

# Institute for Work & Health Activity Plan 2017



Institute  
for Work &  
Health

Research Excellence  
Advancing Employee  
Health



## **2017 Activity Plan**

**Research  
Knowledge Transfer & Exchange  
Corporate Services**

Institute for Work & Health  
481 University Avenue, Suite 800  
Toronto, ON Canada  
M5G 2E9

Telephone: 416.927.2027  
Fax: 416.927.4167  
Website: [www.iwh.on.ca](http://www.iwh.on.ca)



## 2017 Activity Plan

The Ministry of Labour released “*Healthy and Safe Ontario Workplaces: A Strategy for Transforming Occupational Health and Safety*” in December 2013. The Institute for Work & Health is committed to supporting the priorities identified in the prevention strategy. The projects and activities documented in the Institute's 2017 Activity Plan demonstrate alignment to the priorities in the *Healthy and Safe Ontario Workplaces* strategy, and include the following:

- Continuing the Institute's longstanding commitment to describing the circumstances of vulnerable workers, many of whom are new workers, young workers, immigrant workers or older workers. We have important work in progress in this area and are actively supporting the Ministry of Labour's prevention and enforcement activities to address the needs of vulnerable workers.
- Continuing research efforts to identify the hazards associated with the risk of work injury and illness, and the most effective interventions to mitigate these hazards, particularly in the area of non-traumatic musculoskeletal disorders, the largest cause of work-related disability in Ontario.
- Supporting the promotion of a culture of health and safety, in collaboration with the HSAs, on the development of leading indicators of workplace occupational health and safety performance and on the development of tools to apply this knowledge.
- Strengthening our research portfolio's focus on supporting the needs of small businesses
- Continuing to build collaborative research and knowledge exchange partnerships with the HSAs, CREs, and other stakeholders through such forums as the IWH-chaired Prevention Knowledge Exchange Group, and continuing our commitment to involve workplace parties directly in many of our research projects.
- Continuing to contribute high quality research evidence to support workplace practices in the prevention of work disability.

Dr Cameron Mustard  
President & Senior Scientist



## 2017 ACTIVITY PLAN

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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.

The Institute is structured in three programs. The Research Program focuses on the prevention of work-related injury and illness and the prevention of work disability. The Institute for Work & Health has a specific focus on work-related musculoskeletal conditions which are responsible for approximately 50 per cent of disability compensation claims involving time lost from work-related injury and illness. The Knowledge Transfer and Exchange Program builds and maintains 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.

The Institute is an independent not-for-profit organization with a twelve member Board of Directors. The Institute's projected staff complement for 2017 will be 59 FTEs which are distributed across the three programs: Research, Knowledge Transfer & Exchange, and Corporate Services.

The 2017 Activity Plan describes individual research projects to be conducted over the course of the year, outlining project objectives, staffing, stakeholder involvement and the alignment to the Ontario Prevention Strategy. The work of the KTE Department and the organizational support role played by the Corporate Services Department are also described in the plan.

## **Research**

The Institute's research plans for 2017 are organized in two focus areas: 1) the primary prevention of work-related injury and illness and, 2) the prevention and management of work disability. Research projects in the area of primary prevention focus on working conditions and health, vulnerable workers, the prevention of musculoskeletal disorders, the effectiveness of occupational health and safety programs and practices and the influence of regulation and economic incentives on workplace practices. Research projects in the area of work disability management & prevention focus on the measurement of health and function, the effectiveness of clinical treatment, optimal return-to-work practices and the influence of compensation and benefits on the social and economic circumstances of disabled workers. In both of these two areas of research, we devote efforts to the development of evidence-based guides and tools that may be useful to our non-research partners.

## **Knowledge Transfer & Exchange**

The aim of knowledge transfer and exchange is to put research findings into the hands of key decision-makers in a timely, accessible and useful manner. The decision-makers could be workers, employers, OHS professionals, policy-makers, clinicians or other researchers. Additionally, KTE staff ensures that stakeholders are either involved in or informed of research projects that may be relevant to them, KTE initiatives to strengthen stakeholder relationships and to make research evidence available, understandable and useable are described in the 2017 Activity Plan.

## **Corporate Services**

Corporate Services at the Institute provides facilities support, human resources management, finance and accounting capacity and oversees the purchase and maintenance of equipment and supplies. The administrative infrastructure and human resource function supports the diversity and complexity of work at the Institute. It also provides liaison and support to the Institute's Board of Directors. A description of 2017 Corporate Services activities follows the Research and KTE sections.

