study. Study A is an effectiveness evaluation, Study B an economic evaluation, and Study C a process evaluation. The question to be addressed by the economic evaluation is “What are the costs and consequences for workers, employers and society of the CFWP intervention?” Intervention sites are McMaster University and a manufacturing location. The McMaster intervention is a training and communication program targeted at increasing awareness and use of McMaster's flexible work options and its Employee and Family Assistance Programs (EFAPs) through program promotion.

Objectives:

- To pilot test a newly implemented CFWP intervention in two workplaces. (Study A)
- To study the economic impacts of the CFWP intervention(s) in the two workplaces. (Study B)
- To explore the amount of support for the CFWP intervention(s) from the view of employers, co-workers, human resources professionals at the two workplaces. (Study C)

Status: The McMaster intervention began in the fall of 2015 with baseline measure at the university wide level undertaken via a web-survey, and recruitment and baseline interviewing of caregiver participants. The latter is ongoing with a target sample size of 39 caregivers. Several meetings were held with McMaster human resources and the EAP provider to develop the communication plan for the intervention. The supervisor training component has been detailed, which includes a one-hour lunch time workshop and a self-monitoring exercise following the workshop. A video exemplifying good practice for supervisor-caregiver interactions is under development for the workshop. The supervisor training is slated to begin May 2016. A web-based tool for caregivers is also under development. There has been ongoing scouting for a second location throughout 2015.

Researchers: Emile Tompa (Institute Coordinator), Allison Williams (Principal Investigator, McMaster University), Christina Kalcevic, J Fast (University of Alberta), D Lero (University of Guelph), R Ireson (McMaster University), J Atanackovic (McMaster University), Amin Yazdani (McMaster University), I Zeytinoglu (McMaster University)

Collaboration and Partnerships: The McMaster Intervention has active involvement of Human Resources (Wanda McKenna; Melanie Garrafa; Lisa Moraine) and labour (UNIFOR — Sari Sairanen). Two McMaster University departments will be directly involved, but have not yet been recruited. The manufacturing intervention study will begin in late 2016. The site for the manufacturing intervention is yet to be determined, but it will likely involve UNIFOR.

Potential Audiences and Significance: This study is of relevance to all sectors of employment where the workforce is aging, and with a large proportion of female workers. Sectors of particular interest are administration, education, health care, service sector, and manufacturing. It will be of interest to managers, and senior executives looking for best practice information to support retention of workers with family care giving responsibilities. It is also of interest to organized labour, and workers, particularly middle aged females, who are more likely to be primary care givers for family members.

Funding:

Williams A, Tompa E, Fast J, Lero D, Zeytinoglu I. Evaluation of Caregiver-Friendly Workplace Policy (CFWPs) Interventions of the Health of Caregiver-Employees (CEs): Implementation and Cost-Benefit Analysis. Canadian Institutes for Health Research (CIHR) Operating Grant: \$330,954 (2015-2018)

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.

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 disorders associated with different working conditions.

Objectives:

- To conduct surveillance research on 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.

Status: This project has had limited activity in 2015 as other grant-based projects took priority. However, it is important to maintain its status as open for specialised data requests examining claim rates in Ontario. It is expected that activity related to this project will increase in 2016.

Researchers: Peter Smith (Principal Investigator), Amber Bielecky, Curtis Breslin, Cynthia Chen, Sheilah Hogg-Johnson, Sara Morassaei, Cameron Mustard, Kathy Padkapayeva, Brendan Smith

Collaborations and Partnerships: Stakeholders at the Ontario Ministry of Labour and the Ontario Workplace Safety and Insurance Board, as well as possible stakeholders in similar positions in other provinces, will be identified.

Potential Audiences and Significance: Findings from this study are relevant to policy makers at the MOL and the WSIB, and worker's compensation boards in other provinces.

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

Project Status: Completed

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.

Status: Post-doctoral fellow, Imelda Wong, continued to produce peer-reviewed publications as part of this project throughout 2015.

Researchers: Peter Smith (Institute Coordinator), Monique Gignac, Sara Morassaei, Cameron Mustard, Brendan Smith, Imelda Wong

Collaborations and Partnerships: 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:

Wong IS, Smith PM, Ibrahim S, Mustard CA, Gignac MAM. Mediating pathways and gender differences between shift work, sleep and cognitive functioning. Submitted to Occupational and Environmental Medicine.

Wong IS, Smith PM, Mustard CA, Gignac MAM. Health and occupational outcomes among injured, nonstandard shift workers. Journal of Occupational and Environmental Medicine 2015;57(11):1244-1249.

Presentations:

Wong IS, Smith PM, Mustard CA, Gignac MAM. Health and vocational outcomes among injured nonstandard shift workers. 8-12 June 2015; Elsinore, Denmark: 22nd International Symposium on Shiftwork and Working Time.

Wong IS, Smith PM, Mustard CA, Gignac MAM. Pathways and gender differences between shift work, sleep and cognitive functioning. 5-6 Nov 2015; Toronto, Canada: CRDCN 2015 National Conference.

Examining Gender/Sex Differences in the Relationships Between Work Stress and Disease, Work Injury Risk, and the Consequences of Work Injury (1310)

Project Status: Ongoing

Introduction: Women make up nearly half of labour force participants, yet much of what we know about the relationship between working conditions and health is based on measures developed on men and frameworks tested in male-dominated workplaces. Little is known about why work-related risk factors for disease or injury may differ for men and women. In addition, gender differences in the return-to-work process and outcomes after injury are not well-understood. This research program will generate new research across three areas where there are significant gaps in knowledge concerning the work and health experiences of men and women. These are: (1) The psycho-social work environment, including job control, psychological demands and social support, and the development of hypertension and diabetes among men and women; (2) Gender and sex differences in work-related risk factors for occupational injury and disease; (3) Individual, workplace and health-care provider factors leading to differences in the return-to-work outcomes after work-related injury among men and women.

Objectives:

- To create a more nuanced understanding of how sex/gender shape injury risk, the relationship between the work environment and chronic illnesses, and time off work after a work-related injury.
- To help shape the development of gender- and sex-sensitive policies and practices to improve the health of all working Canadians.

Status: Work examining the importance of sex and gender in relationships between work and health continued into 2015, with a focus on the measurement of the concept of gender when using secondary survey data.

Researchers: Peter Smith (Principal Investigator)

Collaboration and Partnerships: This project has an independent advisory committee, which includes members from the Ontario Public Employees Union, the Ontario Ministry of Labour, the Office of the Worker Advisor, and Public Health Ontario.

Potential Audiences and Significance: The research program is supported by a well-developed capacity building and training program and a knowledge transfer and exchange program. The program of research will lead to both an increase in the momentum and capacity in gender, work and health research, and to the development of gender- and sex-sensitive policies to improve the health of working Canadians.

Publications:

Cawley C, Wong IS, Mustard CA, Smith PM. Examining gender differences in the effects of shift work and dependent children on sleep duration. Submitted to Canadian Journal of Public Health.

Smith PM, Koehoorn M. Measuring gender when you don't have a gender measure: constructing a gender index using survey data. Submitted to the International Journal for Equity in Health.

Presentations:

Smith PM. The relationships between work and health. Why are gender and sex important? 16 April 2015; Newfoundland, Canada: CIHR Research Chairs in Gender, Work and Health Speakers' Series.

Smith PM. When it comes to work and health are men and women different? Keynote presentation. 5 June 2015; Niagara Falls, Canada: Annual Ontario Occupational Health Nurses Association Conference.

Funding:

Smith PM. Examining gender/sex differences in the relationships between work stress and disease, work injury risk, and the consequences of work injury. Canadian Institutes of Health Research (CIHR) Chair: Gender, Work and Health: \$800,000 (2014-2021)

Developing a Gender/Sex-sensitive Understanding of How the Psychosocial Work Environment is Related to Chronic Disease (1315)

Project Status: Ongoing

Introduction: Male and female labour force participation rates in Canada have changed dramatically over the last three decades. The percentage of labour force participants who are female increased from 39% to 48% between 1980 and 2011. Despite this increase in female labour market participation, much of our understanding of how aspects of work impact on health status is still male-centric. Nowhere is this more evident than in the area of the psychosocial work environment and chronic disease. Much of what we understand about how and what to measure as part of the psychosocial work environment, and the relationship between these dimensions and disease has been generated in male-dominated samples. However, there might be important male and female differences in the assessment of work stress, the biological and behavioural reactions to work stress, and the relationship between work stress and risk of subsequent disease. In turn, there is a need to better understand the role of sex (biological) and gender (societal and work-role) differences in generating these findings. The purpose of this project is to build an evidence base concerning male and female differences in the relationship between the psychosocial work environment and future risk of metabolic diseases.

Objectives:

- To examine gender/sex differences in factor structure of dimensions of psychosocial work environment.
- To examine gender/sex differences in the association between dimensions of the psychosocial work environment and general work stress and general life stress.
- To examine gender/sex differences in the relationship between the psychosocial work environment and subsequent health behaviour and body mass index (BMI) trajectories over a 16-year period.
- To examine the relationship between the psychosocial work environment and cardiovascular disease in Ontario over a 12-year period.

Status: Work continues on this project with multiple peer-review publications expected in 2016 as a result of work from throughout 2015.

Researchers: Peter Smith (Principal Investigator), Cameron Mustard, C Brisson (Unité de recherche en santé des populations), R Glazier (Institute for Clinical Evaluative Sciences)

Collaboration and Partnerships: Partners include the Institute for Clinical Evaluative Sciences (ICES), as well as collaboration with the Canadian Centre for Occupational Health and Safety (CCOHS).

Potential Audiences and Significance: Findings from this research will determine if more gender-sensitive measures of the psychosocial work environment are needed; if models linking the work environment to health status should further consider gender/sex, and if gender/sex-sensitive primary prevention activities for health behaviours and BMI that integrate aspects of the work environment should be further developed. This project will also help develop a cross-disciplinary, cross-jurisdictional, team of researchers to undertake future work exploring the relationships between the work environment and risk of disease that takes into account gender and sex.

Funding:

Smith PM, Brisson C, Glazier R, Mustard CA. Developing a gender/sex-sensitive understanding of how the psychosocial work environment is related to chronic disease. Canadian Institutes of Health Research (CIHR) Operating Grant: \$329,946 (2015-2018)

Support to the Construction Action Plan (1320)

Project Status: Ongoing

Introduction: In October 2014, the Prevention Office, Ministry of Labour requested assistance from the Institute for Work & Health to prepare a bibliography of published research on effective policies and practices in the prevention of work-related injury and illness in the construction sector. More than 420,000 people are employed in the sector, representing approximately 6.5% of the Ontario labour force. The construction sector including residential building construction, heavy and civil engineering and non-residential building construction, is active in all regions of Ontario. Much of the construction sector exposes workers to substantial hazards for work-related injury and illness. Construction sector hazards include working at elevated heights and in confined spaces, traffic control during roadwork, hoisting, excavation, repetitive motion, overexertion, electrical and mechanical hazards, poor ventilation and chemical exposures, danger of explosion, and the potential for exposures to asbestos, silica dust, carbon monoxide and noise. In this project, we will review and classify approximately 5,000 published research studies relevant for the prevention of traumatic injuries, non-traumatic injuries and occupational illness and disease in the construction industry.

Objectives:

- To develop a framework for classification of primary hazards in construction sector in Phase 1.
- To conduct a comprehensive search of peer-reviewed research in Phase 2 which are relevant to the recognition and control of construction hazards defined in Phase 1.
- To review and classify peer-reviewed published research to compile a structured bibliography of titles and abstracts of peer-reviewed published research in Phase 3.

Status: The project team completed the Phase 1 objective in Q1/2015, defining four classification dimensions to be applied to the peer-reviewed literature concerned with hazard identification and control in the construction sector. The completion of the Phase 2 objective identified more than 4,500 papers. The Phase 3 objective was completed in Q3/2015, applying the classification dimensions to produce a structured bibliography of the peer-reviewed research literature applicable to the construction sector. Preliminary briefings on the application of this bibliography have been provided to officials in the Ontario Ministry of Labour.

Researchers: Cameron Mustard (Principal Investigator), Jacob Etches, Trevor King, Quenby Mahood, Lynda Robson

Collaboration and Partnerships: During Phase 1 of the project, Institute staff consulted with representatives of the construction industry and will disseminate the project summary on completion of the project. Over the course of this project, Institute staff have maintained frequent contact with the Ministry of Labour secretariat leading the development of the construction sector action plan.

Potential Audiences and Significance: The work of this project will summarize research evidence concerning the prevention of work-related injury and illness in the construction sector. This summary will provide guidance to representatives of employers, workers and OHS professionals in the Ontario construction sector concerning promising practices to consider in efforts to reduce the incidence of work-related injury and illness.

Funding:

Mustard CA. Support to the Construction Action Plan. Ontario Ministry of Labour Transfer Payment: \$390,000.

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. In 2015, we co-hosted the CIHR Summer Program in Aging which was attended by trainees from across Canada and internationally who are interested in aging, work and health. In 2015, we also initiated work on a project that seeks to evaluate the validity of violence prevention tools for health care workers.

CIHR – IWH Summer Program in Aging on the Topic of Work and Health (1305)

Project Status: Completed

Introduction: In 2014, the Institute for Work & Health was invited to host a 2015 training program sponsored by the CIHR Institute of Aging, the CIHR Institute of Gender and Health and the CIHR Institute of Musculoskeletal Health and Arthritis. The theme of the 2015 summer school is 'more years, better lives: the health, wellness and participation of older adults in the world of work. We anticipated more than 40 trainees would participate in the four day summer school, designed to provide advanced research training to graduate students and post-doctoral fellows involved in research relevant to aging, work and health.

Objectives:

- To gain an understanding of processes critical to academic success, through plenary and practical sessions.
- To examine multidisciplinary research collaboration in the context of aging and work and health.
- To learn skills in grant preparation, peer review, communication and knowledge transfer in the context of aging and work and health research.
- To explore professionalism and ethics in the context of research on aging and work and health.
- To network with other emerging researchers in aging and work and health, and with academic mentors.

Status: In June 2015, the Institute for Work & Health hosted 30 research trainees from across Canada and 10 international trainees for a four day program in Toronto. The program theme, 'more years, better lives', was introduced and explored by 10 faculty mentors, including three members of the Institute's scientific staff. Program participants gave very high ratings in their assessment of the training program content and organization.

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

Collaborations and Partnerships: Partners in this project included the Canadian Institutes of Health Research.

Potential Audiences and Significance: 30 research trainees from across Canada and 10 international trainees were supervised by 10 academic mentors during a four day training program hosted by the Institute for Work & Health in Toronto on June 2015.

Presentations:

Mustard CA. Summer Program in Aging 2015: More Years, Better Lives. Health, wellness and participation of older adults in the world of work. 22 May 2015; Toronto, Canada: Institute Advisory Board, CIHR Institute of Aging.

Funding:

Mustard CA. Summer Program in Aging. Canadian Institutes of Health Research (CIHR): \$35,000.

Development of Violence Prevention Tools for Health Care (1330)

Project Status: Ongoing

Introduction: IWH is supporting the Public Services Health and Safety Association (PSHSA) and the system in the development of a series of violence prevention tools for health care. IWH will be involved in the support of the tool development committees, in the selection of tools, and in the formative evaluation of tools. IWH will also work with the PSHSA and the tool development groups to produce a series of reports on the tool development, results of the formative evaluation, and a series of proposed summative evaluations as next steps to produce the scientific evidence to support the tools chosen.

Objectives:

- To provide tools to evaluate the usability, ease-of-implementation, comprehensiveness and validity of existing violence prevention tools.
- To support the assessment by health care workers of the tools.
- To guide formative tool evaluations.
- To develop a violence prevention tools summative evaluation plan.

Status: In 2015, we worked with the PSHSA to develop data collection methods and timeline, and to recruit study sites. We created the focus group moderator guides and expert panel questionnaires. Ethics approval was obtained. We also developed and distributed usability surveys for each of the five PSHSA violence prevention toolkits. Analysis was completed and an outcome report was submitted to the PSHSA. We also completed the formative evaluation and presented the outcomes to PSHSA. We recruited focus group participants and scheduled focus groups with all participating sites. We completed two rounds of focus groups in 2015. Analysis and evaluation was initiated in preparation for a final outcome report to PSHSA.

Researchers: Ben Amick (Principal Investigator), Teresa D'Elia, Sheilah Hogg-Johnson, Dwayne Van Eerd

Collaborations and Partnerships: Partners in this project include the Public Services Health and Safety Association (PSHSA).

Potential Audiences and Significance: The findings from this study will be relevant to policy makers and health care professionals.

Funding: Amick B. Development of Violence Prevention Tools in H.C. Public Services Health & Safety Association (PSHSA): \$110,000 (2015-2016)

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 2015, our portfolio of research included the continued examination of several interventions designed to improve the process and sustainability in return to work. We also continued our research on optimal approaches to integrate health care providers in workplace return-to-work. On a related theme, Institute scientific staff have focused on developing methods for improved physician prescribing of opioid medications for a number of years. The Institute for Work & Health also continued to host the Cochrane Back and Neck Group, which 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.

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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 and Neck (CBN) Group: Systematic Reviews of the Scientific Literature on Spinal Disorders (0440)

Project Status: Ongoing

Introduction: Cochrane 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 and Neck (CBN) Group (formerly the Cochrane Back Review Group), one of over 50 international Review Groups. CBN coordinates the publication of literature reviews of diagnosis, primary and secondary prevention and treatment of neck and back pain and other spinal disorders, excluding inflammatory diseases and fractures. The editorial and central coordinating activities associated with the CBN are described here. The activities associated with Institute researchers who are conducting Cochrane reviews are described in project 670. The work of the CBN remains closely aligned with the IWH systematic review program, which in turn has close relations with the Cochrane Work group. We apprise stakeholders of our activities via our website, news bulletins, and social media (Twitter and Facebook).

Objectives:

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

Status: In 2015, the Cochrane Back and Neck Group summarized findings across intervention reviews and presented this information in user-friendly formats on the IWH and CBN websites. In addition, after gathering feedback from editors and methods groups, we published an updated Cochrane Back and Neck Review Group Guidelines for authors. Throughout 2015, the group ensured that the CBN's Trials Register database is up to date with all the relevant trials, guidelines and systematic reviews related to back and neck pain. We also worked with several stakeholder groups to identify priority topics for reviews and knowledge translation strategies. We also released an iBook which includes a high-level summary of all the evidence published within the CBN group.

Researchers: Andrea Furlan (Institute Coordinator), Claire Bombardier, Shireen Harbin, Emma Irvin, Allison Kelly, Claire Munhall, J Hayden (Dalhousie University), M Van Tulder (VU University)

Collaboration and Partnerships: Clinical stakeholders who are involved in this project 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.

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.

Publications:

Furlan AD, Malmivaara A, Chou R, Maher CG, Deyo RA, Schoene M, Bronfort G, van Tulder MW; from the Editorial Board of the Cochrane Back and Neck Group. Updated Method Guideline for Systematic Reviews in the Cochrane Back and Neck Group. *Spine* 2015;40(21):1660-73.

Presentations:

Irvin E. QuickDecks: a new tool for sharing the best evidence in back and neck pain care. 4 Oct 2015; Vienna, Austria: Cochrane Colloquia Vienna.

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)

Early Opioid Prescriptions for Work-Related Musculoskeletal Disorders of the Low Back (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.
- To assess the validity of billing data on opioid, non-opioid, and adjuvant analgesic prescriptions.
- To describe post-claim opioid prescriptions 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.

Status: Data analysis continued and progress was made on all objectives. Analysis is complete for objectives: 1-a) (describe pre-claim patterns of analgesic prescriptions), 1-b) (describe pre-claim patterns of adjuvant analgesic prescriptions), 2-a) (describe post-claim patterns of opioid and non-opioid analgesic prescriptions), 2-b) (describe post-claim patterns of adjuvant analgesic prescriptions), 4-a) (describe post-claim patterns of opioid and non-opioid analgesic prescriptions suggestive of possible opioid misuse). Preliminary analysis has begun for objectives 5a and 5b (assessing the validity of WorkSafeBC's pharmacy management information system as a source of prescription drug exposure).

Researchers: Sheilah Hogg-Johnson (Principal Investigator), Nancy Carnide, Andrea Furlan, P Côté (Ontario University Institute of Technology), M Koehoorn (University of British Columbia)

Collaboration and Partnerships: Partners supporting this project include workers' compensation boards, the National Opioid Use Guideline Group, clinicians, and 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 claim are associated with work disability. This study will generate new knowledge on LBP-related health care leading up a claim, analgesic prescribing patterns, and opioid prescription patterns suggestive of misuse or problematic prescribing. These findings will be fundamental to informing new and existing policies in workers' compensation systems, as well as new information for physicians. It will also have implications for injured workers seeking safe and effective pain management options.

Presentations:

Carnide N. Prescription analgesic patterns before and after a workers' compensation claim: A historical population-based cohort study of workers with low back disorders in British Columbia, Canada. 10 Nov 2015; Institute for Work & Health Internal Plenary Series.

Carnide N, Hogg-Johnson S, Furlan A, Côté P, Koehoorn M. Prescription analgesic patterns in workers' compensation claimants with low back disorders in British Columbia, Canada. 16 June 2015; Dalla Lana School of Public Health, University of Toronto: The Summer Session, Work Disability Prevention CIHR Strategic Training Program.

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)

Hogg-Johnson S, Côté P, Carnide N, Furlan A, Koehoorn M. Early opioid prescriptions for work-related MSK disorders of the low back: understanding utilization patterns, determinants and impact on work disability. CIHR: \$66,576 (2011-2013)

Predicting Successful Return to Work in Workers on Disability Due to Low Back Pain (2210)

Project Status: Ongoing

Introduction: Low back pain costs in Canada are estimated at 11 to 23 billion dollars. Most costs are caused by productivity losses and compensation. Some of the costs and suffering can be diminished by identifying those at high risk. Workers that are at low risk will most likely return to function and work with limited assistance. Those at high risk might benefit from early or more intensive intervention. In this study, we will examine which combination of factors best predicts important outcomes for injured workers that enter a rehabilitation program aimed at improving function and return to work. We will review information routinely collected at the Ontario Workplace Safety and Insurance Board (WSIB). Next, we will add data collected by the healthcare provider (CBI Health) and data on outcomes like function and successful return to work specifically collected for this study. We will use well established (but currently underused) statistical approaches to build predictive rules. The final product will be an easy to use prediction tool. The tool will provide projections of different injured worker outcomes such as return to productivity, function, job satisfaction, successful return to work and recurrences.

Objectives:

- To determine what combination of factors measured at the start of rehabilitation predicts successful work re-entry in the two years follow-up.
- To determine what combination of factors best predicts the length of the first episode of LBP until successful work re-entry in the two years follow-up.
- To determine what combination of factors best predicts successful work retention in two years follow-up.
- To determine what combination of factors measured at the start of rehabilitation best predicts successful career advancement in the two year follow up.
- To identify prognostic factors needed to develop prediction tools (also known as clinical decision rules) for clinicians and work disability prevention professionals.