## **Prevention of Work Related Injury and Illness**

In this section, we provide an overview of the Institute's research plans for 2017 focused on the prevention of work-related injury and illness. Our portfolio of projects addresses vulnerable workers, the effectiveness of occupational health and safety programs, working conditions and health, and economic incentives on workplace practices. We also focus on the development of evidence-based guides and tools that may be useful to our non-research partners. The Institute's knowledge transfer & exchange staff will engage with our partners to support the transfer of research evidence to policy and practice and will continue to strengthen relationships with workplace parties (employers, organized labour, health and safety associations, and OHS professionals) to support their participation in our research activities.

### **Protecting 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. New and young workers, immigrant workers, older workers and those with pre-existing health conditions will continue to be a research priority for the Institute for Work & Health in 2017.

### **Effective workplace health and safety practices**

The role of workplace organizational policies and practices in ensuring the health and safety of workers will continue to be an important focus of the Institute's research in 2017. The Institute's research will continue a focus on understanding of the relationship between occupational health and safety investments by workplaces and the broad economic benefits of these investments. Institute staff will continue research on optimal approaches to the measurement and auditing of organizational policies and practices within Ontario workplaces. We will continue our research on identifying implementation strategies that have been most effective in strengthening organizational violence prevention programs in the Ontario acute healthcare sector while building on the results from the MOL Leadership Table on Workplace Violence Prevention in Healthcare. In 2017, we have two new projects looking at effective occupational health and safety practices. A new project will commence on utilizing benchmarking reports to identify relevant leading indicators of injury and illness in the construction sector. The data will be used in the creation of a dashboard for firms to manage and improve their occupational health and safety metrics over time. As well, we will further explore and evaluate the implementation of a participatory organizational change intervention, aimed at reducing MSDs and slips, trips and falls in long term care facilities.

### **Working Conditions and Health**

The impact of working conditions on health will continue to be a focus for the Institute's research in 2017. The Institute will continue to conduct surveillance research on the relationship between working conditions and work-related disorders and to document trends. In addition, we will examine trends over time in the incidence and duration of work-related injury and illness. Furthermore, we endeavour 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, with a view to help shape the development of gender- and sex-sensitive policies and practices to improve the health of all working Canadians.



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## Occupational health and safety risk in Ontario (1175)

**Project Status:** Ongoing, project to be completed Q3 of 2017

**Introduction:** In the spring of 2015, the Mining Health, Safety and Prevention Review Advisory Group presented recommendations to the Ontario Minister of Labour. A number of recommendations focused on opportunities to strengthen the function of the Internal Responsibility System in underground mines in Ontario. The Advisory Group recommended that the Ontario Mining Association work with labour representatives to adopt an Internal Responsibility System best practice guideline as an industry benchmark. Over the subsequent 18 months, Workplace Safety North has worked with individual mining operations in Ontario to pilot an assessment protocol named the 'Internal Responsibility System Climate Assessment and Audit Tool (IRS CAAT)'. To date, audit information has been collected from 5 underground mine operations in Ontario. Audit information includes survey responses provided by mine employees, encompassing miners, supervisors, contractors, JHSC members and the senior management of the mining operation.

### Objectives:

- To complete psychometric analysis of the IRS CAAT questionnaire, based on more than 1,500 survey responses. Psychometric analysis will include confirmatory factor analysis, internal consistency analysis and will examine score differences across respondent groups.
- To complete analysis of the concurrent validity of IRS CAAT scores by estimating the association between mine scores on the IRS CAAT and the incidence of work-related injury and illness.

**Researchers:** Cameron Mustard (Principal Investigator), Victoria Landsman, Lynda Robson

**Collaboration and Partnerships:** The 'Internal Responsibility System Climate Assessment and Audit Tool' (IRS CAAT) was developed in a collaboration between the Institute for Work & Health and Workplace Safety North. Following the administration of the IRS CAAT in five underground mining operations, IWH and WSN will continue this collaboration through the Institute's analysis of the survey findings.

**Potential Audiences and Significance:** The members of the Ontario Mining Association will have interest in the results of this work. We also anticipate interest on the part of the Section 21 Mining Committee.

**Links to MOL Prevention Strategy:** Hazard assessment and control, integrated planning and service delivery

### Project Targets for 2017:

*First Quarter:* Complete specifications for psychometric analysis and concurrent validity analysis.  
Complete preliminary analysis.

*Second Quarter:* Presentation of preliminary analysis to WSN Mining Conference, April 2017.

*Third Quarter:* Complete manuscript for publication.