Status: Recruitment continued throughout 2015 with 54 participants agreeing to be contacted; 18 participants who completed the baseline questionnaire; and 1 participant who completed all four questionnaires. At end of 2015, due to poor participation rates well below expectations, the research team decided to abandon further recruitment and concentrate on data available electronically and in imaged files. We arranged with CBI to obtain imaged Program of Care (POC) forms. We developed the details for the database development for data entry of the POC information. The CBI Health Group requested POC forms from participating clinics for 2015 cases.

Researchers: Ivan Steenstra (Principal Investigator), Ben Amick, Sheilah Hogg-Johnson, Andrea Furlan, G McIntosh (CBI Health Group)

Collaborations and Partnerships: The project team includes Greg McIntosh from CBI Health Group and also includes collaboration with the CBI Health Group.

Potential Audiences and Significance: The tool will be of interest to injured workers, workers' compensation board professionals, rehabilitation professionals, employers and researchers. We will reach these communities through specific audience briefings, presentations and by the publication of papers in trade and scientific journals.

Publications:

Steenstra I, Busse JW, Tulusso D, Davilmar A, Lee H, Furlan AD, Amick BC, Hogg-Johnson S. Predicting time on prolonged benefits for injured workers with acute back pain. *Journal of Occupational Rehabilitation* 2015;25(2):267-78.

Steenstra IA, Franche RL, Furlan AD, Amick BC, Hogg-Johnson S. The added value of collecting information on pain experience when predicting time on benefits for injured workers with back pain. *Journal of Occupational Rehabilitation* 2015 Jul 8. [Epub ahead of print]

Funding:

Steenstra IA, McIntosh G, Amick BC, Furlan AD, Hogg-Johnson S. Predicting successful return to work in worker on disability due to low back pain. Canadian Institutes of Health Research (CIHR): \$322,946 (2013-2017)

Engaging Healthcare Providers in the Return to Work Process (2245)

Project Status: Ongoing

Introduction: International research has generated strong evidence that health care providers (HCPs) have an important role in the return to work (RTW) process. This research also suggests that HCPs can struggle managing return to work (RTW) consultations. Pressure on consultation time, administrative challenges and limited knowledge about a patient's workplace can thwart active engagement. This two year study will focus on HCPs' experience within the workers' compensation system and how their role in the RTW process can be enhanced.

Objectives:

- To identify programs, guidelines, forms and policies developed by workers' compensation boards designed to facilitate HCPs' engagement in the RTW process.
- To examine the development, benefits and challenges of various approaches used to facilitate HCP engagement in the RTW process through a series of interviews with senior policy makers.
- To understand the perceived role of HCPs in the RTW process including the challenges they face related to interacting with the WCB, injured workers, employers, and other HCPs. Determine practical ways of facilitating meaningful HCP engagement in RTW.

Status: In 2015, we conducted an additional two policy maker interviews, for a total of 12 interviews with 16 policy makers. We have identified case studies from this process of innovative tools and resources that facilitate HCP engagement in RTW. We then recruited for and completed a total of 127 one-on-one interviews (92 interviews with HCPs including Allied HCP, GPs and Specialists; 35 with Case Managers in WCBs and employer-based). These interviews took place across four jurisdictions (BC, MB, NL and ON). All interviews were transcribed, coded and programmed in Nvivo. Analysis of the data is ongoing. We held one Advisory Committee meeting in 2015, as well as two meetings with our co-investigator team.

Researchers: Agnieszka Kosny (Principal Investigator), Dorcas Beaton, Andrea Furlan, Marni Lifshen, J Cooper (University of Manitoba), M Koehoorn (University of British Columbia), E MacEachen (University of Waterloo), B Neis (Memorial University)

Collaborations and Partnerships: Partners in this project include workers' compensation boards in Ontario, Newfoundland, Manitoba and British Columbia.

Potential Audiences and Significance: The results of this study will be relevant to healthcare providers, disability prevention policymakers, case managers, and RTW coordinators. The findings will help identify policies and practices that facilitate healthcare provider involvement in RTW.

Funding:

Kosny A, Beaton DE, Cooper J, Furlan A, Koehoorn M, MacEachen E, Neis B. Engaging health care providers in the return to work process. Workers Compensation Board - Manitoba: \$174,252 (2013-2015)

Strategies to Support Appropriate Use of Prescription Opioids: A Systematic Review Using Narrative and Best Evidence Synthesis Methods (3160)

Project Status: Completed

Introduction: Abuse of prescription opioids is a serious health and safety problem in North America. Canada is the second largest consumer of prescription opioid per capita globally, second only to the United States. In Canada, total prescription opioids consumed in Canada increased 203% from 2000 to 2010, which is steeper than that observed in the US. The scientific literature of the efficacy of opioids has been traditionally synthesized in various meta-analyses, and currently, our group is conducting a systematic review of observational and epidemiological evidence on the outcomes of long-term use of opioids. However, an area that has not been the subject of any systematic review is strategies to promote the appropriate use of prescription opioids.

Objectives:

- To conduct a systematic review (using narrative and best-evidence syntheses methods) of existing strategies, frameworks, collaborative networks and materials to promote the appropriate use of prescription opioids and/or to reduce the abuse of these drugs.
- To provide knowledge users and stakeholders with a database of all the material found in this review and a synthesis report.
- To identify gaps, inconsistencies and duplication among strategies in the literature to guide future research and practices.

Status: In 2015, we prepared a project report summarizing the study findings. We also engaged in knowledge transfer and dissemination activities. We prepared a plain language summary for posting on the IWH website. We also organized and held our end-of-grant workshop with stakeholders to present findings. In March, we presented our findings to the Provincial Opioid Education Work Group.

Researchers: Andrea Furlan (Institute Coordinator), Nancy Carnide, Emma Irvin, Jaemin Kim, Quenby Mahood, Claire Munhall, Dwayne Van Eerd

Collaborations and Partnerships: Amy Porath-Waller (Canadian Centre for Substance Abuse), Anita Srivastava (CAMH), Tom Girling (Organized Crime Enforcement Bureau), Heather Divine (People in Pain Network), Norman Buckley (McMaster University), Marty McLeod (CAMH), Trevagi Satkunendran (Ontario Ministry of Health), Dianne Vermilyea (Community and Population Health), Jennifer Fillingham (College of Physicians and Surgeons of Ontario), Heather Dickinson (RCMP), Amol Deshpande (WSIB), Hannan Ambamovici (Controlled Substances & Tobacco Directorate), J.W. Melenchuk (WCB Saskatchewan), Rabiea Haider (Great West Life), Ian Goldstein (WCB Manitoba), Michael Parkinson (Region of Waterloo Crime Prevention Council), Reggie Caverson (Strategic Planning and Solutions).

Potential Audiences and Significance: The knowledge users interested in this topic are not limited to healthcare professionals, but rather are representatives of diverse groups, public health, prevention services, government, law enforcement, regulators, and insurance payers all of whom are interested in programs, strategies, policies and regulations to solve the problem of inappropriate opioid use.

Presentations:

Furlan A. Strategies to support the appropriate use of prescription opioids. 11 Mar 2015; Toronto, Canada: Provincial Opioid Education Work Group.

Furlan A. Strategies to support the appropriate use of prescription opioids. 23 Mar 2015; Toronto, Canada: CPSO.

Furlan A. The Opioid Crisis in Ontario. 26 Mar 2015; Toronto, Canada: Didactic session for ECHO Ontario.

Furlan A. Strategies to reduce abuse of prescription opioids. 8 Jul 2015; Halifax, Canada: CIHR Best Brains Exchange.

Furlan A, Irvin E, Kim J, Macdonald S. The Strategies for Appropriate Use of Opioids. 30 Jan 2015; Toronto, Canada: Stakeholders meeting.

Furlan A, Irvin E, Munhall C. The Strategies for Appropriate Use of Opioids. 11 Mar 2015; Toronto, Canada: Institute for Work & Health Plenary Series.

Irvin E, Furlan A, Carnide N, Van Eerd D, Macdonald S, Radhakrishnan A, Hitzig S. Appropriate use of prescription opioids: how to do a systematic review of strategies. 3-7 Oct 2015; Vienna, Austria: Cochrane Colloquia Vienna.

Funding:

Furlan A, Irvin E, Carnide N, Van Eerd D, Macdonald S, Radhakrishnan A, Hitzig S. Strategies to support the appropriate use of prescription opioids. Canadian Institutes of Health Research (CIHR): \$96,496 (2013-2014)

Return to Work Practices

Improving return to work outcomes is a priority in reducing costs to the workers' compensation system. There is a 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. In 2015, the Institute updated a systematic review on effective workplace practices for return-to-work that was first published in 2007. Institute scientists have also been engaged for a number of years in research evaluating disability management practices in the workplace. Institute scientists continued a project documenting the costs and benefits of improved workplace disability management practices in a large Ontario health care institution.

Organizational Change to Protect Workers' Health (1250)

Project Status: Ongoing

Introduction: This project is measuring the impact of a three-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. The initiative has been developed by Niagara Health System 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 2012, NHS senior management and union representatives commenced implementation of a three year organization change plan to reduce the incidence of work-related MSDs, 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, the organizational change plan aims to reduce incidence of total claims registered with WSIB by 25% and reduce the total days of disability provided wage replacement benefits by WSIB by 25%.

Objectives:

- To compare workers' compensation claim incidence and duration in NHS to a comparable Ontario health care system for a 3 year period prior to and following January 2012.
- To conduct a repeated survey of a sample of approximately 350 NHS staff for 3 years (2012-2014).
- To conduct two detailed case studies of the organizational change process

Status: Following completion of a detailed case study in 2014 of manager and supervisor perceptions of the implementation of a strengthened disability management policy in the Niagara Health System, the project team completed two work elements in 2015. The project team surveyed NHS employees who returned to work following a disability episode to document their perceptions of the return-to-work process. In addition, the project team completed a quasi-experimental study design, comparing workers' compensation claim incidence and duration in the Niagara Health System to outcomes in a group of 29 large Ontario hospitals over the six year period 2009-2014.

Researchers: Cameron Mustard (Principal Investigator), Ben Amick, Andrea Chambers, Jacob Etches, Morgan Lay, Marni Lifshen, Kathryn Skivington, Dwayne Van Eerd

Collaboration and Partnerships: 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 will be relevant to acute care health care institutions and will be expected to provide evidence to quality improvement initiatives focused on the health of health care workers. This project will also address gaps in evidence concerning effectiveness and cost/ benefit ratio of integrated initiatives to reduce burden of work-related disorders in health care workers.

Publications:

Skivington K, Lifshen M, Mustard CA. Implementing a collaborative return-to-work program: lessons from a qualitative study of a large Canadian healthcare employer. In press: Work.

Presentations:

Mustard CA. Niagara Health System employees' perceptions of the return-to-work / accommodation process. 21 Sep 2015; Return-to-Work Steering Committee, Niagara Health System.

Funding:

Mustard CA, Amick BC, Van Eerd D. Organizational change to protect workers health. Canadian Institutes of Health Research (CIHR): \$306,706 (2012-2015).

Mustard CA, Van Eerd D, Amick B. Niagara Health System Evaluation. MOL Supplemental: \$70,000 (2013-2014)

A National and International Collaboration on Comparative, Inter-jurisdictional Research in Occupational Health and Safety and Workers' Compensation (2200)

Project Status: Ongoing

Introduction: The project brings together knowledge users and researchers from Canadian provinces, Australian states and New Zealand; jurisdictions that have similar economies, labour market institutions and approaches to workers' compensation, but that have differences in regulations, policies and practices. Comparative studies across these jurisdictions have the potential to assess and evaluate occupational health and safety and workers' compensation system performance and improve the health and safety of workers in Canada and internationally. Results from comparative studies are more powerful than those from single jurisdiction studies as it is possible to control for additional sources of variation that may be driving the findings and take advantage of natural policy experiments.

Objectives:

- To facilitate formalization of collaboration, including regulatory agencies participation agreement.
- To conduct an assessment of the data available in each jurisdiction to identify a comparable set of data across the participating jurisdictions.
- To explore logistics of developing and hosting comparable, cross-jurisdictional research dataset.
- To conduct a comparative analysis of severe work-related injuries and long duration claims using data from British Columbia, Manitoba and Ontario.
- To conduct a pilot project across the broader range jurisdictions that would provide proof in concept of the collaboration.
- To prepare project or programmatic research grants to submit to national research funding agencies.

Status: In 2015, comparable cohorts of injury workers in each of the three provinces were created based on individual-level claims data for the period of 2007 to 2011 for all work-related injuries. Comparisons were made on the number of total disability days paid per 1,000 workers and summed to reflect the cumulative disability days paid post injury at six month, six months to one year and one year overall. Analysis was conducted by injury type (e.g. strain and non-strain), occupation (e.g. registered nurses and labourers) and by sector (e.g. construction and health care). Large differences in cumulative disability days paid were observed across jurisdictions. The results indicate that jurisdiction has a marked effect on duration of work-disability by injury type and sector across Canadian provinces. The research team was successful in obtaining a CIHR operating grant that enables extension of the comparative research agenda among Canadian and international jurisdictions. With the project funded, the team held an 'International Comparative Effectiveness Return to Work and Work Disability Management Policy Symposium' in Vancouver in July. The symposium brought together agency stakeholders and researchers to discuss policy-relevant issues and develop stakeholder informed research questions.

Researchers: Chris McLeod (Principal Investigator), Ben Amick, Sheilah Hogg-Johnson, Cameron Mustard, Peter Smith, A Collie (Institute for Safety, Compensation and Recovery Research), M Koehoorn (University of British Columbia), A Kraut (University of Manitoba)

Collaboration and Partnerships: Partners in this project include the Safe Communities Foundation.

Potential Audiences and Significance: Results will be relevant to workers' compensation boards, OHS regulators, employer and labour. Results also have the potential to directly inform policy and practice.

Presentations:

McLeod C. The health and wellbeing consequences of the great recession: A comparative and cross-jurisdictional analysis. 3 Nov 2015; Toronto, Canada: Institute for Work & Health Internal Plenary.

McLeod C. The health and wellbeing consequences of the great recession: A comparative and cross-jurisdictional analysis. 24 Nov 2015; Winnipeg, Canada: Workers' Compensation Board of Manitoba.

McLeod C. The health and wellbeing consequences of the great recession: A comparative and cross-jurisdictional analysis. 26 Nov 2015; Toronto, Canada: Ontario Workplace Safety and Insurance Board.

McLeod C. The health and wellbeing consequences of the great recession: A comparative and cross-jurisdictional analysis. 4 Dec 2015; St. John's, Canada: WorkSafe New Brunswick.

McLeod C. The health and wellbeing consequences of the great recession: A comparative and cross-jurisdictional analysis. 8 Dec 2015; Vancouver, Canada: WorkSafeBC.

Funding:

McLeod C, Collie A, Amick BC, Hogg-Johnson S, Koehoorn M, Smith P. Return to work after work injury and illness: an international comparative effectiveness study of Canada, Australia and New Zealand. Canadian Institutes of Health Research (CIHR): \$525,825 (2014-2017)

Koehoorn M, McLeod C, Amick BC, Hogg-Johnson S. A comparative analysis of severe work-related injuries and long duration claims in three Canadian provinces. WCB Manitoba: \$199,246 (2013-2015)

Understanding Why Gender and Age Differences Exist in Return-to-Work Following a Musculoskeletal Injury (2250)

Project Status: Ongoing

Introduction: Studies on return-to-work (RTW) have consistently identified female workers and older workers as two groups that have poorer recovery outcomes and longer absences from work following a work-related injury. Although female workers and older workers have, in general, a lower risk of work injury, the increasing number of older and female workers in the labour market, and the changing nature of hazards in Canadian workplaces have resulted in the number of injuries among both these groups to rise substantially. To date most research on the consequences of work injuries has treated age and gender as things to adjust for in analyses. As a result, while we know that factors such as recovery expectations, offers of work accommodation, interactions between the worker and their health care provider, contact with the worker by the workplace are all associated with shorter durations of disability, we do not know if the provision of these factors differs for women compared to men, or older workers compared to younger workers. In addition, we do not know if the relationships between factors are more or less effective for women or older workers. Although gender and age are non-modifiable factors, if we can better understand where differences between men and women, and older and younger workers occur in the RTW process; or if particular interventions of more efficacious among these groups; then this would inform the development of targeted secondary interventions to improve the recovery and economic outcomes of both these groups.

Objectives:

- To better understand factors at the individual, occupational, workplace and health care provider level that mediate the relationship between age and gender/sex and RTW outcomes following a musculoskeletal (MSK) injury.
- To identify situations where gender/sex and age moderate the relationship between injury, occupational, workplace and health care provider factors and RTW outcomes following a MSK injury.

Status: Analytical work is ongoing on this project with multiple peer-review publications expected in 2016 as a result of work from throughout 2015.

Researchers: Peter Smith (Principal Investigator), Sheilah Hogg-Johnson, Cameron Mustard

Collaboration and Partnerships: This work will be done in collaboration with the Canadian Centre for Occupational Health and Safety (CCOHS). In addition, all results from this study will be presented to a nine-person advisory committee consisting of leading research and policy makers in occupational health and safety in Ontario.

Potential Audiences and Significance: Findings from this study will provide a much needed knowledge base on which targeted interventions to improve the health and economic outcomes of older workers and female workers following a work-related injury can be developed. The current wage replacement and health care expenditures associated with work-related injury in Ontario are approximately \$1 billion in the 12 month period following injury. Given this study will re-examine previously collected information on a large number of compensation claimants; this project offers the potential of a large return on investment in a relatively short time period.

Funding:

Smith PM, Hogg-Johnson S, Mustard CA. Understanding why gender and age differences exist in return-to-work following a musculoskeletal injury. Canadian Institutes of Health Research (CIHR) Operating Grant: \$162,615 (2015-2017)

Prognostic Factors for Time Away from Work in Workers with Chronic Low Back Pain: An Update of a Systematic Review (3115)

Project Status: Completed

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 in the beginning of a LBP 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, we published a systematic review on prognostic factors for duration on sick leave due to acute low back pain. This study will expand this systemic review to the chronic phase of low back pain.

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.

Status: In 2015, we prepared a project report summarizing the study findings. We also worked on a manuscript outlining the results for peer-review submission. A second manuscript on the results of the data collected from the workshops was also prepared for peer-review submission.

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

Collaborations and Partnerships: Partners in this project include work disability prevention professionals and the Workers Compensation Board of Manitoba.

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

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. WCB Manitoba: \$40,361 (2010-2011)

Steenstra I, Irvin E, Mahood Q, Hogg-Johnson S, Busse J, Van Eerd D, Friesen M, Oranye N. Prognostic factors for time away from work in workers with chronic low back pain. WCB Manitoba: \$119,332 (2012-2014)

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.

Status: In 2015 the update search strategy was run and the search results were downloaded. The relevance, quality appraisal, data extraction and evidence synthesis stages of the review were completed and a draft of the peer-reviewed paper was initiated. The review team also met with stakeholders to refine the messages from the review. In addition, some members of the team initiated the qualitative component of the review and completed the quality appraisal stage in 2015.

Researchers: Emma Irvin (Principal Investigator), Ben Amick, Kim Cullen, Quenby Mahood, Ron Saunders, Dwayne Van Eerd, A Collie (Institute for Safety, Compensation and Recovery Research), U Gensby (Norway National Centre for Occupational Rehabilitation), M Laberge (Institut de recherche Robert-Sauvé en santé et en sécurité du travail)

Collaboration and Partnerships: Partners in this project include the Ontario Workplace Safety & Insurance Board, Workplace Safety & Prevention Services, Public Services Health & Safety Association, Infrastructure Health & Safety Association, Workplace Safety North, Injured Worker's Consultants, members of the employer community, private insurers, and the Ontario Public Service Employees Union.

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.

Presentations:

Cullen K, Irvin E, Amick BC, Collie A. What's new in Return to Work? A systematic review of the quantitative literature on RTW interventions. 31 Mar 2015; Toronto, Canada: Institute for Work & Health Plenary Series.

Cullen K, Irvin E, Amick BC. What's new in return to work? A systematic review update on workplace-based return-to-work interventions. 14 May 2015; Toronto, Canada: Institute for Work & Health Stakeholder Meeting.

Gignac M, Cullen K, Irvin E, Macdonald S, Amick BC. Findings and discussion of a systematic review on the effectiveness of workplace-based return to work programs on both return-to-work and health-related outcomes. 30 Apr 2015; Toronto, Canada: Disability Managers' Network Stakeholder Meeting.

Irvin E, Amick BC, Collie A, Cullen K. What is new in return to work: ten years later? 19 - 21 May 2015; Kingwood, West Virginia, USA: NIOSH - 6th National Occupational Injury Research Symposium (NOIRS 2015) - Advancing Occupational Injury Research through Integration and Partnership.

A Review of the Role of Aging in Return to Work and Stay at Work (3165)

Project Status: Completed

Introduction: The health of workers is increasingly in the public eye. It has always played a key role in the Canadian economy but attention is growing, because of an aging workforce. Older workers need to stay employed. A number of reviews show the benefits of work participation and the importance of ‘good work’ to health and well-being. However, negative impacts of aging on work are also reported. Older workers are also more likely to return to work following an injury. The established consensus of work being a positive experience for individuals has encouraged clinicians and policy-makers to focus on improving work participation through preventing an early end to work—that is, before the standard retirement age—and encouraging return to work. Research to date has been unable to untangle these interacting and concurrent trends. It is unclear to what extent these factors have been examined in understanding the return to work of older injured workers. For this reason, this project will synthesize the literature on return to work in older workers to identify factors that would help these workers to maintain employment, avoid re-injuries and successfully return to work. By doing this, researchers can identify gaps in the literature, evaluate the success of existing interventions and propose new areas of focus. Moreover, what we find may help those active in work disability prevention to apply the summarized evidence that is often generated by different academic research disciplines and, as a result, difficult to clarify for stakeholders.

Objectives:

- To summarize the effectiveness of interventions for older injured workers to successfully return to work.
- To summarize the factors which play a role for older injured workers to successfully return to work.
- To involve stakeholders in the review process and post-grant activities.

Status: In 2015, we completed data extraction on the selected prognosis studies and synthesized the evidence from the intervention studies. We met to generate review messages from the intervention component of the review with our stakeholders. We also prepared a project report summarizing the study findings. Members of the team engaged in knowledge transfer and dissemination activities. In addition, the team organized and held an end-of-grant meeting with stakeholders to present findings. A manuscript on the review results for peer-review submission was initiated.

Researchers: Ivan Steenstra (Principal Investigator), Dorcas Beaton, Kim Cullen, Monique Gignac, Emma Irvin, Dwayne Van Eerd, G McIntosh (CBI Health Group), G Pransky (Liberty Mutual Research Institute for Safety), M Puts (University of Toronto), R Wilkie (Keele University)

Collaborations and Partnerships: Partners in this project include the Ontario Workplace Safety and Insurance Board, the Workers’ Compensation Board of Manitoba, physiotherapists, occupational therapists, kinesiologists, ergonomists, chiropractors, and disability managers. Stakeholders also include injured workers and injured workers organizations, such as the Injured Workers Consultants and the Ontario Network of injured Workers.

Potential Audiences and Significance: The results of this work will be relevant to policymakers, work disability prevention specialists, employers, employees, and clinicians.

Presentations:

Irvin E, Steenstra IA, Irvin E, Alavinia M, Beaton D, Cullen K, Geary J, Gignac M, Gross D, Loisel P, Macdonald S, Mahood Q, Pransky G, Puts M, Scott-Marshall H, Tompa E, Van Eerd D, Wilkie R, Yazdani A. The role of aging in return to work and stay at work: A systematic review. 19-21 May 2015; Kingwood, West Virginia, USA: NIOSH - 6th National Occupational Injury Research Symposium (NOIRS 2015) - Advancing Occupational Injury Research through Integration and Partnership.

Steenstra IA, Alavinia M, Beaton D, Cullen K, Geary J, Gignac MAM, Gross D, Irvin E, Loisel P, Macdonald S, Mahood Q, Pransky G, Puts M, Scott-Marshall H, Tompa E, Van Eerd D, Wilkie R, Yazdani A. The role of aging in return to work and stay at work: A systematic review. 3-4 Mar 2015; Hopkinton, Massachusetts, USA: Workers’ Compensation Research Group (WCRG).

Steenstra IA, Cullen K, Irvin E, Saunders R, Macdonald S. The Role of Aging in Return to Work and Stay at Work. April 2015; Toronto, Canada: The Role of Aging in Return to Work and Stay at Work Stakeholder meeting.

Funding:

Steenstra IA, Lowe G, McIntosh G, Saunders R, Chappel J, Geary J, White M, Beaton DE, Gignac MAM, Gross D, Irvin E, Loisel P, Pransky G, Puts M, Scott-Marshall H, Tompa E, Van Eerd D, Wilkie R, Ceilen B, Thorpe K. A review of the role of aging in return to work and stay at work. Canadian Institutes of Health Research (CIHR): \$89,622 (2013-2014)

Compensation and Benefits

The Canadian OHS and disability policy systems should support workplaces and protect workers and their families. Research can help to ensure these systems are functioning as intended. 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. Additional research looks 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 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.

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 injured workers and other particular groups of workers. One of the key objectives in this area is to understand the impact of legislation, policies and programs on the income security and labour market engagement of different groups of workers.

Benefits Adequacy for Worker's Compensation Claimants, 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 WSIB 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.

Status: Analysis was completed of the benefits adequacy of claimants sustaining permanent impairment from a work injury occurring between 1998 and 2002. Findings were presented to senior policymakers at the Ontario Workplace Safety and Insurance Board in the summer of 2015. An issue briefing on the study has been in preparation through the fall of 2015 and will be released in the spring of 2016. The study found that, on average, workers' compensation benefits fully compensated for lost earnings among workers with permanent impairments injured between 1998 and 2002. The average earnings replacement rate, when taking labour force earnings, workers' compensation benefits and Canada Pension Plan Disability benefits into account, was 104 per cent of the average earnings of workers with similar characteristics who were not injured. Similar to the earlier findings for the pre-1998 program, there is some variation around the average in the earnings replacement rates. About 46 percent of the sample had replacement rates of 100 percent or more, while 25 percent had replacement rates of under 75 percent; 65 percent of the sample had an earnings replacement rate of 85 percent or more, which is the rate used in the post-1998 Ontario legislation to determine benefit payments.

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

Collaborations and Partnerships: 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.

Publications:

Tompa E, Saunders R, Mustard CA. IWH Issue Briefing: Measuring the adequacy of workers' compensation benefits in Ontario: An update. Institute for Work & Health Issue Briefing, Spring 2016.

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 to Canadian Public Policy.

Presentations:

Tompa E, Saunders S, Mustard C. Labour-market Earnings Recovery and Benefits Adequacy: Are Outcomes Better or Worse for Ontario Workers' Compensation Claimant Under the LOE Program Compared to Previous Programs, Policy Brief to the WSIB Executive. Toronto, Ontario, May 25, 2015.

Funding:

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

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 policy is the changing nature of work, workers, and injuries. By work disability policy, we mean policy related to any federal or provincial Canadian program that shapes income security and labour-market engagement for work-disabled individuals. We also include employers in the disability policy system as they play an important role. 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. 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 or service provision.
- To build capacity for research and knowledge mobilization on the topic of work disability policy.

Status: The highlight of CRWDP's 2015 activities was a 3 day event in November during which we held a daylong National Policy Round Table, a daylong National Symposium and a half-day National Action Planning Meeting. At the Policy Round Table senior policy makers from various ministries of the federal and provincial governments attended to discuss program coordination and navigability. The forum was an inaugural session, with plans to continue the dialogue at the national and provincial levels on a regular basis. The National Symposium was attended by more than 120 delegates representing various stakeholders, including academics and students, injured workers and people with disabilities, employers, policymakers and service providers. Several keynotes were given and student research was profiled in a poster session. Keynotes were recorded for posting as podcasts on the CRWDP website. The National Action Planning Meeting provided a forum for key CRWDP participants and partners to brainstorm research priorities for the Centre under three thematic areas—1) program coordination and navigability, 2) employer opportunities, and 3) adequacy of program supports. Other activities during the year included inaugural sessions of community caucuses in each of the four clusters, as well as a national caucus session. Several new projects have been profiled on the website—1) A Disability Policy Scoping Review, 2) Two Reviews of Evidence on Policies and Practices for the Accommodation of Persons with Disabilities, and 3) A Proposal for a National Standard for Work Disability Prevention Management Systems to be developed by the Canadian Standards Association. A related international collaborative of academics and policymakers (of which CRWDP is a founding member) is spearheading international comparative research on work disability policy. The collaborative, called the International Work and Life Academy (IWALA), met virtually on several occasions, and twice in person over the last year. The group had its inaugural in-person meeting in Stockholm, Sweden, and a second meeting in Tilburg, the Netherlands.

Researchers: Emile Tompa (Co-Principal Investigator), Ellen MacEachen (Co-Principal Investigator, University of Waterloo), Curtis Breslin, Ron Saunders. Over 60 external researchers are also part of the initiative.

Collaborations and Partnerships: Stakeholders, including disability communities and program provider representatives, are involved in all aspects of the initiative, including governance. Several new organizations have joined the initiative as partners.

Potential Audiences and Significance: This initiative will be of interest to all stakeholders in the Canadian work disability policy system, which includes injured worker and disability communities, as well as employers. Policy makers and academics in other countries have expressed interest in the CRWDP initiative as a model for partnered research in their own country.

Publications:

CRWDP. Working Policy: News, Views and Research from CRWDP, Volume 2: Issue 1, May 2015.

MacEachen E, Du B, Bartel E, Tompa E, Stapleton J, Kosny A, Petricone I, Ekberg K. 2015. Work Disability Policy Scoping Review Database. <https://www.crwdp.ca/en/new-studies>

Prince M. 2015. Policies and Practices on the Accommodation of Persons with Invisible Disabilities in Workplaces: A Review of Canadian and International Literature. Final Report. Employment and Social Development Canada. 65 pp. <https://www.crwdp.ca/en/new-studies>

Tompa E, Buettgen A, Mahood Q, Padkapayeva K, Posen A, Yazdani A. (May 2015). Literature Review of Types of Workplace Accommodations Made for Persons with Visible Disabilities: Final Report. Employment and Social Development Canada. 173 pp. <https://www.crwdp.ca/en/new-studies>

Tompa E, Posen A, Farquhar A, MacEachen E, Galer D, Torjman S. An Environmental Scan of Past Policy Initiatives Addressing Coordination Issues in the Canadian Work Disability Policy System. <https://www.crwdp.ca/en/new-studies>

Presentations:

Lippel K, Eakin J, Holness L, Howse D (keynotes). Fourth Session of Bancroft Speaker Series. How Characteristics of Workers' Compensation Systems Affect Doctors: A Comparative Study of Québec and Ontario. 14 May 2015; Toronto, Canada: St. Michael College the University of Toronto.

MacEachen E, Tompa E. Centre for Research on Work Disability Policy: Mission, Structure and Key Activities. 19 Nov 2015; Toronto, Canada: CRWDP National Policy Round Table on the Future of Work Disability Policy in Canada.

Tompa E, MacEachen E. The Centre for Research on Work Disability Policy: How We Got Started and Established. 12 Feb 2015; Stockholm, Sweden: Presentation given to the Swedish Welfare Academy.

Tompa E. Discussant at the Roundtable on Income and Employment Needs of Persons Dealing with Illness, hosted by the Institute for Research on Public Policy (IRPP). 17 Jun 2015; Ottawa, Canada.

Tompa E. Ideas for Collaborative Projects and Building Capacity. 25-27 Aug 2015; Stockholm, Sweden: International Knowledge Network Conference on Work and Health.

Tompa E, MacEachen E. A systems focus on WDP at the government policy level: the Centre for Research on Work Disability Policy mandate. 19 Jun 2015; Toronto, Canada: Challenges Workshop at the Work Disability Prevention CIHR Strategic Training Initiative.

Tompa E, MacEachen E. Centre for Research on Work Disability Policy: Mission, Structure and Key Activities. 20 Nov 2015; Toronto, Canada: CRWDP National Symposium: Informing the Roadmap for Work Disability Policy in Canada. <https://www.crwdp.ca/en/informing-roadmap-work-disability-policy-canada>

Tompa E, Posen E, Farquhar A, Torjman S, MacEachen E, Galer D. Environmental Scan of Past Initiatives Addressing Canadian Work Disability Policy System Coordination and Navigation Issues. 19 Nov 2015; Toronto, Canada: CRWDP National Policy Round Table on the Future of Work Disability Policy in Canada.

Funding:

Tompa E (Co-Principal Investigator), MacEachen E (Co-Principal Investigator), et al. Income Security and Labour-Market Engagement: Envisioning the Future of Disability Policy in Canada. Social Sciences & Humanities Research Council of Canada (SSHRC): \$2,760,782 (2013-2019)

Tompa E. Policies and Practices on the Accommodation of Persons with Visible Disabilities in the Workplace. Office of Disability Issues, Employment and Social Development Canada—Fall 2014, \$21,900 over 8 months.

Tompa E. Feasibility Study and Needs Assessment for a Canadian Searchable Online Resource for Workplace Accommodation for Persons with Disabilities. Office of Disability Issues, Employment and Social Development Canada—Fall 2015, \$24,999 over 8 months.

Assessment of the Human and Economic Burden of Workplace Cancer (2205)

Project Status: Ongoing

Introduction: There is now an increasing awareness of how occupational exposures can give rise to cancer, despite long latency that has historically prevented attribution of the cancer to work. In particular, there is a growing interest in better understanding the extent of occupational cancers and their economic burden to society. Yet assessing the economic burden of occupational cancer has rarely been performed. This is likely due to the challenges associated with such a task. One of the challenges is methodological. There is little standardization of methods and some uncertainty related to conceptual issues. Data availability is another challenge. It is difficult to identify sources with the range of data needs. The objective of this study is to estimate the economic burden of occupational cancer in Canada. Morbidity and mortality burden will be estimated separately before aggregation. Both types of cases will include lifetime costs associated with medical expenses, market productivity losses, and losses in health related quality of life.

Objectives:

- To estimate the direct costs of hospitalization, physician care, treatment costs.
- To estimate the indirect and health-related quality-of-life costs such as lost output in the paid labour force, activity loss in non-paid roles, and the intrinsic value of health.

Status: In 2015, two economic burden studies were completed-- one on asbestos-related mesothelioma and lung cancer, and another on skin cancer. For the latter, a PhD student was employed to spearhead the study during the summer of 2015. Both studies were prepared for submission to journals and a presentation was given on asbestos-related mesothelioma and lung cancer at a stakeholder symposium in November 2015. Ongoing analysis continued on the economic burden of breast cancer and lung cancer from silica and radon. The estimated total cost of mesothelioma and lung cancer from asbestos related occupational exposure for new cases in 2011 was \$1.7 billion, with a per case average lifetime cost of \$818,000. Health-related quality of life costs were the highest proportion of the burden, comprising 80% of the total cost. The estimated cost of occupational skin cancers for new cases in 2011 was \$108.2 million for output and productivity costs, and \$3.9 million for medical treatment costs. This amounts to \$2,462 per case. In 2016, the economic burden of several other occupational cancers will be estimated.

Researchers: Emile Tompa (Principal Investigator), Christina Kalcevich, D Hyatt (University of Toronto), C McLeod (University of British Columbia)

Collaborations and Partnerships: We will effectively communicate the findings by: integrating the Canadian Cancer Society (CCS) as a research partner; engaging in multiple communication strategies with CCS's collaboration; and having a knowledge broker from CCS who will help the team target, strengthen and build relationships with stakeholders, especially policymakers, who can use the study findings to help inform policy change.

Potential Audiences and Significance: Burden of disease studies provide insight into the magnitudes of the health loss and the cost of a disease to society. Information on the economic burden is extremely useful for government and industry decision making on the benefits of investing in prevention-related efforts, such as exposure reduction and increased enforcement of government regulations. In cases where best practices for prevention are not clear, burden estimates can help prioritize research and development. Key audiences are policy makers, workers, employers and physicians.

Publications:

Spencer J, Tompa E, Kalcevich C, Peters C. (September 2015). The Economic Burden of Occupational Skin Cancer in Canada. Report Prepared for Cancer Care Ontario. 30 pp.

Tompa E, Sarnocinska-Hart A, Kalcevich C, Constante A. (August 2014). The Economic Burden of Occupational Cancer. Interim Report submitted to Occupational Cancer Research Centre. IWH #2205. p. 1-53.

Presentations:

Tompa E, Kalcevich C, McLeod C, Lebeau M, Fong D, McLeod K, Kim J, Demers P. The Economic Burden of Lung Cancer and Mesothelioma in Canada Due to Occupational Asbestos Exposure. 5 Nov 2015; Toronto, Canada: Preventing the Burden of Occupational Cancer in Canada: A Stakeholder Symposium.

Funding:

Demers P, Davies H, Kramer D, Tompa E (Principal Investigators). Assessment of the Human and Economic Burden of Workplace Cancer, Multisector team grants in prevention research. Canadian Cancer Society Research Institute (CCSRI): \$1,000,000 (2012-2016). Sub-project: Tompa E (Project Lead), Hyatt D, McLeod C. Estimation of Economic Burden. CCSRI Multisector Team Grant: \$256,635 over 3 years (2013-2016).

Enhancing Community Participation in Canadians with Physical Disabilities: Development, Implementation and Evaluation of a Partnered Strategy (2255)

Project Status: Ongoing

Introduction: Many Canadians with physical disabilities report disrupted levels of participation in several important aspects of community life such as employment, sports and active recreation, and simply being able to move about their communities independently and with dignity (i.e., community mobility). As a result, not only do people with physical disabilities have lower rates of community participation than their able-bodied counterparts, their quality of participation (e.g., enjoyment, satisfaction) is also poorer. The goal of our 7-year program of research and knowledge mobilization (KM) is to enhance the quantity and quality of community participation among Canadians living with physical disabilities by developing, mobilizing and evaluating theory- and evidence-based strategies to enhance community participation. This research and KM program will focus on three community participation domains that people with physical disabilities consistently identify as being the most restrictive, as well as the domains in which they most desire greater participation: employment, mobility, and sports. In addition, our efforts will also focus on understanding and enhancing the psychosocial quality of participation (e.g., feelings of meaningful engagement, autonomy, responsibility, and social connectedness).

Objectives:

- To describe and understand participation, its barriers and facilitators in the disability community.
- To identify effective Knowledge Mobilization methods.
- To create interventions/practices to enhance participation.
- To implement and evaluate the interventions and practices.

Status: Data analysis is currently underway. We have coded all data and are currently extracting themes from the transcripts to address research questions.

Researchers: Arif Jetha (Principal Investigator), Monique Gignac, C Connelly (McMaster University), K Martin Ginis (McMaster University), S Tucker (University of Regina)

Collaboration and Partnerships: Partners in this project include the Canadian Council on Rehabilitation and Work (Monica Winkler), March of Dimes (Keith Rashid), and the Neil Squire Society (Gary Birch).

Potential Audiences and Significance: This project will generate data to better understand life course transitions which workers with disabilities face (e.g., young adults with disabilities trying to engage in employment; middle-aged adults with disabilities trying to sustain employment as older workers, etc). The project will focus on developing more comprehensive theories to capture a life course perspective among workers with disabilities, as well as specific strategies that would enable workers to join the workforce, meet their employment goals, and sustain work. The findings will be of relevance to workers with disabilities, employers (e.g., HR), and not-for-profit groups who work with people with disabilities to find employment and meet accommodation needs.

Funding:

Martin Ginis K (PI), Connolly C, Borisoff J, Bray J, Hayes K, Latimer-Cheung A, Mortenson B, Beauchamp M, Miller B, Noreau L, Rimmer J, Horrocks J, Tucker S, Gignac MAM, Bassett-Gunter R, Jetha A. Enhancing community participation in Canadians with physical disabilities: Development, implementation and evaluation of a partnered strategy. Social Sciences and Humanities Research Council (SSHRC): \$2,643,997 over 7 years; \$24,275 for this project.

Measuring Health and Function

Over the past 20 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 can assist in increasing the capacity to measure other return to work and health care outcomes to improve the effectiveness of business management.

In 2015, the Institute strengthened its focus on the impact of chronic illness on the incidence of work disability and premature exit from the workforce. This issue is likely to be of increasing importance given the aging of the population and advances in treatment of many chronic diseases that enable individuals across the life course who have left the workplace or who were previously unable to work, to participate in employment.

Measurement Methodology Studies (0925)

Project Status: Ongoing

Introduction: This is a group of studies with a primary focus on measurement issues in the development and use of measurement instruments as indicators and outcomes of health and safety efforts. The data for much of this work comes from projects initiated for other research objectives within this theme but in this particular application are focusing on the measurement issues.

Objectives:

- To determine the best methods for cross cultural adaptation of self-report measures of outcome.
- To evaluate approaches used to determine the validity and reliability of different indicators.
- To produce models of recovery based on qualitative and quantitative findings.
- To explore cognitive interviewing/debriefing as a tool to understand respondents processing of rating systems or questions.

Status: In 2015, the measurement group submitted a paper on the “deep dive” approach in the OMERACT process, and a CIHR grant on the “BOSS” validation of critical appraisal tools. We also prepared a chapter on outcome measurements and interpretation of scores for a book publication. We also collected data on the cross-cultural adaptation of the OAKQOL (testing approaches to cross cultural adaptation). There was also participation in the EULAR meeting to discuss measurement of worker productivity for clinical practice, and attendance at OMERACT meetings at EULAR. We also participated in the EnRICH outcome measurement session. Throughout 2015, we continued with the synthesis of critical appraisal tools, and the development of a model of recovery.

Researchers: Dorcas Beaton (Institute Coordinator), Claire Bombardier, Cynthia Chen, Kim Cullen, Jocelyn Dollack, Sheilah Hogg-Johnson, Carol Kennedy-Yee, Peter Smith, Michael Swift, Dwayne Van Eerd, R Buchbinder (Monash University), F Guillemin (University of Nancy), J Katz (Brigham and Women's Hospital, Harvard University), R Osborne (Monash University), P Tugwell (University of Ottawa), G van der Velde (University of Toronto), G Wells (Ottawa Hospital Research Institute)

Collaboration and Partnerships: Partners in this project include users of the instrument database, clinicians, researchers, trainees, and students, as well as organizations collaborating in our activities, including OMERACT, COSMIN, IMMPACT, and EnRICH.

Potential Audiences and Significance: The results of this project will be relevant to users of indicators and measures in health and work research. Researchers in measurement sciences, epidemiologists, health and safety organizations, clinical community at large will also be interested in this work.

Publications:

Beaton DE, Terwee C, Singh J, Hawker G, Patrick D, Burke L, Toupin-April K, Tugwell P. A call for evidence-based decision-making when selecting outcome measurement instruments for summary of findings tables in systematic reviews: Results from an OMERACT working group. *Journal of Rheumatology* 2015;42(10):1954-61.

Epstein J, Osborne RH, Elsworth GR, Beaton DE, Guillemin F. Cross-cultural adaptation of the health education impact questionnaire: experimental study showed expert committee, not back-translation, added value. *Journal of Clinical Epidemiology* 2015;36(4):360-9.

Kalsi-Ryan S, Beaton DE, Ahn H, Askes H, Drew B, Curt A, Popovic M, Wang J, Verrier M, Fehlings M. Responsiveness, sensitivity and minimally detectable difference of the graded and redefined assessment of strength, sensibility, and prehension, version 1.0 (GRASSP V1). *Journal of Neurotrauma* 2015 Dec 17 [Epub ahead of print]

Maxwell LJ, Wells G, Simon L, Conaghan P, Grosskleg S, Scrivens K, Beaton DE, et al. Current state of reporting pain outcomes in Cochrane reviews of chronic musculoskeletal pain conditions and considerations for an OMERACT research agenda. *Journal of Rheumatology* 2015 Sep 15 [Epub ahead of print]

Page MJ, McKenzie JE, Green SE, Beaton DE, Jain NB, Lenza M, Verhagen AP, Surace S, Deitch J, Buchbinder R. Core domain and outcome measurement sets for shoulder pain trials are needed: systematic review of physical therapy trials. *Journal of Clinical Epidemiology* 2015;68(11):1270-81.

Pinsker E, Inrig T, Daniels TR, Warmington K, Beaton DE. Reliability and validity of 6 measures of pain, function, and disability for ankle arthroplasty and arthrodesis. *Foot Ankle International* 2015;36(6):617-25.

Stupar, M, Côté P, Beaton DE, Boyle E, Cassidy JD. Structural and construct validity of the whiplash disability questionnaire in adults with acute whiplash-associated disorders. *Spine* 2015;15(11):2369-77.

Stupar M, Côté P, Beaton DE, Boyle E, Cassidy JD. A test-retest reliability study of the whiplash disability questionnaire in patients with acute whiplash-associated disorders. *Journal of Manipulative and Physiological Therapeutics* 2015;38(9):629-36.

Stupar, M, Côté P, Beaton DE, Boyle E, Cassidy JD. Internal consistency and responsiveness of the whiplash disability questionnaire in adults with acute whiplash-associated disorders. Submitted to *European Spine Journal*.

Tang K, Beaton DE, Hogg-Johnson S, Côté P, Loisel P, Amick BC. Does the Upper-Limb Work Instability Scale predict transitions out of work among injured workers? *Archives of Physical Medicine & Rehabilitation* 2015;96(9):1658-1665.

Tugwell PS, Maxwell LJ, Beaton DE, Busse JW, Christensen R, Conaghan PG, Simon LS, Terwee C, Tovey D, Wells GA, Williamson P. Deliberative dialogue on developing consensus on measurement and presentation of patient important outcomes in systematic reviews: A preconference meeting at OMERACT 12. *Journal of Rheumatology* 2015 Feb 1 [Epub ahead of print]

Presentations:

Beaton DE. Core domain sets and core measurement instruments. June 2015; Toronto, Canada: Enhancing Research in International Child Health (EnRICH) Innovative Trial Design course at The Hospital for Sick Children.

Employment Needs and Experiences of Workers with Arthritis and Diabetes: Keeping the Boomers in the Labour Market (2230)

Project Status: Ongoing

Introduction: The large size of the Canadian baby boomer generation (born 1946 to 1964) has created concerns for older workers. A loss of skills in the labour market as older workers retire has meant the need for strategies to keep individuals working and delay retirement. To date, we don't have information about how characteristics of many chronic health conditions that arise with age may create unique challenges for workers, including conditions like arthritis and diabetes that do not have a continuous impact but result in episodes of disability, unpredictable symptoms, and stress related to working and disclosing health problems to colleagues. This proposal focuses on women and men 50-67 years of age who work with arthritis and/or diabetes compared to workers with no disabling health conditions. This study forms an important step in understanding the interplay of health and work and will provide information to help sustain employment.

Objectives:

- To describe extent to which remaining employed is a priority among baby boomers as they age.
- To examine the experiences and perceived impact of working with an episodic health condition, as well as factors that act as barriers or facilitate working.
- To examine characteristics of episodic health conditions (e.g., symptom unpredictability, invisibility) and their association with work outcomes (e.g., job disruptions, absenteeism).

Status: To date, study data have been cleaned and descriptive statistics run on all variables. Scales have been examined for internal consistency. Analyses are completed for two papers: 1) a paper examining the availability, need for, use of and helpfulness of diverse accommodations and workplace policies; and 2) a paper comparing the retirement planning and expectations of meeting retirement plans across the four groups, along with factors associated with retirement. The first paper is currently under review and writing of the second paper is underway. Analyses for a third paper examining the role of intermittent and unpredictable symptoms have begun. We will also undertake exploratory analyses examining disclosure of diseases in the workplace. An abstract for CARWH on retirement expectations will be submitted.

Researchers: Monique Gignac (Principal Investigator), Dorcas Beaton, Vicki Kristman, Cameron Mustard, Peter Smith, E Badley (Toronto Western Research Institute)

Collaboration and Partnerships: We will collaborate with IWH's network of educationally influential practitioners in ergonomics, occupational therapy and physiotherapy, as well as disability management professionals.

Potential Audiences and Significance: Data from this research will provide insight into the experiences, needs, and expectations of working baby boomers. It will enable a comparison of healthy baby boomers and those who may experience difficulties working related to a chronic disease. It can also provide concrete information and potential strategies to inform and enhance policies, practices and interventions to help older workers sustain their employment. Results of this research will be relevant for older workers and especially those living with chronic conditions. It will also be relevant to employers, disability managers, human resource professionals, occupational health professionals, insurers, and consumer/patient organizations.

Publications:

Gignac MAM, Kristman V, Smith PM, Beaton DE, Badley EM, Ibrahim S, Mustard CA. Keeping the Boomers in the Labour Market: A Comparison of Workplace Accommodations, Health and Job Outcomes among Healthy Older Workers and those with Arthritis and Diabetes. [Under review]

Presentations:

Gignac MAM, Badley E, Beaton DE, Kristman V, Mustard CA, Smith PM, Ibrahim S. Keeping the baby boomers in the labour force longer: What does this mean for workers with arthritis? 6-11 Nov 2015; San Francisco, USA: 2015 Annual Conference, American College of Rheumatology.

Gignac MAM, Badley E, Beaton DE, Kristman V, Mustard CA, Smith PM, Ibrahim S. Sustaining employment with arthritis: can existing workplace policies, practices and accommodations make a difference? 6-11 Nov 2015; San Francisco, USA: 2015 Annual Conference, American College of Rheumatology.

Funding:

Gignac MAM, Badley E, Beaton DE, Kristman V, Mustard CA, Smith PM. Employment needs and experiences of workers with arthritis and diabetes: Keeping the Boomers in the labour market. Canadian Institutes of Health Research (CIHR): \$176,466 (2013-2015)

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.

One of our large, multi-year projects, celebrating its 20th anniversary, involves the ongoing development and testing of the DASH, a 30-item questionnaire designed to measure disability and symptoms in any or multiple disorders of the upper limb. We also describe how Institute researchers contributed to a Canadian based international training initiative for young researchers interested in work disability prevention.

Training Initiatives in Work Disability Prevention (0144)

Project Status: Completed

Introduction: 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 Institute supports the CIHR Work Disability Prevention (WDP) Program, which is based at the University of Toronto, by contributing Scientists' 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.

Status: 2015 was the final year for the WDP program. Two week e-courses were held in the spring on methodological challenges and sociopolitical challenges. The two week summer session was held in June with Drs. Hogg-Johnson and Tompa acting as chair mentors. Dr. Hogg-Johnson also participated in a symposium as part of the two week summer session on Methodological and Sociopolitical challenges in Work Disability Prevention research. Dr. Hogg-Johnson co-supervised a practicum project of Nieke Elbers.

Researchers: Sheilah Hogg-Johnson (Institute Coordinator), Curtis Breslin, Emile Tompa, P Côté (Ontario University Institute of Technology)

Collaboration and Partnerships: 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.

Presentations:

Hogg-Johnson S. Cohort studies: Why, outcomes, strengths, limits. 18 Jun 2015; Toronto, Canada: WDP Methodological Challenges.

Hogg-Johnson S, MacEachen E, Cote P, Nha Hong Q, Anema H. Other methods and mixed methods. 18 Jun 2015; Toronto, Canada: WDP Methodological Challenges.

Funding:

Loisel P. and (in alphabetical order) Anema JR, Baril R, Breslin C, Bültmann U, Cassidy JD, Cooper JE, Corbiere M, Côté P, Coutu MF, Dewa C, Dionne C, Durand MJ, Feuerstein M, Franche RL, Gagnon D, Guzmán J, Hogg-Johnson S, Koehoorn M, Krause N, Lambert C, Lippel K, MacEachen E, Mairiaux P, Pransky G, Ranville P, Shaw W, Tompa E, Vézina N, Scardamalia M. CIHR Strategic Training Program in Work Disability Prevention. CIHR: \$1,950,000 (2009-2015)

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 Institute for Work & Health (IWH) and the American Academy of Orthopaedic Surgeons (AAOS). It is now in world-wide use with cross-cultural adaptation versions having been completed on 30 language translations and 10 languages currently in progress. In 2003, the 11-item QuickDASH was released. In 2012, the 3rd edition of the DASH/QuickDASH User's Manual was loaded onto our website. Several tools to assist users with the calculation of DASH/QuickDASH scores have been developed within the Institute (e.g., QuickDASH scoring e-tool, DASH Outcome Measure app). In 2012, we developed the DASH Outcome Measure application for use on the iPad (allows for real-time administration, scoring and longitudinal tracking of DASH outcomes) and the app is available from the Apple App Store.

Objectives:

- To continue work with the DASH and modern measurement theory.
- To revise the scoring system for the DASH based on the findings of repeated factor analysis.
- To synthesize the findings of the user's survey into a manuscript.

Status: In 2015, the DASH group prepared for the 20th anniversary activities in 2016 and finalized the knowledge transfer plan. The team initiated a systematic review and creation of the tool repository.

Researchers: Dorcas Beaton (Institute Coordinator), Claire Bombardier, Kim Cullen, Sheilah Hogg-Johnson, Carol Kennedy-Yee, Quenby Mahood, Peter Smith

Collaboration and Partnerships: Consultation with clients, clinicians, educators, professional organizations, regulatory bodies and other researchers have and will continue to occur throughout the development and fulfillment of these projects.

Potential Audiences and Significance: There is already great interest in the DASH among clinicians, researchers and educators, professional organizations such as the Canadian Physiotherapy Association and various regulatory colleges. These projects will be important to anyone interested in outcome measurement that reflects the "real world" experience of employees, clients and patients. 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 Ontario Workplace Safety and Insurance Board (the QuickDASH is the outcome used in the shoulder program of care). Anyone interested in outcome measurements that reflect client's perspective could be a potential user of DASH.

Publications:

Kennedy CA, Beaton DE. Disabilities of the Arm, Shoulder and Hand (DASH) Outcome measure grows beyond intended use. Submitted to Journal of Bone Joint Surgery.

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.

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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 has been completed.

Objectives:

- To identify areas and subjects where specific researchers at IWH 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 data dictionary.

Status: In 2015, the reorganized Privacy and Security policies and standard operating procedures on the IWH wiki were launched. Some orientation to them was provided through an IWH internal plenary along with a refresher for staff of our Privacy Protection in Research policies and procedures. The Data Documentation Coordinator continued in her role, monitoring data holdings and permissions on the T drive, and providing orientation to the T drive for all incoming staff.

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

Collaboration and Partnerships: Partners that are involved in this project include the Ministry of Labour Data Diagnostic Unit, who are a potential audience and user of the Data Dictionary, as well as a potential contributor around sources and uses of data.

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

Workplace Safety and Insurance Board Data Routine Statistics (0307/0835/0845)

Project Status: Ongoing

Introduction: The Workplace Safety & Insurance Board (WSIB) of Ontario 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.
- To develop set of core competencies regarding WSIB data.

Status: In 2015, staff responded to ad hoc requests for WSIB data as required. Responsibility for fulfilling these requests has been transferred to a new IWH staff member. Documentation materials for WSIB data have been transferred to the wiki.

Researchers: Sheilah Hogg-Johnson (Institute Coordinator), Amber Bielecky, Jacob Etches, Hyunmi Lee

Collaboration and Partnerships: Partners involved in this project include the WSIB through our research and master agreements, external researchers from universities, and the Centres of Research Excellence.

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.

Evidence-Based Practice Systematic Reviews (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.

Status: In 2015, we initiated the adverse events methods work with the IWH team and a MSc student. We submitted an updated review manuscript for publication. The team had preliminary meetings with George Wells' team to develop methods on uncertainty analysis.

Researchers: Andrea Furlan (Principal Investigator), Claire Bombardier, Nancy Carnide, Emma Irvin, Dwayne Van Eerd, C Ammendolia (Mount Sinai Hospital), L Chaparro (University of Antioquia), K Cheng (University of Maryland), A Deshpande (University Health Network), L Lao (University of Maryland), E Manheimer (University of Maryland), M Pelowitz (University of Toronto), R Reardon (College of Physicians and Surgeons), M Van Tulder (VU University)

Collaborations and Partnerships: 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, Giraldo M, Baskwill A, Irvin E, Imamura M. Massage for low-back pain. Cochrane Database of Systematic Reviews 2015;9(A).

Funding:

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

Furlan AD, Bombardier C, Reardon R, Carol A, Cote C, Hutchings R, Lefebvre F, Little C, Pope B, Santerre C, Shaw K, Spitzig D, Vroomm R, Weppler C, Wright J, Young R. Dissemination and Implementation of the NOUGG Guidelines of Opioids for Chronic Non-Cancer Pain. Canadian Institutes of Health Research (CIHR): \$25,000 (2009-2010)

Methodological Developments in Systematic Reviews (0951)

Project Status: Ongoing

Introduction: IWH is committed to continuously improving the field of systematic review methodology. In 2015, we worked on the following methods projects:

- A. Update three Cochrane reviews: 1) Multidisciplinary interventions for neck and shoulder pain; 2) Multidisciplinary interventions for subacute low back pain; and 3) Alcohol and drug screening of occupational drivers for preventing injury.
- B. Advance Review Methods: 1) Comparison of Cochrane vs. Non-Cochrane reviews; 2) Comparison of Evidence synthesis methods; 3) Realist and Rapid Review project; 4) Review classification project; and 5) Reviews of Complications.
- C. Create a database of prognosis reviews.

Objectives:

- To update Cochrane reviews and develop a database of prognosis reviews.
- To write a paper on adapting the established SR methodology to non-clinical literature.
- To develop a process for conducting realist and rapid reviews and classifying review typologies.
- To recommend a methodology for conducting reviews of complications.

Status: In 2015, the methods group participated with a group of researchers across Canada in a CIHR funded exercise to develop methods for scoping reviews. A curriculum was developed and submitted to teach a semester graduate course for the Department of Rehabilitation Sciences for the University of Toronto. A team meeting was held in the Fall to extend the work of the Cochrane Prognosis Methods Group. Two papers were submitted for publication as part of collaboration in method development with the University Health Network.

Researchers: Emma Irvin (Institute Coordinator), Dwayne Van Eerd (Institute Coordinator), Andrea Furlan (Institute Coordinator), Ben Amick, Nancy Carnide, Kim Cullen, Melanie Fortune, Joanna Liu, Quenby Mahood, Claire Munhall, Imelda Wong, J Hayden (Dalhousie University), J Jordan (Keele University), M Van Tulder (VU, Amsterdam), G Wells (University of Ottawa)

Collaborations and Partnerships: Partners in this project include external researchers, the Ontario Workplace Safety and Insurance Board, clinicians, and policy-makers.

Potential Audiences and Significance: The results of this project will be relevant to methods groups of the Cochrane Colloquium and other researchers conducting systematic reviews, and those interested in incorporating stakeholders in the process.

Publications:

Salbach NM, O'Brien KK, Brooks D, Irvin E, Martino R, Takhar P, Chan S, Howe JA. Reference values for standardized tests of walking speed and distance: A systematic review. *Gait and Posture* 2015;41(2):341-60.

Salbach NM, O'Brien KK, Brooks D, Irvin E, Martino R, Takhar P, Chan S, Howe JA. Considerations for the selection of time-limited walk tests post-stroke: A systematic review of test protocols and measurement properties. Submitted to *Journal of Neurologic Physical Therapy*.

Synthesizing Occupational Health and Safety Knowledge for Local Stakeholders (3170)

Project Status: Ongoing

Introduction: Through a collaboration involving researchers and an advisory panel of OHS stakeholders in Manitoba (MB), Memorial University's SafetyNet Centre for Occupational Health & Safety Research (SafetyNet), and the Institute for Work & Health (IWH), we will develop and test an innovative methodology for synthesizing current scientific knowledge and tailoring it for use in specific provincial and local contexts. The methodology will combine features of the approach used by the 'Contextualized Health Research Synthesis Program' (CHRSP) at the Newfoundland and Labrador Centre for Applied Health Research (NLCAHR) with the systematic review techniques and synthesis reports pioneered by the Systematic Review Program at IWH. In addition to developing an innovative set of methods suitable for OHS stakeholders in MB and other similar jurisdictions, the project will produce a handbook on this approach and a sample knowledge synthesis on a topic selected by the MB Stakeholder Advisory Panel and contextualized for the specific resources, capacities, and challenges of the province. Our findings—the new methodology, the Handbook, and the synthesis reports—will be transferred to end users in MB through the direct participation of the Stakeholder Panel in the project and through other modes of dissemination as detailed below. The methodology will also be transferred to end users in Newfoundland and Labrador and Ontario through a set of end-of-project webinars.

Objectives:

- To produce a practical and relatively inexpensive way for OHS stakeholders in MB, as well as in other provinces, to develop increased research synthesis capacity.
- To enhance the utilization of current knowledge about the causation, prevention, and treatment of occupational injuries and diseases tailored to the context of the province's industries, workplaces, and compensation system.

Status: In 2015, the project team secured data and interviews for the second IWH report. They also performed the contextualization and revision of the second IWH report with a team of stakeholders in Newfoundland and Labrador. The draft version of the project handbook was created and discussed with the Manitoba Stakeholder Advisory Committee (MSAC) at a mid-project workshop held in Winnipeg. The project handbook was revised accordingly. At the same meeting the MSAC chose the topic for the Manitoba synthesis and the review was initiated. The search strategy was run, results screened and an appraisal of the quality of the studies was completed.

Researchers: Emma Irvin (Co-Principal Investigator), S Bornstein (Co-Principal Investigator) (Memorial University), Kim Cullen, Ron Saunders, Dwayne Van Eerd, L Johnson (University of Manitoba), R Kean (Memorial University), S Passmore (University of Manitoba)

Collaborations and Partnerships: Partners in this project include the Workers Compensation Board of Manitoba, Memorial University, and the University of Manitoba.

Potential Audiences and Significance: The findings from this study will be of interest to workplaces, and to the workers compensation systems.

Funding:

Bornstein S, Irvin E, Van Eerd D, Saunders R, Passmore S, Kean R, Johnson L. Synthesizing Occupational Health and Safety Knowledge for Local Stakeholders. Workers Compensation Board of Manitoba: \$196,126 (2014-2016).

Guidelines on Health-Related Rehabilitation (3175)

Project Status: Completed

Introduction: Unmet needs for rehabilitation services can result in poor outcomes for people with disabilities including deterioration in general health status, activity limitations, participation restrictions and reduced quality of life. These negative outcomes can have broad social and financial implications for individuals, families and communities. The World report on disability highlighted that while some people with disabilities have complex rehabilitation needs that require management in specialized settings, the majority of people require fairly low-cost, modest rehabilitation services that can be delivered in mainstream health settings. Priorities for service delivery include strategies for the integration of rehabilitation services into mainstream health care settings, decentralization of rehabilitation services, and the provision of coordinated and multidisciplinary rehabilitation services to ensure continuity of care.

Objectives:

- To determine what service provision models work for different health conditions/resource settings/phases to ensure the provision of rehabilitation services.
- To determine what types of assessment tools can be used to ensure individual's rehabilitation needs are adequately identified.

Status: The team completed a review to determine what service provision models work for different conditions, resource settings and phases of recovery in order to support the provision of rehabilitation services. An additional review was also completed to determine what types of assessment tools can be used to support an individual's rehabilitation needs. The final review was submitted to the World Health Organization (WHO) in order to support the development of a guideline for health-related rehabilitation of people with mental and physical disabilities.

Researchers: Andrea Furlan (Principal Investigator), Dorcas Beaton, Cynthia Chen, Mary Cicinelli, Jocelyn Dollack, Emma Irvin, Carol Kennedy-Yee, Claire Munhall, M Bayley (University of Toronto), R Bhide (University of Toronto), A Costante (University of Toronto), C Borkhoff (University of Toronto), S Danak (University of Toronto), J David (Christian Medical College Hospital), J Flannery (University of Toronto), L Fullerton (University of Toronto), S Marchenko (University of Toronto), R McMaster (Centre for Addiction and Mental Health), K Pitzul (University of Toronto), M Prieto (Hospital Universitario San Vicente Fundación), M Sachdeva (University of Toronto), G Tardif (University of Toronto)

Collaborations and Partnerships: Partners in this project include the World Health Organization, the University of Toronto, the Institute of Rehabilitation, and the Faculty of Medicine of the University of Sao Paulo - Institute of Physical Medicine and Rehabilitation.

Potential Audiences and Significance: The results from this review will become part of the World Health Organization's guideline on health related rehabilitation.

Funding:

Furlan A, Irvin E, Kennedy C, Bayley M, Flannery J, Tardif G, Borkhoff C, Prieto M, David JA. Guidelines on health-related rehabilitation. WHO: \$94,268 (2014-2105).

Literature Review of Policies and Practices on the Accommodation of Persons with Visible Disabilities in the Workplace (3180)

Project Status: Completed

Introduction: The labour market is seeing a growing shortage of labour in certain industries and geographic areas, and an aging workforce that is retiring at an older age than in the past. But at the same time, there is an untapped labour pool of some 795,000 Canadians with disabilities—almost half of whom have a post-secondary education—who are unemployed despite being able and willing to work. People with visible disabilities hold great promise for the Canadian labour market, and employers who succeed in recruiting, hiring and accommodating people with disabilities generally do so with minimal disruption or expense. Replicated on a wider scale, these accommodations have the potential to transform Canadian workplaces, and create opportunities for skilled Canadians who are currently not engaged in paid work because of a visible disability. In partnership with Employment and Social Development Canada (ESDC), researchers at the Institute are undertaking a literature review to identify the kinds of accommodations being made for different types of visible disabilities by employers in different workplace contexts, as well as accommodations in recruitment, hiring and retention practices that have been effective in attracting and retaining people with disabilities. As well, the literature review seeks to identify the gaps and barriers that prevent employers from actively recruiting and retaining people with disabilities.

Objectives:

- To determine types of accommodation practices that have been shown to be effective for different types of visible disabilities and in which contexts (e.g. occupation, industry and size of employer).
- To identify promising recruiting, hiring, and retention practices adopted by employers in Canada and in other countries for accommodating persons with different types of visible disabilities.
- To identify the gaps, barriers and needs of employers in relation to accommodating persons with different types of visible disabilities in the workplace.
- To examine which types of accommodation practices and resources might better support labour-force attachment in Canada for persons with different types of visible disabilities.

Status: This project was undertaken on behalf of the Office of Disability Issues, Employment and Social Development Canada over an 8 month period between 2014 and 2015. The study consisted of a structured search and synthesis of web and peer-reviewed sources related to employer policies and practices on the recruitment and retention of persons with disabilities. The web search focused on identifying accommodation policies implemented or recommended for workplaces. The peer-reviewed search focused on studies describing or evaluating workplace accommodation practices. Data was extracted and synthesized from all sources meeting inclusion criteria. From the peer-reviewed search, 2000 titles and abstracts were reduced to 109 studies for data extraction. From the web search, more than 20 sites were identified, four of which provided a particularly detailed information. Evidence from the two searches provided invaluable insights into organizational policies, the accommodation process, and the types of accommodations to consider for different needs, and provides a starting point for developing guidelines for best practices related to the recruitment and retention of persons with disabilities. Few rigorous evaluations of effectiveness or cost-effectiveness of policies and practices were identified. To further advance the evidence base, there is need for formal and rigorous evaluation of effectiveness and cost-effectiveness of policies and practices with detailed analyses of the contexts in which they work well and why.

Researchers: Emile Tompa (Principal Investigator), Alexis Buettgen, Quenby Mahood, Kathy Padkapayeva, Andrew Posen, Amin Yazdani

Stakeholder Involvement: This study is funded by Employment and Social Development Canada, and is of great interest to various departments in that ministry. They are actively involved in guiding the research project. As well, drafts of the report will be reviewed by several people in the disability community.

Potential Audiences and Significance: This study is directly related to the development of best practice guidelines by the Canadian Standards Association, and may be a platform for the larger evidence synthesis they will be completing in the process of developing work disability prevention best practice guidelines. The study is also relevant to CRWDP partners, particularly employers and disability communities.

Publications:

Tompa E, Buettgen A, Mahood Q, Padkapayeva K, Posen A, Yazdani A. (May 2015). Literature Review of Types of Workplace Accommodations Made for Persons with Visible Disabilities: Final Report. Employment and Social Development Canada. 173 pp. Available at:

https://www.crwdp.ca/sites/default/files/documentuploader/full_report_-_evidence_synthesis_visible_disabilities_tompa_et_al._2015.pdf

Presentations:

Tompa E. Employer costs and benefits of accommodation: What is the evidence? 25 Feb 25, 2016: Employment and Social Development Canada Inaugural WebCast Speaker Series.

Tompa E, Buettgen A, Mahood Q, Padkapayeva K, Posen A, Yazdani A. Literature Review of Types of Workplace Accommodations Made for Persons with Visible Disabilities. 29 Oct 2015; Quebec, Canada: Knowledge Talk hosted by Employment and Social Development Canada.

Funding:

Tompa E (Principal Investigator). Policies and Practices on the Accommodation of Persons with Visible Disabilities in the Workplace. Office of Disability Issues, Employment and Social Development Canada—Fall 2014, \$21,900 over 8 months.

Osteoarthritis and Work: A Systematic Review (3185)

Project Status: Ongoing

Introduction: Arthritis is among the most prevalent chronic health problems in Canada. It is estimated to affect more than 4.4 million people, which makes it the leading cause of physical disability in Canadian adults). Moreover, the number of people with arthritis disability is rising with the percentage of Canadian adults living with rheumatic diseases projected to become 26% by 2020. Although often thought of as a disease of aging, about 60% of people with arthritis are under age 65 with most being in their prime earning years (ages 45+). As a result, costs for arthritis are high. In 2000, the estimated burden of the disease in Canada was \$6.4 billion per year with two thirds of the costs (\$4.3 billion) thought to be indirect and come mostly from lost productivity and long-term disability. Similar findings have been found elsewhere with disability and productivity costs in Canada and other developed countries estimated to be 2-4 times greater than the direct health care costs of the disease. Osteoarthritis (OA) is the most common type of arthritis and ranks among the top ten causes of disability worldwide. It is characterized by significant pain, stiffness, swelling, fatigue, and limitations in everyday activities and roles, including work. Osteoarthritis can be found in a number of joints in the body, but research to date has focused mostly on OA of the knees, hips, ankles/feet and hands/wrists with less research on the shoulders, neck and spine. Of increasing interest are personal and environmental factors that may contribute to the development of OA or aggravate its trajectory over time, particularly the role of occupational activities.

Objectives:

- To examine the current literature to ascertain the level and quality of evidence for a causal relationship between work-related activities/exposures and the development of OA, including the type of work activities potentially associated with OA and whether the amount of activity matters.
- To examine factors that may independently relate to the development of OA or that may modify or mediate the relationship between work activities and trajectory of OA in terms of sustaining work.

Status: In 2015, the team ran and downloaded the search results, screened the literature for relevant articles, conducted an appraisal of the quality of the relevant studies, extracted the relevant data and organized the end of project stakeholder meeting in Vancouver, B.C.

Researchers: Monique Gignac (Principal Investigator), Emma Irvin (Principal Investigator), Dorcas Beaton, Quenby Mahood, Dwayne Van Eerd, C Backman (University of British Columbia), C McLeod (University of British Columbia)

Collaborations and Partnerships: WorkSafeBC Policy and Regulation Divisions, and Health Care Services. The Arthritis Society (TAS) Mr. Johnathan Riley, Vice-President Research; Richard Mulcaster, Executive Director TAS BC Division; Joan Vyner, Director Education and Services, BC Division; and Lynn Moore, National Director, Education, Programs and Services form an advisory group to all phases of the research project.

Potential Audiences and Significance: Findings from this study will be important to the OA research community, clinical practitioners, workers' compensation boards, and policy makers.

Funding:

Gignac MAM (Co-PI), Irvin E, (Co-PI), McLeod C, Backman C, Van Eerd D, Beaton D, Mahood Q. Osteoarthritis and Work: A Systematic Review. WorksafeBC: \$62,813 (2015-2016)

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

Knowledge Transfer & Exchange

Stakeholder/Audience Relationships and Exchanges

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Issue Briefings (0611)

Project Status: Ongoing

Introduction: Research findings of the Institute for Work & Health often have implications for decision makers in government, the Ontario Workplace Safety and Insurance Board (WSIB), and the health and safety associations, and for employers, labour groups, and clinicians. In this project, Institute researchers 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.

Objectives:

- To 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.

Status: One new Issue Briefing was published in 2015: “Divergent trends in work-related and non-work-related injury in Ontario.” A second Issue Briefing, “Measuring the adequacy of workers’ compensation benefits in Ontario: An update” was prepared in late 2015 for publication in the first quarter of 2016.

Researchers: Ron Saunders (Project Leader), Kristina Buccat, Cindy Moser, Cameron Mustard

Collaborations and Partnerships: Advance copies of 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 Prevention Knowledge Exchange Group, the CCOHS, the Industrial Relations Centre at U of T, and others who have signed up to receive notices of Issue Briefings. 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 C, Costante A. (June 2015). Issue Briefing. Divergent trends in work-related and non-work-related injury in Ontario.

Educationally Influential Networks (0617)

Project Status: Ongoing

Introduction: Many clinical provider groups deliver care to populations of interest to IWH (e.g. workers with musculoskeletal disorders). We have targeted these groups as potential audiences for Institute research messages, as providers who may also work within, or in close association with, workplaces (in primary/secondary prevention roles and/or in return to work, delivering treatment and/or disability management). These groups include: physiotherapists (PT), kinesiologists (Kin), occupational therapists (OT), chiropractors (Chiro) and ergonomists (Ergo). Many IWH research messages are relevant to these groups (management of MSDs, injury prevention, disability management and RTW) and equally, these groups possess a practice expertise and knowledge that is useful and relevant to IWH. 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). Each of the EI networks has been convened to seek their cooperation in an ongoing role as “knowledge broker”. It is 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 also sometimes look to EIs to participate in research projects as advisors. In 2015, we renewed the membership in the Kinesiologists, Occupational Therapists, and Physiotherapists networks.

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 alert notices to all EI groups.
- To remain active contributors to association trade publications.

Status: The renewed network of 12 Occupational Therapists had their annual meeting on November 30, 2015. The annual meeting of Chiropractors was held on February 5, 2015. The renewed Physiotherapist network consists of 19 members; their first meeting is scheduled for March 2016. The renewed networks of 14 Kinesiologists and 15 Ergonomists will have their first meetings scheduled in Spring 2016. EIs were contacted to participate in various research projects as stakeholders/advisory committee members as well as for publications on network relationships at IWH. A survey of all EI network groups was conducted and results will be shared with network members in 2016. Bi-monthly research alerts were sent to all EIs.

Researchers: Ron Saunders (Project Leader), Kristina Buccat, Siobhan Cardoso, Kim Cullen, Sara Macdonald

Collaborations and Partnerships: Partners in this project include clinicians/practitioners and professional bodies (associations and regulatory colleges).

Potential Audiences and Significance: This project is of interest to physiotherapists, kinesiologists, occupational therapists, chiropractors and ergonomists. 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.

Tracking KTE and Evaluation (0629)

Project Status: Ongoing

Introduction: Consistent with the IWH Five Year Strategic Plan, KTE has identified activities and indicators to be measured. KTE staff will continue to track stakeholder engagement in IWH projects, using templates that we developed for tracking KTE activities associated with each research project and use of tools/guides resulting from those projects. We will complete 5 new case studies of research impact.

Objectives:

- To track KTE indicators that are part of the Five Year Strategic Plan.
- To track stakeholder engagement in systematic reviews and other KTE activities.
- To document indicators of research use, e.g., downloads, media mentions, testimonials of research use.
- To document research impact through case studies.

Status: Five impact case studies were completed in 2015. These case studies talk about the impact of IWH research on measuring upper extremity function through the DASH Outcome Measure, changing the discourse from “young” to “new” workers, the focus on enforcement by OSHA in the U.S., the use of the IWH-OPM in jurisdictions across Canada, and the potential change to experience rating in Ontario with respect to temp agencies.

Researchers: Ron Saunders (Project Leader), Kristina Buccat, Siobhan Cardoso, Kim Cullen, Emma Irvin, Sara Macdonald, Cindy Moser, Dwayne Van Eerd

Collaborations and Partnerships: Stakeholders involved include participants in KTE systematic review stakeholder committees, other project stakeholder/advisory committees, and senior policy officials.

Potential Audiences and Significance: This project is of interest to IWH staff, IWH Board of Directors, external stakeholders, and KTE researchers.

Disability Managers Network (0638)

Project Status: Ongoing

Introduction: In 2012, IWH established a new network of disability management professionals. The group is currently composed of 70 active members. The first meeting was held in April 2012, with 30 members in attendance. A LinkedIn group was subsequently created at the request of those that attended a meeting in 2014. Approximately 20 members have joined the online group. The site is used to disseminate relevant research findings, generate discussion, and provide networking opportunities. All 70 members also receive regular e-Alerts via email and are notified about new Research Alerts (which are posted on the IWH website). Members are also sometimes approached for interest in participating in research projects or advisory committees.

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 facilitate participation in IWH research projects or IWH events (e.g. Workshops, seminars).
- To provide KTE support for research projects with messages for RTW audiences.

Status: Presentations are made to the network at the annual event held each spring. In 2015, two IWH researchers presented: Dr Monique Gignac, on job accommodations, benefits and employment outcomes among workers with arthritis and diabetes and Kim Cullen on effectiveness of workplace-based return to work programs on both return-to-work and health-related outcomes.

Researchers: Sara Macdonald (Project Leader), Kristina Buccat, Cindy Moser, Ron Saunders

Collaborations and Partnerships: Health and safety association consultants, workplace parties, disability managers, insurance providers, and 60 Summits Group.

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

Prevention Partners Networks (0640)

Project Status: Ongoing

Introduction: KTE will continue to build relationships with the prevention partner community through vehicles like the Prevention Knowledge Exchange Group (PKEG), which has representation from the health and safety associations (HSAs), the Ministry of Labour (MOL), the Workplace Safety and Insurance Board, the Centres for Research Expertise (CRE-MSD and CREOD), and the Occupational Cancer Research Centre (OCRC). This regular committee work is supplemented with seminars and presentations in conferences that involve partners in the Ontario prevention system.

Objectives:

- To continue to build relationships with prevention partners to take research evidence to Ontario workplaces and to explore new research ideas.
- To continue to develop opportunities for our prevention partners to participate in the research process and review their experience with this participation.
- To foster dialogue and prevention system networks about strengthening knowledge exchange.
- To coordinate input into the Partners in Prevention conference and assist with research posters.

Status: PKEG met on March 6, June 5, September 11, and December 4, 2015, chaired by the Director of KTE at IWH. There were presentations from IWH on a measure of OHS vulnerability, results of the stakeholder survey about communication practices and preferences, and on our research on leading indicator, and a presentation from MOL on the status of implementation of the Prevention Strategy.

IWH had a booth at the annual Partners in Prevention conference, and had two presentations in the main program (on leading indicators and on office ergonomics training) as well as four scientific posters. IWH also participated in the Ergonomics Integrated Planning Action Committee (chaired by MOL) and the Health & Safety Partners Communications Forum, a new network of communications professionals representing partners within Ontario's health and safety system, also chaired by the MOL. The IWH KTE Director participated on two advisory councils of the Public Services Health and Safety Association.

Researchers: Ron Saunders (Project Leader), Kristina Buccat, Siobhan Cardoso, Sara Macdonald, Cindy Moser, L Holness and J Brown (CRE-OD), D Kramer (OCRC), R Wells (CRE-MSD)

Collaborations and Partnerships: HSA Community, Ministry of Labour, WSIB, OCRC, CRE-MSD, CRE-OD, and IWH researchers.

Potential Audiences and Significance: For HSALC: Health and safety associations (HSAs), Ministry of Labour, (MOL) and Centres for Research Expertise (CREs). For the Research Exchange Series and the Partners in Prevention Conference, workplace parties and OHS professionals would also be among the audience.

Outreach (0650)

Project Status: Ongoing

Introduction: The Institute continues to engage in opportunities and activities to increase its visibility provincially, nationally and internationally. Throughout the year, the Institute participates in key events and conferences where targeted information can be made available to stakeholder groups to raise the awareness and profile of IWH. In addition, the Institute uses these opportunities to market its products to stakeholders. As workplace parties are priority audiences for IWH research, this project also explores ways to reach employers and organized labour. In 2013, we hosted the first meetings of knowledge exchange forums with leaders from the employer and labour communities. These forums continued to meet in 2015. We also reach workers and employers through intermediaries (organizations with members or subscribers with an interest in work and health) and direct communication. In 2013, the KTE program also began to identify and interview “influential knowledge users” about ways to improve knowledge exchange. In 2015, we hosted the first meeting of influential knowledge users as a group. The efforts to engage this group are ongoing. Finally, in 2015 IWH formed a new network of 80 occupational health and safety professionals and held a launch event for them in December.

Objectives:

- To continue implementing the plan for engagement with influential knowledge users.
- To continue to develop/enhance plan for working with intermediaries.
- To implement academic outreach plan.
- To continue to develop themed displays to meet targeted audiences, profiling key research initiatives where appropriate.
- To use these opportunities to profile the Institute as a credible resource of evidenced-based information and tools for improving the health of workers.
- To coordinate and lend support to a calendar of key events.
- To assist IWH researchers in linking with workplace parties

Status: At our booth at the Partners in Prevention conference, we signed up 214 new names to our subscription list. We produced an updated version of the handout called “5 things we think you should know”—outlining five IWH research findings of interest to workplace parties — as well as a mental health resource handout. IWH scientists presented research in oral and poster sessions at the conference. A launch event was held at IWH for the new OHS Professionals Network, December 9, 2016. Two meetings of the Employer and the Labour Forums were held at IWH in the Fall and Spring 2015. A launch event was held for the Influential Knowledge Users Group in November. The annual Alf Nachemson memorial lecture took place in October. It was well attended (107 attendees) and continues to be a major OHS networking event hosted by the Institute. We used the event to celebrate IWH’s 25th anniversary, with rotating slides showing IWH milestones. The Student Resource Guide continued to be promoted on the IWH website throughout the year as part of the academic outreach plan. As well, an e-alert was sent to a number of post-secondary schools in September 2015 to tell them about the availability of the guide and IWH resources.

Researchers: Ron Saunders (Lead), Kristina Buccat, Siobhan Cardoso, Kim Cullen, Sara Macdonald, Cindy Moser

Collaboration and Partnerships: Influential knowledge users are located in several of our stakeholder organizations, such as health and safety associations, government ministries or agencies, and labour or employer organizations. We partner with OHS specialty media on articles based on IWH research.

Potential Audiences and Significance: All stakeholder groups, with particular attention (in this project) to workers, unions, employers, employer associations.

Tool Development and Dissemination (0636)

Project Status: Ongoing

Introduction: Stakeholders have told us that they need tools and guidelines to help them apply research findings in the workplace. Research in knowledge transfer has also shown the advantage of having evidence-based tools. IWH has developed several tools for our various stakeholder groups, e.g., DASH Outcome Measure, Prevention is the Best Medicine toolkit for newcomers, Participatory Ergonomics (PE) Guide, Red Flags/Green Lights Return-to-Work (RTW) Guide, Health & Safety Smart Planner, and Seven Principles for Successful Return to Work. As research continues to develop and mature at the Institute, there will be a need for additional tools and guides, and to update existing ones to meet the needs of the Institute's stakeholders.

Objectives:

- To look for new opportunities for tool development, e.g., from systematic reviews.
- To update, repackaging and market current tools within IWH toolkit as needed.
- To disseminate and document the uptake of IWH tools and guides.
- 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.

Status: 1) DASH Outcome Measure: Four new licenses for translations of the DASH were issued in 2015. DASH and QuickDASH commercial and non-commercial databases requests were maintained and all downloads were tracked. There were 68 user profiles submitted and it was determined that 11 of these fit into the conditions for commercial use. The DASH website was redesigned (for launch in early 2016) to be easier to navigate and to automate part of the process of determining whether a commercial license is needed. There were 106 iPad apps sold in 2015. The application for "DASH Outcome Measure" as a trademark was approved in November 2015. Planning began on *DASHbash*, a celebration of the tool's 20th anniversary.

2) Guide to Return to Work for Low Back Pain (working title): Work continued on a guide for Manitoba stakeholders based on the prognostic factors for RTW with workers with LBP SRs.

3) eOfficeErgo-Ergonomics e-Learning for Office Workers: Jointly with Public Services Health and Safety Association, IWH released an online office ergonomics e-learning program.

4) IWH-OPM tool: Follow up questions were developed and posted on the IWH website for users of the Organizational Performance Metric (an 8-item questionnaire developed as a potential leading indicator of OHS outcomes) to help workplaces improve their OHS activities.

Researchers: Jocelyn Dollack (Co-Lead), Cindy Moser (Co-Lead), Kristina Buccat, Siobhan Cardoso, Jan Dvorak, Carol Kennedy-Yee, Sara Macdonald, Ron Saunders

Collaboration and Partnerships: Partners involved in this project include the health and safety associations.

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

Workshops (0643)

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 which continued through 2015.

Objectives:

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

Status: Registration and preparation for the Systematic Review workshop was ongoing. We held the first workshop from May 6-8th, 2015. We held a second workshop from November 25-27th, 2015.

Researchers: Emma Irvin (Project Leader), Andrea Furlan, Quenby Mahood, Lyudmila Mansurova, Dwayne Van Eerd

Collaborations and Partnerships: Participants in the workshops 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, social 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 through website, e-mail, social media, slidecasts, videos and print products, as well as through external media and stakeholder events/ publications.
- 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.

Status: 2015 saw IWH's research messages reach further through the Institute's website, e-alerts, social media and videos/slidecasts. One of the bigger undertakings was a survey in the spring of 2015 to determine stakeholders' preferred formats and channels for receiving work-related injury and disability prevention information, including research information. The survey concluded that the most effective way to reach stakeholders is to use e-alerts or e-newsletter to point people to short summaries, articles and tools on a website, including a link to a peer-review journal article, if applicable. The survey also pointed out that social media does not seem to have substantially taken hold as a conveyor of OHS information among this group, although that doesn't mean social media isn't important as a relationship-builder. As a result of the survey findings, the communications team diverted some of the time previously spent on social media to other activities, although social media activity does continue on an almost daily basis.

In 2015, IWH developed and began implementing a plan to ensure the Institute's communication practices and tools comply with the *Accessibility for Ontarians with Disabilities Act*.

2015 consolidated the replacement of quarterly e-alerts tied to the production of At Work (no longer available in print) with monthly e-alerts rebranded as IWH News, a change that was initiated in 2014. IWH News subscriptions rose from 4,166 at the end of 2014 to 4,499 by the end of 2015. The monthly e-alert includes items on IWH research (via links to At Work stories), news, events and scientist accomplishments, as well as items from the Centres for Research Expertise (CREs). During 2015, IWH subscribers were also tagged as At Work subscribers, so that the number of At Work subscribers at the end of 2015 stood at 4,852. Subscribers to other products also rose slightly over the year. In all, the total number of subscribers to any IWH product (excluding DASH) rose from 4,779 at the end of 2014 to 5,322 at the end of 2015 bringing it back up to the all-time high levels before the end of the print edition of At Work.

The website as seen by the public changed only slightly in 2015. Most of the work was done behind the scenes to upgrade the website platform from Drupal 6 to Drupal 7, a task that was completed early in 2016, making the website both mobile-friendly and more accessible. Nonetheless, website views held steady. The number of unique page views in Q4 2015 was 344,404 (up eight per cent from Q4 2014), and the number of unique visitors in Q4 2015 was 266,766 (up 11 per cent from Q4 2014). Although What Researchers Mean By (WRMB) continued to account for the bulk of unique page views, other web pages more directly related to IWH research and events held steady. Most notably, At Work unique page views stood at 16,009 in Q4 2015.

Media relations during the year continued to implement the plan approved in 2012 to increase the number of research-based releases. Five releases were issued in 2015, four related to research: on the eOfficeErgo training tool, the union safety effect, supporting workers with arthritis and interventions to prevent upper extremity MSDs. The union safety effect release resulted, by far, in the greatest number of media activity, with over 35 articles and 40 mentions. IWH News items continued to play an important part in media mentions. The average of quarterly media mentions went up. In 2014, quarterly media mentions ranged from a low of 38 to a high of 84, with an average of almost 55. In 2015, they ranged from a low of 53 to a high of 121, with an average of 75 per quarter.

Social media outreach continued to grow in 2015 despite spending less total time on it as a team. The number of Twitter followers grew from 1,406 to 1,898, the number of LinkedIn subscribers grew from 1,004 to 1,581, and the number of video/slideshare views grew from 1,646 to 2,132. In 2015, IWH posted three research videos on its YouTube channel: on injury risk and shift work, supporting workers with arthritis, and trends in work- and non-work related injury rates. IWH also posted 24 slideshares on its YouTube channel—23 plenaries and the Nachemson lecture. Policies and guidelines for researchers using Twitter for work purposes were approved by the IWH Executive in March of 2015.

IWH hosted its annual Nachemson lecture, featuring Judy Geary, a former executive at the Workplace Safety and Insurance Board (WSIB), who talked about the WSIB's use of research to remake its return-to-work and vocational rehabilitation policies and practices. The event was attended by 107 people. The lecture was used as an opportunity to celebrate IWH's 25th anniversary, with rotating slides showing IWH milestones. IWH also staffed a booth at the Partners in Prevention trade show, where the handouts included a its "5 things we think you should know," an annual handout communicating five key IWH research findings from the previous year, as well as a handout on IWH findings related to mental health. A badge scanner was used again and, after eliminating people who were already in our CRM, it collected 214 new IWH News subscribers.

The annual report for 2014, released in 2015, was themed "Promoting a culture of occupational health and safety." Internally, 2015 saw the almost-weekly production of the staff newsletter, thistweek@iwh. As well, considerable work on restructuring the wiki-based staff intranet and updating its contents was completed in 2015 (and rolled out in early 2016).

Researchers: Cindy Moser (Project Leader), Kristina Buccat, Jan Dvorak, Lyudmila Mansurova, Uyen Vu, Siobhan Cardoso, Ron Saunders

Collaborations and Partnerships: In 2015, Communications Manager Cindy Moser and Communications Associate Uyen Vu were invited to join a Ministry of Labour-led network called the Health and Safety Partners Communication Forum. Through this network, the IWH communications team meets monthly with communications counterparts in Ontario's prevention system, including the MOL, WSIB and health and safety associations.

Potential Audiences and Significance: External audiences include workplace parties, worker and employer representatives, policy-makers, occupational health and safety professionals, disability management professionals, clinicians, researchers, funders and more. Internal audiences include all IWH staff.

2015 Accomplishments

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2015 Publications
(not included in project listings)

Published

Badley EM, Canizares M, Perruccio A, Hogg-Johnson S, Gignac MAM. Benefits gained-benefits lost: a longitudinal cohort study (1994-2010) of the differential impact of changes in socio-economic status, smoking and obesity on self-rated health comparing baby boomers to other generations. *Milbank Q.* 2015 Mar;93(1):40-72. doi: 10.1111/1468-0009.12105. PMID:25752350

Berecki-Gisolf J, Smith P, Collie A, McClure RJ. Gender differences in occupational injury incidence. *American Journal of Industrial Medicine.* 2015 Mar;58(3):299-307. doi: 10.1002/ajim.22414. Epub 2015 Jan 14

Berolo S, Steenstra I, Amick BC 3rd, Wells RP. A comparison of two methods to assess the usage of mobile hand-held communication devices. *J Occup Environ Hyg.* 2015;12(4):276-85. doi: 10.1080/15459624.2014.973111. PMID: 25436479

Bielecky A, Chen C, Ibrahim S, Beaton DE, Mustard CA, Smith PM. The impact of co-morbid mental and physical disorders on presenteeism. *Scandinavian Journal of Work, Environment and Health.* 2015;41(6):554-64. doi: 10.5271/sjweh.3524.

Brijnath B, Mazza D, Kosny A, Bunzli S, Singh N, Ruseckaite R, Collie A. Is clinician refusal to treat an emerging problem in injury compensation systems? *British Medical Journal.* 2015;6(1). doi:10.1136/bmjopen-2015-009423.

Chambers A, Mustard CA, Holness LD, Nichol K, Breslin CF. Barriers to the adoption of safety-engineered needles following a regulatory standard: Lessons learned from three acute care hospitals. *Healthcare Policy.* 2015; 11(1):90-101.

Chambers A, Mustard CA. Trends in needlestick injury incidence following regulatory change in Ontario, Canada (2004-2012): an observational study. *BMC Health Services Research* 2015 Apr;15:127. doi: 10.1186/s12913-015-0798-z. PMID: 25880621.

Cullen KL, Dickey JP, Bent LR, Brown S, Nykamp S, Thomason JJ, Moens NMM. A validated approach for collecting fine-wire electromyographic recordings in four canine shoulder muscles during highly dynamic tasks. *Comparative Exercise Physiology.* 2015;11(2):65-74.

Dhanhani AA, Gignac MAM, Beaton D, Su J, Fortin P. Job accommodation availability and utilization among people with lupus: An examination of workplace activity limitations and work context factors. *Arthritis Care Research (Hoboken).* 2015 Nov;67(11):1536-44. doi: 10.1002/acr.22662

Dubin RE, Flannery J, Taenzer P, Smith A, Smith K, Fabico R, Zhao J, Cameron L, Chmelnitsky D, Williams R, Carlin L, Sidrak H, Arora S, Furlan AD. ECHO Ontario Chronic Pain & Opioid Stewardship: Providing Access and Building Capacity for Primary Care Providers in Underserved, Rural, and Remote Communities. *Stud Health Technol Inform.* 2015;209:15-22. PubMed PMID: 25980700.

Gignac MAM, Cao X, McAlpine J. Availability, need for, and use of work accommodations and benefits: are they related to employment outcomes in people with arthritis? *Arthritis Care Res (Hoboken).* 2015 May;67(6):855-64. doi: 10.1002/acr.22508. PMID: 25370701

Gignac MAM, Cao C, Ramanathan S, White L, Hurtig M, Kunz M, Marks PH. Perceived Personal Importance of Exercise and Fears of Re-injury: A Longitudinal Study of Psychological Factors Related to Activity After Anterior Cruciate Ligament Reconstruction. *BMC Sports Science, Medicine and Rehabilitation.* 2015 Jan;7:4 doi:10.1186/2052-1847-7-4.

Jetha A, Badley EM, Beaton D, Fortin PR, Shiff NJ, Gignac MAM. Unpacking early work experiences of young adults with rheumatic disease: An examination of absenteeism, job disruptions and productivity loss. *Arthritis Care Res (Hoboken)*. 2015 Apr;17. doi: 10.1002/acr.22601. [Epub ahead of print] PMID: 25892130

Jetha A, Pransky G, Hettinger LJ. Capturing complexity in work disability research: application of system dynamics modeling methodology. *Disabil Rehabil*. 2016;38(2):189-94. doi: 10.3109/09638288.2015.1031291. Epub 2015 Apr 13. PMID: 25864874

Kosny A, Brijnath B, Singh N, Allen A, Collie A, Ruseckaite R, Mazza D. Uncomfortable bedfellows: Employer perspectives on General Practitioners' role in the Return to Work Process. *Policy and Practice in Work and Health*. First on line 2015: <http://link.springer.com/article/10.1007/s12207-015-9222-6>

Mansfield L, Colantonio A, Kita M, Bayley M, Cassidy JD, Moody J, Kristman VL, Oshin V, Gomez M, Jeschke M, Mantis S. Return to work challenges following a work-related mild TBI: the injured worker perspective. *Brain Injury*. 2015;29(11):1362-9. doi: 10.3109/02699052.2015.1053524. Epub 2015 Aug 7

Mazza D, Brijnath B, Singh N, Kosny A, Ruseckaite R, Collie A. General practitioners and sickness certification for injury in Australia. *BMC Family Practice*. 2015;16:(100) doi:10.1186/s12875-015-0307-9

McGuire C, Kristman VL, Shaw W, Williams-Whitt K, Reguly P, Soklaridis S. Supervisor Autonomy and Considerate Leadership Style are Associated with Supervisors' Likelihood to Accommodate Back Injured Workers. *J Occup Rehabil*. 2015 Jan 17. [Epub ahead of print] PMID: 25595332

McGuire C, Kristman VL, Shaw W, Reguly P. Disability management policies are associated with supervisors' likelihood to accommodate back injured workers. *Occupational and Environmental Medicine*. 2016 Feb 17:1-8. [Epub ahead of print]

Milner A, Smith P, LaMontagne AD. Working Hours and Mental Health in Australia: Evidence from an Australian Population-Based Cohort. *Occupational and Environmental Medicine*. 2015 Aug;72(8):573-9. doi: 10.1136/oemed-2014-102791. PMID: 26101295

Mustard CA, Chambers A, Ibrahim S, Etches J, Smith P. Time trends in musculoskeletal disorders attributed to work exposures in Ontario using three independent data sources, 2004-2011. *Occupational and Environmental Medicine* 2015 Apr;72(4):252-7. doi: 10.1136/oemed-2014-102442. PMID: 25311003

Nolet PS, Côté P, Kristman VL, Rezai M, Carroll LJ, Cassidy JD. Is neck pain associated with worse health related quality of life six months later? A population-based cohort study. *The Spine Journal*. 2015;15:675-84.

Nolet PS, Kristman VL, Côté P, Carroll LJ, Cassidy JD. Is low back pain associated with worse health related quality of life 6 months later? *European Spine Journal*. 2015;24(3):458-66. PMID: 25391622

Nolet PS, Kristman VL, Côté P, Carroll LJ, Hincapié CA, Cassidy JD. The association between a lifetime history of work-related low back injury and future low back pain: a population-based cohort study. *European Spine Journal*. April 2015. (Epub ahead of print)

Prang K-H, Bohensky M, Smith P, Collie A. Return to work outcomes for workers with mental health conditions: A retrospective cohort study. *Injury*. 2015;47(1):257-265.

Roberts MH, Sim MR, Black O, Smith P. Occupational injury risk among ambulance officers and paramedics compared with other healthcare workers in Victoria, Australia: analysis of workers' compensation claims from 2003 to 2012. *Occupational & Environmental Medicine*. 2015;72(7):489-495]. doi:10.1136/oemed-2014-102574.

Rueda S, Smith P, Bekele T, O'Brien K, Husbands W, Li A, et al. Is any job better than no job? Labor market experiences and depressive symptoms in people living with HIV. *AIDS Care*. 2015;27(7):907-915. DOI 10.1080/09540121.2015.1015479

Sale JEM, Bogoch E, Meadows L, Gignac M, Frankel L, Inrig T, Beaton D, Jain R. Bone Mineral Density Reporting Underestimates Fracture Risk in Ontario. *Health*. 2015 May;7(5):566-571. doi: 10.4236/health.2015.75067

Sale JEM, Gignac MAM, Hawker G, Beaton D, Frankel L, Bogoch E, Elliot-Gibson V. Patients do not have a consistent understanding of high risk for future fracture: A qualitative study of patients from a post-fracture secondary prevention program. *Osteoporosis International*. 2016 Jan;27(1):65-73. doi: 10.1007/s00198-015-3214-y. Epub 2015 Jun 27.

Sears JM, Bowman SM, Rotert M, Hogg-Johnson S. A new method to classify injury severity by diagnosis: validation using workers' compensation and trauma registry data. *Journal of Occupational Rehabilitation*. 2015 Apr 22. [Epub ahead of print] PMID 25900409

Sears JM, Bowman SM, Hogg-Johnson S. Disparities in occupational injury hospitalization rates in five states (2003-2009). *American Journal of Industrial Medicine*. 2015 May;58(5):528-40. doi: 10.1002/ajim.22427. [Epub 2015 Mar 4] PMID:25739883

Senthanar S, Kristman VL, Hogg-Johnson S. Working and living in Northern vs Southern Ontario is associated with the duration of compensated time off work: A retrospective cohort study. *Journal of Occupational and Environmental Medicine*. 2015 Jul;6(3):144-54 [Epub Jan, 2015] PMID:26174991

Smith P, LaMontagne AD. What is needed to make research on the psychosocial work environment and health more meaningful? Reflections and missed opportunities in IPD debates. *Scand J Work Environ Health*. 2015;41(6):594-6. doi:10.5271/sjweh.3519

Smith PM. Workplace climate, employee actions, work injury and structural equation modelling. *Occupational & Environmental Medicine*. 2015;72(7):465-466. doi 10.1136/oemed-2015-102850.

Strassels SA, Straube S. Systematic review of enriched enrolment, randomized withdrawal trial designs in chronic pain: a new framework for design and reporting. *Pain*. 2015 Aug;156(8):1382-95. doi: 10.1097/j.pain.000000000000088. PubMed PMID: 25985142

Wong IS, Smith PM, Mustard CA, Gignac MAM. Health and occupational outcomes among injured, nonstandard shift workers. *Journal of Occupational and Environmental Medicine*. 2015 Nov;57(11):1244-9. doi: 10.1097/JOM.0000000000000551.

Forthcoming

Bastawrous M, Gignac MAM, Kapral M, Cameron JI. What factors are associated with adult children caregivers' well-being? A systematic review. *Clinical Rehabilitation*. (in press).

Kosny A, Allen A. Falling through the cracks? An analysis of health & safety resources available for newcomers to Australia. *International Journal of Migration, Health and Social Care* (accepted, June 23, 2015)

Ruseckaite R, Collie A, Brijnath B, Kosny A, Mazza D. Does medical certification of injured workers influence patterns of health service use? *Work: A Journal of Prevention, Assessment & Rehabilitation* (accepted, August 26, 2015)

Submitted

Colantonio A, Vernich L, Salehi S, Carter A, Vartanian O, Bayley M, Kirsh B, Hébert D, Lewko J, Kristman V, Cassidy JD, Kubrak O, Mantis S. Return to work after work-related traumatic brain injury. *Neurorehabilitation*, Mar 2015.

Darvesh N, Richmond S, Chambers A, Logan L, Mustard CA, Macarthur C. Risk factors and interventions for the prevention of injuries associated with motor vehicle collisions: a systematic review of reviews. *Accident Analysis and Prevention*, 2015.

Hamilton CB, Wong M-K, Gignac MAM, Davis AM, Chesworth BM. Validated measures of illness perception and behavior in people with knee pain and knee osteoarthritis: A Scoping Review. *Archives of Physical Medicine and Rehabilitation*, 2015.

Kilgour E, Kosny A, Collie A. "The System Impacts Almost Every Aspect of My Interactions with Clients": Psychologists and Workers' Compensation. *Disability and Rehabilitation*, 2015.

Kosny A, Allen A, Collie A. Understanding Medical Assessments in workers' compensation systems: a multijurisdictional scan. *Journal of Disability Policy*, 2015.

Kosny A, Allen A, Macfarlane E, Benke G, Dimitriadis C, Sim M. Carpentry Apprentices, Work and Noise. *Noise and Health*, 2015.

Kosny A, Santos I, Reid A. Employment in a "land of opportunity"? Immigrants' experiences of racism in the Australian workplace. *Journal of International Migration and Integration*, 2015.

Kristman VL, Brison RJ, Bédard M, Reguly P, Chisholm S. Prognostic factors for poor recovery after mild traumatic brain injury in older adults: a pilot cohort study. *Journal of Head Trauma Rehabilitation*, Feb 2015.

Laberge M, Calvet B, Fredette M, Tabet N, Tondoux A, Bayard D, Breslin C. Unexpected events: learning opportunities or injury risks for apprentices in low-skilled jobs? A Pilot Study. *Safety Science*, 2015.

Leao ALM, Barbosa-Branco A, Turchi MD, Steenstra I, Cole D. Burden of diagnosis-specific sickness absences among newly employed public workers. *American Journal of Public Health*, Feb 2015.

Stolwijk C, Castillo-Ortiz J-D, Gignac MAM, Luime J, Boonen A, and the OMERACT Work Productivity Group. Which Contextual Factors have an important influence on Work Outcome in patients with Ankylosing Spondylitis? A Systematic Literature Review within the OMERACT Worker. *Arthritis Care & Research*, 2015.

Richmond S, Chambers A, Mustard CA, Logan L, Macarthur C. A comprehensive framework to integrate evidence into decision-making for intermediary organizations. *Implementation Science*, 2015.

Roseboom KJ, van Dongen JM, Tompa E, van Tulder MW, Bosmans JE. Economic evaluations of health technologies in Dutch healthcare decision-making: a qualitative study of the current and potential use, barriers, and facilitators. *Implementation Science*, 2015.

Williams-Whitt K, Kristman VL, Shaw WS, Soklaridis S, Reguly P. Step-by-step decision-making and strained resources: A qualitative study of supervisors' experiences in accommodating back injured workers. *Human Resource Management Journal*, June 2015.

Contribution to Books

MacEachen E & Kosny A. Qualitative evidence in occupational health. *Handbook of Qualitative Research for Evidence-Based Practice*, Co-Edited by Karin Olson, Richard Young, and Izabela Schultz. Springer, 2015.

Mustard CA. Workplace Injuries. In Canadian Injury Prevention Resource. Parachute. Submitted 2015.

Tompa E. (forthcoming). Labour Market Flexibility or Employment Insecurity? Towards Healthy and Productive Work. Chapter 6 in: Social Determinants of Health: Canadian Perspectives, Fourth Edition, Raphael D (ed.). Toronto: University of Toronto Press, 2015.

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, 2015.

Other Papers, Unpublished Reports and Reviews

Gross DP, Steenstra IA. Final Report for the Workers' Compensation Board of Manitoba Research and Workplace Innovation Program. For Project Entitled: Clinical Decision Support Tools for Managing Disabling Musculoskeletal Disorders. June 16, 2015.

Kristman V, Brison RJ, Bédard M, Chisholm S, Reguly P. Prognosis for Mild Traumatic Brain Injury in the Elderly Population: a Pilot Cohort Study. Final Scientific Report. Prepared for the Ontario Neurotrauma Foundation. March 2, 2015.

Mustard, C. Institute for Work & Health. CIHR Institute of Aging Newsletter: Canadian Institutes of Health Research (Ottawa, Ont.) p. 4 [article on IWH in PDF newsletter of CIHR Institute of Aging]. <http://cihr-irsc.gc.ca/e/8645.html>. June 17, 2015.

Tompa E, Buettgen A, Mahood Q, Padkapayeva K, Posen A, Yazdani A. Literature Review of Types of Workplace Accommodations Made for Persons with Visible Disabilities: Final Report. Employment and Social Development Canada. May 2015.

Media and Web

Bernier, L. Permanent impairment from work-related injuries linked to early death. Canadian Safety Reporter. Thomson Reuters Canada (Toronto, Ont.), April 2015, pp. 2, 7 [article in print newsletter on Heather Scott-Marshall's research, including quotes based on interview with Cam Mustard]. Available to subscribers at: <http://www.safety-reporter.com/articleview/23937-permanent-impairment-from-work-related-injuries-linked-to-early-death>

Cottrill, J. Ontario welcomes conclusions of mining-safety review. OHS Canada This Week: Business Information Group (Toronto, Ont.), April 21, 2015 [online article included in April 21 edition of weekly e-alert of OHS Canada magazine; mentions Cam Mustard as member of Mining Safety Review panel]. Article available at: http://www.ohscanada.com/health-safety/ontario-welcomes-conclusions-of-mining-safety-review/1003346876/?utm_source=OHS&utm_medium=email&utm_campaign=OHS-EN04212015.

Cottrill, J. Ontario welcomes mining-safety recommendations. Canadian Occupational Health & Safety News: Business Information Group (Toronto, Ont.), April 16, 2015 [article in online, subscription-based newsletter mentioning Cam Mustard as member of Mining Safety Review panel]. Article available at: <http://www.cohsn.com/2015/04/16/ont-government-welcomes-mining-safety-recommendations/>

La Rose L. Adequate rest and recovery critical to help workers avoid burnout. The Canadian Press (Toronto, Ont.), June 29, 2015 [CP news wire article that quotes Cam Mustard on impact of overwork on health].

Mustard, C. Institute for Work & Health. CIHR Institute of Aging Newsletter: Canadian Institutes of Health Research (Ottawa, Ont.), June 17, 2015, p. 4 [article on IWH in pdf newsletter of CIHR Institute of Aging]. Not yet published online; should eventually be available at: <http://cihr-irsc.gc.ca/e/8645.html>

Research Project Funding: Awarded in 2015

Jetha A, Breslin C, Furrie A, Smith F, Work integration needs analysis of the school---to---work transition for young adults with disabilities in Ontario. CRWDP Seed Grant, \$10,000, 1 year.

Kristman VL, Corbière M, Shaw W, Cernigoj M. Supervisor and worker perspectives on workplace accommodations for mental health disorders. WCB Manitoba Scientific Grant, \$154,889, 2 years.

Mustard CA, Tompa E. Employer investments in occupational health and safety: establishing benchmarks for Ontario. MOL ROP R4W, \$250,000, 2 years.

Mustard CA, Tompa E. Tackling health inequalities and extending working lives (THRIVE). CIHR Operating Grant: Health, Wellbeing and Extended Working Life, \$268,500, 2 years.

Saunders R, Breslin C, Myers K. Addressing essential skills gaps among participants in an OHS training program: a pilot study. Max Bell Foundation, \$225,312, 2 years.

Saunders R, Myers K, Breslin FC. Addressing essential skills gaps among participants in an OHS training program: a pilot study. MOL ROP R4W, \$220,000, 2 years.

Smith PM, Saunders R, Tompa E, Breslin FC, LaMontagne A. Examining the impact of mandatory awareness training on worker OH&S vulnerability in Ontario. MOL ROP R4W, \$263,994, 2 years.

Smith PM, Breslin FC, LaMontagne A, Saunders R, Tompa E. Evaluating the impact of mandatory awareness training on OH&S vulnerability in Ontario. CIHR Operating Grant Intervention Research, \$198,791, 2 years.

Steenstra I, Cullen K, Irvin E, Beaton D, Van Eerd D. Labour force participation in older workers and musculoskeletal disorders, a scoping review. CRE-MSD Seed Grant, \$10,000, 1 year.

Steenstra I, Irvin E, Cullen K, Scott-Marshall H, Van Eerd D. A review of policy changes to promote work participation in older workers. CRWDP Seed Grant, \$10,000, 1 year.

Van Eerd D (Co-PI), Chow A (Co-PI), Steenstra I, Amick B, King T. Developing and evaluating a multifaceted patient handling program among nurses to improve safety culture: a pilot study. CRE-MSD Seed Grant, \$9,600, 1 year.

Non- IWH Research Project Funding: Awarded in 2015

Beaton DE, Jain R, Bogoch E, Da Costa D, Fortin P, Gignac MAM, Jaglal S, Josse R, Kennedy C, Mamdani M, Rotondi N, Sale J, Sujic R, Thorpe K. (2015). "Make this break your last": pilot testing an educational intervention to improve fragility fracture patients' awareness of their risk of re-fracture. Canadian Institutes of Health Research (CIHR), \$210,196 over 2 years.

Bigelow P, Dickey J, Tompa E. (2015). Intervening in the transportation sector to reduce driver fatigue, low back pain, discomfort and increase vehicle safety. Workers Compensation Board of Manitoba. \$127,098 over 2 years.

Rueda S, Mulsant B, Kurdyak P, Dubey A, Greenberg A, Heath M, Roerecke M, Bonato S, Zaheer J, de Oliveira C, Wilson M, Irvin E, Rehm J. (2015). Managing complexity in psychiatric and medical care: a systematic review of the effectiveness of interventions to improve health outcomes in people living with schizophrenia and chronic medical conditions. Canadian Institutes of Health Research (CIHR) Knowledge Synthesis, \$100,000, 1 year.

White M, Steenstra I, Wagner S, Dionne C, O'Hagan F, Larivière C, Christian J, Geary J, Bogoyo T, Stoffman L, Hyde T. Creating a Strategic Roadmap to Operationalize the Health and Work Productivity Portal: An Academic Community Knowledge Translation Partnership, Phase 1. Canadian Institutes of Health Research (CIHR) Community Support Grant, \$6,500, 1 year.

Research Project Funding: Submitted in 2015

Amick BC (Co-PI), Van Eerd D (Co-PI), Hogg-Johnson S, Robson L Big Data vs. Right Data: What Leading Indicators Information is Needed in Mining? MOL ROP, \$258,812, 2 years.

Amick BC (Co-PI), Van hulle H (Co-PI), Van Eerd D, Beaton D, Riahi S. Clinical Practice Assessment Tool (CPAT): A Tool to Prevent of Client-on-Staff Violence in Mental Healthcare. MOL ROP, \$144,550, 2 years.

Breslin FC, Kosny A, Robson L, Hogg-Johnson S, Amick BC. Understanding how to support the safe integration of new workers in small firms. MOL ROP, \$282,640, 2 years.

Furlan A, Van Tulder M, Ammendolia C, Irvin E, Lao L, Munhall C, Schoene M. Acupuncture for low-back pain: A Cochrane Systematic Review with Meta-analyses. CIHR Knowledge Synthesis, \$100,000, 1 year.

Gignac MAM, Kristman V, Kosny A, Cameron J. Conceal or Reveal? Facilitators and Barriers to Older Workers' Communication of Accommodation Needs in the Workplace and its Relationship to Work Outcomes. SSHRC Insight Grant, \$297,860, 3 years.

Gignac MAM, Saunders R, Van Eerd D, Jetha A, Franche R-L, MacDermid J, Tompa E, Beaton D, Breslin FC, Hogg-Johnson S. Sustainable work participation: work disability prevention and improvement of employment outcomes among those with chronic, episodic health conditions. SSHRC\CIHR HWP, \$145,950, 2 years.

Irvin E (Co-PI), Van Eerd D (Co-PI), Amick III BC, Cullen K, King T, Munhall C, Mahood Q, Cardoso C. Implementation of effective musculoskeletal injury prevention: A synthesis of evidence and practice. WCB Manitoba Scientific Grant, \$120,262, 2 years.

Irvin E (Co-PI), Van Eerd D (Co-PI), Amick III BC, Cullen K, Munhall C, Mahood Q, Cardoso C. MSD Prevention: a practical implementation guide. MOL ROP, \$59,295, 1 year.

Kosny A. A participatory approach to MSD prevention with electrical apprentices in Ontario. Occupational Health & Safety Prevention and Innovation Program (OHSPiP), \$149,550, 2 years.

Kosny A, Chambers A, Hayes J, Amad D, Saunders R, Flecker K, Grant-Jury H, McKee J. A Pilot and Formative Evaluation of a Health & Safety Toolkit for Immigrant Workers. WCB Manitoba Training and Education Grant, \$169,606, 2 years.

Kosny A, Gignac M, Mustard C, Chambers A. Examining implementation of workplace violence legislation in Ontario. MOL ROP, \$262,735, 2 years.

Kristman V, Dinh T, Chambers L, Matthews R, Moeller M, Mushquash C, Schiff R, Stroink M, Shaw W, Gignac M. Strengthening healthy and productive work in Canada's aboriginal population: Partnering with the Nokiwin Tribal Council. SSHRC\CIHR HWP, \$150,000, 2 years.

Mustard CA. Improving information on worker health protection in Ontario. MOL ROP, \$182,902, 2 years.

Mustard CA, Amick BC, Robson L, Kristman V, Jetha A, Gensby U, McLeod C, Kosny A. Strengthening disability management in the Ontario municipal sector. SSHRC\CIHR HWP, \$150,000, 2 years.

Robson L, Amick BC, Bigelow P, Hasle P, McLeod C, Van Eerd D, Yanar B, Yazdani A. Evaluation of an employer recognition program in the Ontario construction sector. MOL ROP, \$298,162, 2 years.

Smith PM, Bailly A, Breslin FC, Kosny A, LaMontagne A, McIntosh G, Saunders R, Tchernikov I, Tompa E. Using research evidence to identify, target and reduce occupational health and safety vulnerability in the Canadian labour market. Canadian Institutes of Health Research (CIHR) Knowledge to Action Grant, \$190,000, 2 years.

Smith PM, LaMontagne A, Ibrahim S, Cullen K, Breslin C, Franche R-L, Kosny A, Reavley N, Marchand A, Furlan A, Rueda S. Developing a feasible and effective approach to reduce work disability due to mental health conditions. SSHRC\CIHR HWP, \$149,354, 2 years.

Tompa E (Co-PI), Irvin E (Co-PI), McLeod C, van Dongen H, Mahood Q, Yazdani A. The business case for safety in small workplaces: An evidence-based handbook for decision makers. MOL ROP, \$165,313, 2 years.

Van Eerd D (Co-PI), Amick BC (Co-PI), Hogg-Johnson S, Robson L, Steenstra I, Mustard C, Wells R, Van hulle H. Implementing Participatory Organizational Change (iPOC): Evaluating a participatory intervention in long term care. MOL ROP, \$299,967, 2 years.

Van Eerd D (Co-PI), Cullen K (Co-PI), Irvin E, Gignac MAM, Cardoso S, Mahood Q, Dubey A, Geary J. Managing Depression in the Workplace – Bridging the Research-to-Practice Gap. WorkSafeBC Innovation at Work, \$49,970, 1 year.

Non-IWH Research Project Funding: Submitted in 2015

Lindsay S, Irvin E, Kirsh B, Stergiou-Kita M. Systematic review of qualitative research on workplace disclosure and accommodations for people with physical disabilities: Implications for research, policy and practice. CIHR Knowledge Synthesis, \$100,000, 1 year.

Verstappen S, Dixon W, Gignac MAM, Hammond A, Lunt M, McBeth J, Prior Y. Impact of fatigue and pain on work-life balance in patients with rheumatoid arthritis. Arthritis Research UK (ARUK).

Williams-Whitt K, Kristman V, Ansari M, Lyubykh Z. The impact of disability perceptions on supervisor-employee relationships and RTW outcomes. WCB Alberta Research Program, \$28,020, 1 year.

Williams-Whitt K, Smith PM, Kristman V. Understanding and supporting employment transitions after dementia diagnosis: A qualitative study and scoping review. Alzheimer's Society Research Funding Program, \$104,250, 2 years.

Research Personnel funding & Other Awards

Furlan A. CIHR New Investigator Award, \$100,000, 2015.

Smith PM. Examining gender/sex differences in the relationships between work stress and disease, work injury and the consequences of work injury. CIHR Chair, \$60,000, 2015.

2015 Institute for Work & Health Staff

* denotes staff no longer at the IWH

Research

Amick, Benjamin; PhD, Senior Scientist
Beaton, Dorcas; PhD, Senior Scientist
Bielecky, Amber; MSc, Research Coordinator
Bombardier, Claire; MD, FRCP(C) Senior Scientist
Buettgen, Alexis; Research Associate, PhD Student
Breslin, F. Curtis; PhD, Scientist
Canga, Albana; BA, Administrative Assistant
Cawley, Caroline, MSc Student*
Chen, Cynthia; MSc, Research Associate, Analyst
Cole, Donald; MD, Senior Scientist
Cullen, Kim; PhD, Research Associate
D'Elia, Teresa; MA, Project Coordinator
Dollack, Jocelyn; MHSc, Research Assistant/Administrative Assistant
Etches, Jacob; PhD, Research Coordinator
Furlan, Andrea; MD, PhD, Scientist
Gensby, Ulrick; PhD, Visiting Scientist
Gignac, Monique; PhD, Associate Scientific Director and Senior Scientist
Habrin, Shireen; Dip. Library and Information Technician, Library Technician
Heath, Charmaine; Dip. Business Administration, Administrative Assistant
Hogg-Johnson, Sheilah; PhD, Senior Scientist
Ibrahim, Selahadin; MSc, Associate Scientist
Iman, Sabrina; MSc, Research Assistant
Irvin, Emma; BA, Director, Research Operations
Kalcevich, Christina; MA, Research Associate*
Kelly, Allison; Dip. S.T. Administrative Editorial Assistant
Kennedy-Yee, Carol; MSc, Research Associate
Kosny, Agnieszka; PhD, Scientist
Kristman, Vicki; PhD, Associate Scientist
Latour-Villamil, Desiree; MA, Research Assistant
Lay, Morgan; MPH, Research Associate
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
Mahood, Quenby; MI, Manager, Library Services

Maselli, Paolo; Network Administrator/Systems Analyst
McLeod, Chris; PhD, Associate Scientist
Morassaei, Sara; MSc, Manager, Research Operations
Munhall, Claire; MA, Project Coordinator/ Managing Editor, Cochrane Back Review Group*
Nasir, Kay; BA, Research Assistant
Padkapayeva, Kathy; BA, Administrative Assistant
Posen, Andrew; MHP Practicum Student*
Raktoe, Shanti; BSc, Administrative Assistant
Robson, Lynda; PhD, Associate Scientist
Scott-Marshall, Heather; PhD, Associate Scientist*
Severin, Colette; MSc, Project Coordinator
Smith, Peter; PhD, Senior Scientist
Spencer, James, PhD Student, Research Associate*
Steenstra, Ivan; PhD, Associate Scientist*
Swift, Michael; MSc, Research Associate, Data Manager/Programmer
Tomba, Emile; PhD, Senior Scientist
Tonima, Sabrina; BA, Research Assistant
Van Eerd, Dwayne; MSc (Kin), MSc (HRM), PhD (c), Associate Scientist
Yao, Grant; BComm, Network Administrator/Systems Analyst
Yazdani, Amin; PhD, Research Associate

Knowledge Transfer & Exchange

Buccat, Kristina; Dip. Radio and Television Production, Administrative Assistant
Cardoso, Siobhan; MPH, Research Associate/KTE Associate
Dvorak, Jan; BA, Web & Design Coordinator
King, Trevor; MA, KTE Associate*
Macdonald, Sara; QEHS Management Diploma, KTE Associate
Moser, Cindy; BA, Communications Manager
Saunders, Ron; PhD, Director of Knowledge Transfer and Exchange, Senior Scientist
Wu, Yuen; MA, Communications Associate

Corporate Services

Cicinelli, Mary; CHRL, Director, Human Resources & Corporate Services
Maccarone, Dylan; Accounting Clerk
Mansurova, Lyudmila; BSc, Administrative Coordinator, Office of the President
Mustard, Cameron; ScD, President, Senior Scientist
Sir, Cathy; CMA, Manager, Financial Services

2015 Institute for Work & Health Research Trainees

Adihetty, Chamila; PhD Student

Bogaert, Laura; PhD Student

Carnide, Nancy; PhD Student

Fan, Jonathan; PhD Student

Van Eerd, Dwayne; PhD Student

Wong, Imelda; PhD, Mustard Fellow

2015 Research/Professional Collaborations and Networks, Appointments and Offices

AMICK, Benjamin

Adjunct Professor, University of Texas School of Public Health
Advisory Board Member, Harvard Center For Work and Health

BEATON, Dorcas

Member, Executive committee, OMERACT (Outcome Measurement in Rheumatology), November 2014 - present
Member, Fragility Fracture Network (FFN), August 2013 – Present.
Member, Scientific advisory committee, OMERACT (Outcome Measurement in Rheumatology), November 2013 - present
Co-Chair, Worker Productivity Measurement Initiative, OMERACT (Outcome Measures in Rheumatology 2006-present.
Course Instructor Committee, Institute of Health Policy, Management and Evaluation, Faculty of Medicine, University of Toronto (2009-present)
Ontario Graduate Scholarships (OGS) Review Panel, Department of Occupational Sciences and Occupational Therapy, University of Toronto (2008-present)
Advisory Meetings, Institute of Health Policy, Management and Evaluation, Faculty of Medicine, University of Toronto (2006-present)
Member, Research Support & Partnership Committee, St. Michael's Hospital (2011-present)
Research Ethics Board, St. Michael's Hospital. March 2001-April 2004 (ad hoc member: 2004- present)
Cataract Surgery Decision Tool, Advisory Committee, University Health Network, January 2016 – present
Interprofessional Practice Based Research Advisory Board, St. Michael's Hospital, January 2015 – present

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, Department of English and Liberal Studies

CULLEN, Kim

Registered Kinesiologist. College of Kinesiologists of Ontario
Member: Ontario Kinesiology Association
Member: Canadian Association for Research on Work and Health
Invited Delegate: CIHR IMHA Young Investigators Forum

FURLAN, Andrea

Staff Physician: Psychiatry, Toronto Rehabilitation Institute
Associate Professor: Department of Medicine, Division of Psychiatry, University of Toronto
Associate Member: Institute of Medical Science, University of Toronto
Scientist: Health Services Research, Monitoring and Evaluation, Institute for Work & Health
Member: Ontario Ministry of Health Narcotics Monitoring Working Group
Member: Ontario Ministry of Health Opioid Education Working Group
Co-chair: ECHO Ontario
Member: Canadian Association of Physical Medicine and Rehabilitation
Member: Canadian Pain Society
Member: Canadian Academy of Pain Medicine
Member: International Society of Physical & Rehabilitation Medicine (ISPRM)
Member: WSIB Drug Advisory Committee
Member: Clinical Sciences Committee, International Society of Physical and Rehabilitation Medicine (ISPRM)
Representative of the Institute of Medical Sciences (IMS) Department of the University of Toronto in the "CoPAS" Collaborative Program in Addiction Studies

GIGNAC, Monique

Associate Scientific Director, Institute for Work and Health, Toronto, Ontario
Senior Scientist, Institute for Work and Health, Toronto, Ontario

Professor, Dalla Lana School of Public Health, University of Toronto, Status Appointment
Affiliate Scientist, Division of Health Care & Outcomes Research, University Health Network
Full Member, Graduate Department of Public Health Sciences, University of Toronto
Chair, Institute Advisory Board (IAB), Institute for Musculoskeletal Health and Arthritis (IMHA), Canadian Institutes of Health Research (CIHR), 2011 to present
Chair, Scientists Meeting, Institute for Work and Health, 2015 to present
Decanal Promotions Committee, Dalla Lana School of Public Health (DLSPH), University of Toronto, 2015 to present
Member, Executive Committee, Institute for Work and Health (IWH), 2014 to present
Chair, Plenary Committee, Institute for Work and Health (IWH), 2014 to present
Member, Ontario Episodic Disabilities Forum (OEDF), 2011 to present,
Research Mentor, Health Care, Technology & Place (HCTP) Transdisciplinary Research Training Program, University of Toronto, 2002 to June 2015
Member, Advisory Council, Community Health Solutions, Simon Fraser University, British Columbia, 2013 to present
Member: Advisory Committee, "Work with Us," Mood Disorders Society of Canada (MDSC) and The Arthritis Society (TAS), 2013 to Dec 2015
Member: Scientific Advisory Committee (SAC), The Arthritis Society (TAS), 2011 to present
Member, Technical Advisory Group (TAG) on Persons with Disabilities Data and Information Strategy, Employment and Social Development Canada (ESDC) in partnership with Statistics Canada, 2011 to present
Associate Editor, Arthritis Care & Research (Impact factor: 4.71)
Member, International Working Group for the Measurement of Work Productivity, Outcome Measures in Rheumatology (OMERACT)
Planning Co-Chair: Summer Program in Aging (SPA), "More Years, Better Lives: The Health, Wellness and Participation of Older Adults in the World of Work." Sponsored by CIHR's Institute of Aging; Institute of Gender and Health; Institute of Musculoskeletal Health and Arthritis. Institute for Work and Health (Host 2015)
External Reviewer: McMaster University, Department of Clinical Epidemiology and Biostatistics, July 2015
External Reviewer: Université de Montréal, School of Rehabilitation, August 2015
Member: American Psychological Association (APA)
Member: Canadian Association on Gerontology (CAG)
Member: Gerontological Society of America (GSA)
Member: Association of Rheumatology Health Professionals (ARHP)

HOGG-JOHNSON, Sheilah

Member: Statistical Society of Canada
Professional Statistician: Statistical Society of Canada
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

Member: Canadian Association for Research on Work and Health
Member CIHR Spring/Fall 2015 Knowledge Synthesis Grant Competition Review Committee

JETHA, Arif

Contributing Content Expert: Spinal Cord Injury Rehabilitation Care High Performance Indicators Project (SCI-HIGH), Toronto Rehabilitation Institute, University Health Network
Project Collaboration: Arthritis Program, Centers for Disease Control and Prevention, Atlanta, GA, USA
Member: Centre for Disability Participation Project, McMaster University
Collaborator: Centre for Work Disability Policy, IWH/McMaster University
Adjunct Assistant Professorship (2013 to Present): DeGroot School of Business, McMaster University, Hamilton

KOSNY, Agnieszka

Steering Committee: Bancroft Institute
CRWDP Co-Investigator/Academic Partner

KRISTMAN, Vicki

Member: Canadian Association for Research on Work and Health
Board Member & 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
Member: Canadian Institute for the Relief of Pain and Disability
Member: Brain Injury Association of Canada
Member: American Congress of Rehabilitation Medicine
Lead for Hopkinton Conference Group #1: Workplace Factors; "Improving research of employer practices to prevent disability", October 14-16, 2015, Hopkinton, Massachusetts, MA, USA

MUSTARD, Cameron

Member, Teaching Evaluation Committee, Dalla Lana School of Public Health, University of Toronto, November 2015 -
Member, Strategic Plan Sub-Committee, Performance Measures and Benchmarks, Dalla Lana School of Public Health, University of Toronto, June-September 2015
Member, Review Team, Department of Epidemiology and Community Medicine, University of Ottawa, April 29-May 1, 2015
Member, Dean's Advisory Board, Dalla Lana School of Public Health, University of Toronto, April 2015 to March 2018
Member, Expert Advisory Committee, Parachute, July 2014 to June 2016.
Member, Advisory Group, Mining Health Safety and Prevention Review. Ontario Ministry of Labour, December 2013 to February 2015
Member: Quality Committee, Parachute, 2013 – 2015
Member: Advisory Committee, Lancaster House Health and Safety Conference, 2008 –
Member: Advisory Board International Journal of Social Security and Workers Compensation, 2008 –
Member: Board of Advisors, RAND Center for Health and Safety in the Workplace, 2008 –
Member: Board of Directors, Ontario Neurotrauma Foundation, 2008 –
Member: Ontario Health Quality Council Performance Measurement Advisory Board, 2007 –
Member: Scientific Visitors Advisory Board, Liberty Mutual Research Institute for Safety, 2007 –
Member: Steering Committee: Toronto Region Research Data Centre, 2005 –
Member: Editorial Advisory Board, Longwoods Review, 2003 –
Affiliate: Centre for Health Services and Policy Research, University of British Columbia, 2008 –

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

SMITH, Peter

Associate Editor: Australian Journal of Social Issues
Reviewer: CIHR New Investigator Awards 2014 to 2016
Member: Scientific Committee for the 2016 Epidemiology in Occupational Health (EPICOH) Conference.

Member: Scientific Committee of the 2016 International Conference on Sustainable Employability
Member: Scientific Committee 2016 Canadian Association for Research on Work & Health (CARWH)
Mentor: Canadian Institutes of Health Research Summer Program on Aging. More Year, Better Lives Health, wellness and participation of older adults in the world of work. Toronto, June 1 to June 4, 2015
Co-Chair: Indicators, Evaluation and Reporting Working Group. Workplace Violence Prevention in Health Care. MOL and MOHLTC Engagement.

STEENSTRA, Ivan

Member: Canadian Association for Research on Work and Health
Member: Workers' Compensation Research Group
Member: Canadian Evaluation Society
Member: Editorial Board, Journal of Occupational Rehabilitation

TOMPA, Emile

Co-director: Centre for Research on Work Disability Policy
Member: Canadian Association for Research on Work and Health
Member: Workers' Compensation Research Group
Member: Mentorship Committee, Work Disability Prevention CIHR Strategic Training Program, University of Toronto
Member: Editorial Board, Journal of Occupational Rehabilitation
Member: Steering Committee, Bancroft Institute for Studies in Workers' Compensation and Work Injury
Member: Syme Fellowship Selection Committee, 2015
Member: MPH Admission Committee, Dalla Lana School of Public Health, University of Toronto, 2015
Advisory Committee, EU-OSHA project entitled "Estimating the costs of work-related injuries, illnesses and death at the European Level," 2015-present
Technical Committee Member, Canadian Standards Association Initiative on Work Disability Prevention, 2014-present

VAN EERD, Dwayne

Researcher, Centre for Research Expertise for Musculoskeletal Disorders, University of Waterloo
Member, Knowledge Translation Trainee Collaborative supported by KT Canada.

WONG, Imelda

Member: Scientific Director - International Commission on Occupational Health: Scientific Committee on Shiftwork and Working Time 2012 -
Member: Human Factors and Ergonomics Society 2014 -

Teaching, Educational and Service Activities

AMICK, Benjamin

Service Activities

Editorial Board: Journal of Occupational Rehabilitation, 2010 –
Scientific Chair: PREMUS 2016, 2013 –

BEATON, Dorcas

Teaching/Educational Role

Scientist and Director, Mobility Program Clinical Research Unit, St. Michael's Hospital, Toronto, Ontario. February 2001 – present.
Associate Professor, Department of Occupational Sciences and Occupational Therapy, Faculty of Medicine, University of Toronto. July 2008 – present.
Senior Scientist, Measurement Stream of Research, Institute of Work & Health, Toronto, Ontario. February 2014 – present.
Full Member, Rehabilitation Sciences Institute, University of Toronto, Toronto, Ontario. July 2001 – present.

Full Member, School of Graduate Studies (SGS), Appointed to: Institute of Health Policy, Management and Evaluation, Clinical Epidemiology Program, University of Toronto, Toronto, Ontario. September 2001 – present.
Course Coordinator, Graduate Course, Clinical Epidemiology. Measurement in Clinical Research. 2002 – 2015.
Lecture. Measurement in rehabilitation research. 1999 – present.
Lecturer: Advanced measurement course, University of Toronto
Lecturer: Advanced Clinician Practitioner in Arthritis Care (ACPAC), St. Michael's Hospital, 2011- present.

Service Activities

Operating Grants: Canadian Institutes of Health Research, SSHRC, The Arthritis Society, Hospital for Sick Children Foundation, The Liver Foundation, Workers Safety and Insurance Board Research Advisory Committee, Work Safe BC.

Journals: Journal of Clinical Epidemiology, Medical Care, JAMA, Journal of Rheumatology, Quality of Life Research, International Journal of Epidemiology, Journal of Hand Therapy, Journal of Bone and Joint Surgery (American), Physical Therapy, Arthritis Care Research, Spine, Archives of Physical Medicine and Rehabilitation.

Grant Review Panels

CIHR Stage 2 Foundation Grant Program (2015 – present)

BRESLIN, Curtis

Teaching/Educational Role

Associate Professor: Dalla Lana School of Public Health, University of Toronto

Associate Member: School of Graduate Studies, University of Toronto

Post-doctoral fellow, Arif Jetha, Co-supervisor

Guest Lecturer: CHL 5804, Health Behavior Change, University of Toronto

Service Activities

Editorial Board, Journal of Occupational Health Psychology

Reviewer: Ontario Ministry of Labour, Request for Proposal 2014 submission

Advisory Committee: Occupational injury among young workers project (PI: Sandra Moll & Mary Stergiou-Kita) funded by the Ontario Ministry of Labour

CULLEN, Kim

Teaching/Educational Role

Seminar Facilitator. Evidence-based Practice (OT 747). Occupational Therapy, School of Rehabilitation Science, McMaster University

FURLAN, Andrea

Teaching/Educational Role

Associate Professor: Department of Medicine, Faculty of Medicine, University of Toronto

Instructor: IWH Systematic Reviews Workshop

PhD Thesis Committee member: N. Carnide,

MSc Thesis Committee member: B. Rafat, M. Pelcowitz, A. Bartolini

Post-graduate Supervisor, M. Prieto

Undergraduate teaching:

Undergraduate MD:

Pharmacological treatment of pain, Mechanisms, Manifestations and Management of Diseases – Department of Medicine - Faculty of Medicine - University of Toronto

Graduate teaching:

Pain Management: Practical aspects of prescribing opioids for patients with chronic pain, Faculty of Nursing, University of Toronto

Service Activities

Journal Referee: American College of Occupational and Environmental Medicine Journal (ACOEM), Annals of Internal Medicine, Canadian Medical Association Journal, Cochrane Back Review Group, Journal of Rehabilitation Medicine, Journal of Rheumatology, Pain Research & Management, Spine
Editorial Board: Journal Rehabilitation Medicine
Co-ordinating Editor, Editorial Board: Cochrane Back Review Group
CIHR Grant Review Panel Chair: Partnership for Health systems improvement
CIHR Knowledge Synthesis Grant Committee Member
External Advisory Board, NIH NCCAM

GIGNAC, Monique

Teaching/Educational Role:

Course Co-instructor: CHL5203H: Public Health Research Methods. Dalla Lana School of Public Health, University of Toronto
Lecturer: HAD5302H: Measurement in Clinical Research. Health Policy, Management and Evaluation, University of Toronto
Research Mentor, Health Care, Technology & Place (HCT&P) Transdisciplinary Research Training Program, University of Toronto
Mentor, Summer Program in Aging (SPA) "More Years, Better Lives: The health, wellness and participation of older adults in the world of work." Sponsored by the Canadian Institutes of Health Research: Institutes of Aging; Gender and Health; Musculoskeletal Health and Arthritis. Toronto, June 1-5, 2015
Post-Doctoral Fellowship Advisor: Imelda Wong, Ph.D.
PhD Supervisor: Angela Pickard
MSc Co-Supervisor (with D. Beaton): Stacey Morrison
PhD Committee member: 1) Mayilee Canizares; 2) Ellie Pinsker
MSc Committee member: 1) Sabrina Koehler

Mentorship Award:

Kiran van Rijn Award: Outstanding contributions made to the Health Care, Technology and Place (HCTP) Canadian Institutes of Health Care (CIHR) Strategic Research Training Program, March 2015.

Graduate Thesis Examiner

Ph.D. External Examiner: Stephanie Filbay (March 2016). "Longer-term quality of life following anterior cruciate ligament reconstruction" Health and Rehabilitation Sciences, University of Queensland, Australia.
Supervisor: Kay Crossley Ph.D. External Examiner: Adalberto Loyola Sanchez (April, 2015). "The problem of arthritis in the Mayan municipality of Chankom: A situational analysis for developing a community-based rehabilitation program."
McMaster University. Supervisor: Julie Richardson, M.Sc. Internal Examiner: Eileen Nicolina Guerriero (September, 2015). "Rehabilitation utilization following a work-related traumatic brain injury: An examination of workers' compensation claims in Victoria, Australia." Rehabilitation Sciences Institute, University of Toronto.
Supervisor: Angela Colantonio.

HOGG-JOHNSON, Sheilah

Teaching/Educational Role

Associate Professor: Dalla Lana School of Public Health, Faculty of Medicine, University of Toronto, 1995-
Associate Professor: Institute of Health, Policy, Management & Evaluation, University of Toronto, 2001 –
Chair Mentor: CIHR Work Disability Training Program
Mentor: Symposium on Methodological Challenges in Work Disability Prevention Research: Cohort Studies, CIHR Work Disability Training Program
Teaching: HAD 5302 Measurement in Clinical Research, University of Toronto
Instructor: Privacy Policy Training, IWH
PhD Thesis Committee Member: Orit Schieir, Mayilee Canizares Perez, Chamila Adhihetty
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 (status only): University of Toronto, Dalla Lana School of Public Health, 2002 –2015
Promoted to Assistant Professor (status only) in 2015
Co- teaching: Advanced Quantitative Methods in Epidemiology (Winter 2015)
Co-teaching: a new EPI reading course on Causal Inference and Counterfactuals (Fall 2015)
PhD Thesis Committee Member: Mana Rezai and Alanna Mihic, Dalla Lana School of Public Health.

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

CIHR Knowledge Synthesis grant Spring and Fall 2015 peer reviewer
Reviewer for the Journal of Rheumatology
Reviewer for CADTH, PREMUS

JETHA, Arif

Teaching/Education

Co-Instructor with Ron Saunders: CHL 5308: Public Health Policy Tools. Course director: Robert Schwartz, Dalla Lana School of Public Health, University of Toronto.
Lecturer: Comparative Program on Health and Society (CPHS). Career Development Lecture Series. Munk School of Global Affairs University of Toronto. Toronto, ON, Canada.

Service Activities

Guest speaker (on behalf of the Institute): Health and Safety Meeting. Ontario Power Generation. Ajax, Canada
Reviewer: Journal of Occupational Rehabilitation
Reviewer: Journal of Rheumatology
Reviewer: Arthritis Care and Research
Reviewer: Rheumatology
Conference abstract reviewer: American College of Rheumatology

KOSNY, Agnieszka

Teaching, Educational and Service Activities

Assistant Professor (Status Only) – Dalla Lana School of Public Health (Social and Behavioural Sciences)
PhD candidate entrance review committee - Dalla Lana School of Public Health (Social and Behavioural Sciences)
CIHR Master's award reviewer
PhD activity report reviewer - Dalla Lana School of Public Health (Social and Behavioural Sciences)
Comprehensive Exam Review Committee - Dalla Lana School of Public Health (Social and Behavioural Sciences)
Plenary Committee (IWH)
Qualitative Research Group (IWH)

KRISTMAN, Vicki

Teaching/Educational Role

Associate 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 II, Department of Health Sciences, Lakehead University
Instructor, Whole group Sessions on Epidemiology, Research and Statistics and Framework for Critical Appraisal & Evidence-based Medicine, Northern Ontario School of Medicine
MPH Committee Member: Joseph Nguemo Djiometio Department of Health Sciences, Lakehead University
MHS Supervisor: Jennifer Asselstine, Jessica Lowey, Department of Health Sciences, Lakehead University
PhD Committee Member: Mana Rezai, Dalla Lana School of Public Health, University of Toronto

Service Activities

Grant Reviewer: Oct, 2015 Ministry of Labour ROP Grants , Mar 2015, CIHR Community and Population Health Review Committee, Transitional Open Operating grants competition
Award Reviews: CIHR Rising Star Award Review Committee, 2015 – 2016
Journal Reviewer: BMC Research Notes, BMC Public Health, BMC Pediatrics, Movement Disorders, Ammons Scientific, Medicine and Science in Sport and Exercise, 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
Member: Lakehead University Research Ethics Board
CIHR Delegate, Lakehead University

MUSTARD, Cameron

Teaching/Educational Role

Primary Supervisor for Laura Bogaert, PhD candidate, Dalla Lana School of Public Health, University of Toronto.
Co-instructor. CHL 5426. Population Perspectives for Epidemiology. Dalla Lana School of Public Health. September-December 2015.
Professor: Public Health Sciences, University of Toronto, University of Toronto Dalla Lana School of Public Health, July 2002 –
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

Peer Review: Chair, CIHR Public, Community & Population Health Grants Committee, August 1, 2015 to July 31, 2016.
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
Guest lecturer: OHS 818 System Management II, Ryerson University

Service Activities

Associate Editor: International Journal of Workplace Health Management

Journal Referee: International Journal of Injury Control and Safety Promotion, Safety and Health at Work, Safety Science
Member, Public Services Health & Safety Association Advisory Council for Municipal and Community Affairs, 2014-present.

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

Member, IWH Plenary Committee

SMITH, Peter

Teaching/Educational Role

Associate Professor: Dalla Lana School of Public Health, University of Toronto
Associate Professor: School of Public Health and Preventive Medicine, Monash University
Reviewer for Masters in Public Health Admissions for the Dalla Lana School of Public Health, University of Toronto, 2014
Member Admissions Committee PhD Admissions for the Dalla Lana School of Public Health, University of Toronto, 2015
Member, Curriculum Review Committee for Epidemiology Program, Dalla Lana School of Public Health, University of Toronto.
Course Instructor: CHL5426: Population perspectives in epidemiology
Course Director: CHL7001H F2: Epidemiological Methods for Mediation Analyses
Guest Lecturer: Developing a measure. HAD5302 – Measurement in Clinical Research.
External Reviewer. Steve Geoffrin PhD Defence. Aggression and accountability: how caregivers and law enforcers cope. University of Montreal. August 12, 2015
External Reviewer. Carl Étienne Juneau PhD Defence. Is socioeconomic position during childhood associated with physical activity during adulthood following the accumulation of risk model with additive effects. University of Montreal. December 9, 2015
Departmental Reviewer. Cesar Hincapié PhD Defence. Topic: Chiropractic Care and Risk For Acute Lumbar Disc Herniation: A Mixed Methods Approach. August 27, 2015

STEENSTRA, Ivan

Teaching/Educational Role

Assistant Professor (Status Only): Dalla Lana School of Public Health, University of Toronto
Lecturer, Lecture CHL 5110 - Theory and Practice of Programme Evaluation. Lecture on measurement. Public Health Sciences, University of Toronto
Researcher, Center of Research Expertise for the Prevention of Musculoskeletal Disorders, University of Waterloo, Waterloo, ON, Canada

Service Activities

Reviewer: Spine, Journal of Occupational Rehabilitation, Biomed Central, Occupational and Environmental Medicine, Scandinavian Journal Occupational and Environmental Health.

TOMPA, Emile

Teaching/Educational Role

Adjunct Associate Professor: Department of Economics, McMaster University, 2012-present
Adjunct Assistant Professor: Public Health Sciences, University of Toronto. 2004-present

Sessional Lecturer: Centre of Industrial Relations and Human Resources, 2013-present
Co-Instructor, Advanced Topics in Health Economics, McMaster University, 2015
Course Coordinator and Instructor, Current Topics: Health and Safety (IRE 2715H/IRE1655H), Centre for Industrial Relations and Human Resources, University of Toronto, 2015
Guest Lecturer, Theory and Practice of Program Evaluation, Department of Public Health Sciences, University of Toronto, 2015
Second/Third Year Lecturer, Work Disability Prevention CIHR Strategic Training Program, University of Toronto, 2015
Committee Member for Kenneth Scott, Ph.D. candidate, Colorado School of Public Health, University of Colorado at Denver, September 2014-present
Committee Member for Pam Lahey, Ph.D. candidate, School of Rehabilitation Sciences, McMaster University, September 2014-present
Committee Member for Alexis Buettgen, Ph.D. candidate, Critical Disabilities Studies, York University, December 2015-present
Committee Member for Christina Hackett, Ph.D. candidate, Health Policy, McMaster University, September 2015-present
Committee Member for Saeed Rana, Ph.D. candidate, Department of Economics, McMaster University, January 2015- present
Practicum Student Mentor for Andrew Posen, MPH student from Dalla Lana School of Public Health, University of Toronto, 2014-2015
Mentor for Masters in Public Health students at Dalla Lana School of Public Health, University of Toronto, 2014-2015)
Mentor, Work Disability Prevention CIHR Strategic Training Program, University of Toronto, 2015
Course Mentor, Introduction to Public Health (CHL5004H), Dalla Lana School of Public Health, University of Toronto, 2015
Summer Student Mentor, James Spencer, PhD Candidate, Department of Economics, McMaster University, 2015
Post-doctoral Mentor, Amin Yazdani, funded by CIHR, McMaster University, 2015-present

Service Activities

Editorial Board, Journal of Occupational Rehabilitation (2008-present)
Manuscript Reviewer (2015): Applied Ergonomics, Canadian Journal of Public Health, Health Education Research, Journal of Labour Research, Journal of Occupational and Environmental Medicine, Journal of Occupational Health, Journal of Occupational Rehabilitation, PLOS ONE

VAN EERD, Dwayne

Teaching/Educational Role

Course Instructor, The Systematic Review Workshop Module 1 November 27, 2015 – Toronto, Ontario. Topic taught: Systematic Reviews of Observational Studies
Course Instructor, The Systematic Review Workshop May 8, 2015 – Toronto, Ontario. Topic taught: Systematic Reviews of Observational Studies
Association of Canadian Ergonomists (ACE) Webinar April 15, 2015 - Canada. Topic taught: Effectiveness of OHS Interventions to Prevent MSDs.

WONG, Imelda

Service Activities

Reviewer: Ergonomics, PLoS One, Journal of Occupational and Environmental Medicine, 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. Carlo Ammendolia is a clinical epidemiologist and an assistant professor in the Department of Health Policy, Management and Evaluation at the University of Toronto. In 2012, he was appointed to the first "professorship in spine" at the University of Toronto, a new position funded by the Canadian Chiropractic Research Foundation. Dr. Ammendolia is also a staff clinician in the Department of Medicine at Mount Sinai Hospital. His research interests include designing and implementing workplace health promotion and return-to-work programs, developing and testing non-operative treatments for spinal stenosis and herniated discs, and conducting systematic reviews on interventions for back pain.

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 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. Claire Bombardier is a professor of medicine and director of the Division of Rheumatology at the University of Toronto. She holds a Canada Research Chair in Knowledge Transfer for Musculoskeletal Care, as well as a Pfizer Research Chair in Rheumatology. She's a rheumatologist at Mount Sinai Hospital and a senior scientist at the Toronto General Research Institute. From 1995-2013, she was a co-editor at the Cochrane Back Review Group housed at the Institute for Work & Health, where she now serves on the editorial board as a founding editor emeritus. Professional interests include the improvement of clinical effectiveness, optimum use of technology and drugs, clinical economics, performance measurement/program evaluation, health research methods (clinical trials), knowledge transfer and workplace/rehabilitation, with a focus on musculoskeletal disorders.

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 is a 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, as well as people with long-term illnesses.

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. Andrea Chambers is an evaluation specialist in Infection Prevention and Control with Public Health Ontario, based in Toronto. She is also a credentialed evaluator with the Canadian Evaluation Society. Her professional interests include developing methods and approaches to support evidence-informed decision-making in public health, implementation science, and the evaluation of complex interventions. Her more recent work has focused

on infection prevention and control aspects of occupational health, including needlestick injury prevention and health-care worker influenza immunization.

Dr. Donald Cole is a professor at the University of Toronto's Dalla Lana School of Public Health. He is also a fellow of the Royal College of Physicians and Surgeons of Canada in occupational medicine, public health and preventive medicine. He has skills in occupational and environmental epidemiology, complex intervention evaluation, and research capacity development, with an interest in agricultural work, food systems and human health. He teaches, mentors and contributes mixed-methods research evidence to practice, programs and policy.

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 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. 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. Jill Hayden is an assistant professor in the Department of Community Health & Epidemiology at Dalhousie University in 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. Gail Hepburn is an assistant professor in the Department of Psychology at the University of Lethbridge in Alberta. 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 is a professor in the Dalla Lana School of Public Health and Department of Medicine at the University of Toronto, chief of the Department of Occupational and Environmental Health at St Michael's Hospital, and director of the Centre for Research Expertise in Occupational Disease. She is an occupational health physician whose research interests include occupational health services and occupational disease, particularly work-related skin and lung diseases.

Dr. Mieke Koehoorn is a professor in the School of Population and Public Health at the University of British Columbia (UBC). Her research interests focus on the surveillance and epidemiology of work-related injury and illness (e.g. serious injuries, asthma, mesothelioma) and the evaluation of workers' compensation policies and programs (e.g. effect of certification on injury risk of tree-fallers, effect of surgical settings and wait times on return-to-work outcomes). Many of her projects are part of her work as the co-lead of the Partnership for Work, Health & Safety, a research partnership with WorkSafeBC to maximize the use of administrative data for policy-relevant research questions. Mieke is the recent recipient of a CIHR Chair in Gender, Work and Health.

Dr. Marie Laberge is an assistant professor in the Faculty of Medicine at the University of Montreal and a scientist at the Sainte Justine University Hospital Research Centre (which specializes in mother, child and adolescent health). She is also a member of the Interdisciplinary Research Centre on Biology, Health, Society and

Environment (CINBIOSE) at the Université du Québec à Montréal (UQAM), a Collaborating Centre of the World Health Organization and the Pan American Health Organization. Her primary disciplinary fields are ergonomics and occupational therapy, and her current research activities concern adolescent occupational injuries and disability prevention.

Dr. Tony LaMontagne leads, and is a professor in, the Work, Health & Wellbeing Unit in the Population Health Strategic Research Centre at Deakin University in Melbourne, Australia. His broad research interest is in developing the scientific and public understanding of work as a social determinant of health, and translating this research into policy and practice to improve workplace and worker health. Currently, his primary focus is on work and mental health—combining a range of etiologic and intervention research projects.

Dr. Ellen MacEachen is an associate professor in the School of Public Health in the University of Waterloo's Faculty of Applied Health Sciences, as well as co-director of the Centre for Research on Work Disability Policy housed at the Institute for Work & Health. She is a mentor and program executive committee member with the CIHR Strategic Training Program in Work Disability Prevention, an academic fellow with the Centre for Critical Qualitative Enquiry at the University of Toronto, and an academic council member with the Pacific Coast University for Workplace Health Sciences. Her research interests focus on systemic, social and organizational determinants of work injury, disability and labour market integration, and on how qualitative methods can inform policy and practice in occupational health.

Greg McIntosh is an epidemiologist and director of clinical research at CBI Health Group in Toronto, where he designed and implemented a company-wide clinical data collection system and clinical database. He has been active in using that data to further the understanding and treatment of low-back pain. In 2000, he joined the journal *Spine* as a scientific referee and is now on its advisory board performing peer reviews.

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 is a 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. 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 holds a Chair in Global Leadership and is a professor of sustainable supply chain management at University College Dublin (UCD) in Ireland. Prior to joining UCD, he was a professor of operations management and information systems at the Schulich School of Business at York University in Toronto. His research focuses on sustainable supply chain management, human resources issues such as employee safety in operational environments, and operational responses to environmental uncertainty.

Dr. Glenn Pransky is director of the Center for Disability Research at the Liberty Mutual Research Center for Safety and Health in Hopkinton, Massachusetts (USA). 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. Stéphanie Premji is an assistant professor in Labour Studies and Health, Aging & Society at McMaster University in Hamilton, Ontario. Her research interests include the occupational health of racialized workers within industrialized countries and social inequalities in work-related health. Whenever possible or advisable she conducts mixed-methods, interdisciplinary research in collaboration with unions and community organizations, and her research usually incorporates a gender-based perspective. She has written the guidance for incorporating gender in healthy workplace initiatives for the World Health Organization.

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 is a professor in the Department of Clinical Epidemiology and Biostatistics at McMaster University in Hamilton, Ontario. 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, and he is a co-investigator on the IWH project on breakthrough change. He chairs the Methodology Working Group for the Canadian Longitudinal Study on Aging, and has written on health and safety implications of the aging workforce. He is also involved in several global health projects, including a simulation study of sampling in difficult settings and another study on evaluating humanitarian aid.

Dr. William Shaw is a principal research scientist at the Liberty Mutual Research Institute for Safety in Hopkinton, Massachusetts (USA) and holds an appointment with the Department of Family Medicine and Community Health at the University of Massachusetts Medical School. His training background is in engineering and clinical psychology, and his research is focused on issues of workplace disability and return to work, especially with regard to psychosocial factors and organizational support for workers with musculoskeletal conditions and chronic illnesses. He is involved in a number of collaborative projects in Australia, Canada, Sweden, and The Netherlands.

Dr. Mary Stergiou-Kita is an Assistant Professor in the Department of Occupational Science and Occupational Therapy, University of Toronto, and an Adjunct Scientist, Toronto Rehabilitation Institute, University Health Network. Her research focuses on developing tools to enhance work performance and participation across worker injury, illness and disability groups.

Dr. Nancy Theberge is Professor Emerita in the Departments of Kinesiology and Sociology at the University of Waterloo in Waterloo, Ontario. Until her recent retirement from the University she was the Coordinator of the Collaborative Doctoral Program in Work and Health and taught courses in the sociology of health, work and health, and social aspects of injuries in sport and work. Her current research addresses questions related to gender, risk and workplace injury.

Dr. Zahi Touma is an assistant professor of medicine in the Division of Rheumatology at the University of Toronto and a staff physician and clinician scientist in the Division of Rheumatology at Toronto Western Hospital and Mount Sinai Hospital. His research interests include outcome measurement, cognitive function assessment and quality of life, especially in patients diagnosed with lupus. He is involved in collaborative research with IWH related to the review of critical appraisal tools of studies on measurement properties.

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.

Partners and Affiliates

The Institute for Work & Health has ongoing partnerships with a number of organizations on research and knowledge transfer projects. IWH researchers work with colleagues from universities, research agencies, health and safety associations and other agencies to find ways to collaborate on projects and to share information.

Academic

McMaster University
University of Toronto
University of Waterloo
York University

Government

Association of Workers' Compensation Boards of Canada (AWCBC)
Ontario Ministry of Health and Long-term Care
Ontario Ministry of Labour
Ontario Workplace Safety and Insurance Board (WSIB)
Statistics Canada

Health & safety associations (HSAs)

Public Services Health & Safety Association (formerly the Education Safety Association of Ontario, Ontario Safety Association for Community and Healthcare and Municipal Health and Safety Association of Ontario)
Infrastructure Health & Safety Association (formerly the Construction Safety Association of Ontario, Electrical & Utilities Safety Association and Transportation Health & Safety Association of Ontario)
Workplace Safety & Prevention Services (formerly the Industrial Accident Prevention Association, Ontario Service Safety Alliance, Farm Safety Association Inc.)
Workplace Safety North (formerly the Mines and Aggregates Safety and Health Association, Pulp and Paper Health and Safety Association, Ontario Forestry Safe Workplace Association)
Occupational Health Clinic for Ontario Workers, Inc. (OHCOW)
Workers Health and Safety Centre (WHSC)

Research organizations

Canadian Cochrane Centre
Canadian Institute for Advanced Research (CIFAR)
Canadian Institute for Health Information (CIHI)
Canadian Institutes of Health Research (CIHR)
Centre for Health Economics and Policy Analysis (CHEPA)
Cochrane Collaboration
Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST)

WSIB Centres of Research Expertise

The WSIB Research Advisory Council has established three Centres of Research Expertise to strengthen the research capacity in Ontario. As the largest research agency in Ontario devoted to the protection of the health of workers, the Institute for Work & Health is also committed to expanding research capacity through networking and partnership with the Centres of Research Expertise.

IWH researchers and knowledge transfer and exchange staff actively collaborate with colleagues from:

Centre of Research Expertise for the Prevention of Musculoskeletal Disorders (CRE-MSD)
Centre for Research Expertise in Occupational Disease (CREOD)
Occupational Cancer Research Centre (OCRC)

Other associations

American Academy of Orthopaedic Surgeons (AAOS)
Canadian Physiotherapy Association
College of Physiotherapists of Ontario (CPO)

Related Organizations

Academic

Department of Health Policy, Management and Evaluation (HPME), University of Toronto
Centre for Health Services and Policy Research, University of British Columbia
Ryerson University
Queen's University

Business associations

Canadian Federation of Independent Business
Canadian Labour and Business Centre
Conference Board of Canada
The RAND Corporation
W.E. Upjohn Institute

Clinical organizations

Canadian Agency for Drugs and Technologies in Health (CADTH)
Institute for Clinical Evaluative Sciences (ICES)

Government

Canadian Centre for Occupational Health and Safety (CCOHS)
Health Canada
Human Resources and Social Development Canada
Networks of Centres of Excellence (NCE)

Health and safety professional associations

Board of Canadian Registered Safety Professionals (BCRSP)
Canadian Society of Safety Engineering (CSSE)
Ontario Occupational Health Nurses Association (OOHNA)

Health and safety information

Canada National Occupational Safety and Health Information Centre (CANOSH)
eLCOSH - Electronic Library of Construction Occupational Safety and Health
International Labour Organization (ILO)
Parachute – Preventing Injuries, Saving Lives

Policy-maker organizations

Institute for Research on Public Policy (IRPP)
Workers' Compensation Resources

Research organizations

Agency for Healthcare Research & Quality (AHRQ)
Caledon Institute of Social Policy
Canadian Association for Research on Work and Health (CARWH)
Canadian Foundation for Healthcare Improvement (CFHI)
Canadian Institute for Advanced Research (CIFAR)
Canadian Institute for Health Information (CIHI)

Canadian Institutes of Health Research (CIHR)
Centre for Health Economics and Policy Analysis (CHEPA)
Centre for the Study of Living Standards (CSLS)
Cochrane Collaboration
Finnish Institute of Occupational Health
Global Applied Disability Research and Information Network on Employment and Training (GLADnet)
Institute for Clinical Evaluative Sciences (ICES)
Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST)
National Institute of Disability Management and Research (NIDMAR)
National Institute for Occupational Safety and Health (NIOSH)
Natural Sciences and Engineering Research Council (NSERC)
Partnership for Work, Health and Safety
Safety Net
Social Science and Humanities Research Council (SSHRC)

Workers' compensation boards and commissions

Association of Workers' Compensation Boards of Canada (AWCBC)
Alberta Workers' Compensation Board
British Columbia Workers' Compensation Board
Manitoba Workers' Compensation Board
New Brunswick Workplace Health, Safety and Compensation Commission (WHSCC)
Newfoundland and Labrador Workplace Health, Safety and Compensation Commission (WHSCC)
Northwest Territories and Nunavut Workers' Compensation Board (WCB)
Nova Scotia Workers' Compensation Board (WCB)
Ontario Workplace Safety and Insurance Board (WSIB)
Prince Edward Island Workers' Compensation Board
Saskatchewan Workers' Compensation Board
Quebec Commission de la santé et de la sécurité du travail (CSST)
Yukon Workers' Compensation Health & Safety Board
American Association of State Compensation Insurance Funds (AASCIF)

Other organizations of interest

British Occupational Hygiene Society (BOHS)
Canadian Abilities Foundation (CAF)
College of Physicians & Surgeons of Ontario (CPSO)
International Association of Industrial Accident Boards and Commissions (IAIABC)
New England Journal of Medicine (NEJM)
Occupational Health Nurses Association of Nova Scotia (OHNANS)
Registered Nurses' Association of Ontario (RNAO)
European Agency for Safety and Health at Work
World Health Organization (WHO)

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 Chief Prevention Officer
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)
IHSR 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.)
JANCAN 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

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

OHCOW 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)