*Fourth Quarter:*

## Addressing essential skills gaps among participants in an OHS training program: a pilot study (1340/1341)

**Project Period:** Ongoing, project to be completed Q3 of 2017

**Introduction:** The study is designed to develop, implement and evaluate a pilot occupational health and safety (OHS) training program designed to improve training outcomes for workers with essential skills gaps by embedding curriculum that enhances essential skills. The pilot involves the hoisting and rigging training program offered by the training centre of local 506 of the Labourers' International Union of North America (LiUNA), using curriculum developed by the Infrastructure Health and Safety Association (IHSA).

### Objectives:

- To determine the extent to which a redesigned curriculum for the hoisting and rigging safety training program that addresses essential skills gaps improves learning of the health and safety content and adherence to safe practices.
- Should the pilot prove successful, the longer term goal is to apply the model to a range of other OHS programs, thereby improving worker / workplace safety more broadly.
- To develop an understanding of the trainees/ instructor experience taking/delivering the regular and modified hoisting and rigging OHS training program, and insights on how to improve the process of modifying an OHS training program to address gaps in essential skills.

**Researchers:** Ron Saunders (Principal Investigator), Curtis Breslin, Siobhan Cardoso, K Myers (Blueprint)

**Collaboration and Partnerships:** The training centre of LiUNA local 506 and the IHSA are key partners. The training centre is delivering the program and conducting assessments of learning outcomes. IHSA is assisting with curriculum development, which is being led by a consultant, Tracy Collins.

**Potential Audiences and Significance:** If the pilot is successful, the process used to develop it could be a model for the improvement of other OHS training programs that serve a trainee population with essential skills gaps. We will explore such opportunities with other health and safety associations (besides IHSA) through meetings with them once findings from the pilot have been identified.

**Links to MOL Prevention Strategy:** Integrated planning and service delivery, preventive workplace culture

### Project Targets for 2017:

- First Quarter:* Complete intakes (and learning assessments) for project using modified curriculum.  
Conduct external standard task evaluation (STE) assessments with trainees(baseline intake)  
Conduct interviews with essential skill experts  
Begin recruitment for baseline intake trainee interviews and focus groups (modified intake)
- Second Quarter:* Conduct external STE assessments with trainees from modified program groups  
Schedule interviews/focus group with training instructors, training centre director and assistant director after final intake complete  
Analyze quantitative data; coding of qualitative data  
Meet with HSAs to explore wider application of model.
- Third Quarter:* Synthesis of findings from focus groups and interviews and HSA meetings  
Write final report and plain-language summary.  
Begin other communication/ dissemination activities
- Fourth Quarter:* Project completed

## **Newcomers, employment, and safety (1335)**

**Project Period:** New in 2017, to be completed in Q3 of 2017

**Introduction:** This project focuses on ways to help newcomers to Canada stay healthy and safe at work and what role settlement programming can play in this process. We will interview policy makers, service providers and program developers from several organizations who work with newcomers and refugees about the scope of current programming and possible approaches to integrating work health & safety resources into service delivery. We will also conduct focus groups with recent immigrant and refugees about their own experiences.

### **Objectives:**

- To examine the role that settlement organizations play in work integration of newcomers
- To examine the scope of current employment and OHS programming aimed at newcomers
- To determine the needs of recent immigrants and refugees related to safe integration into the Ontario labour market
- To examine the experiences that newcomers have looking and preparing for work and in their first jobs.

**Researchers:** Agnieszka Kosny (Principal Investigator), Basak Yanar, S Premji (Co-Investigator; McMaster University)

**Collaboration and Partnerships:** Skills for Change, Access Alliance, Brampton Multicultural Centre, KEYs Employment Centre (Kingston).

**Potential Audiences and Significance:** Ministry of Labour, Immigration, Refugees and Citizenship Canada, Ontario Ministry of Citizenship and Immigration

**Links to MOL Prevention Strategy:** Vulnerable workers

### **Project Targets for 2017:**

*First Quarter:* Begin focus groups with newcomers including recent immigrants

*Second Quarter:* Data analysis of one-on-one interviews and focus groups

*Third Quarter:* Final report

*Fourth Quarter:*

## Evaluating the impact of mandatory awareness training on OH&S vulnerability in Ontario (1336)

**Project Period:** Ongoing, to be completed in Q4 of 2017

**Introduction:** On July 1 2014, the province of Ontario introduced a mandatory awareness training program. The aim of this province-wide intervention is to increase worker and supervisor knowledge of basic occupational health and safety (OH&S) rights and responsibilities under the Ontario Occupational Health and Safety Act. This increased knowledge among workplace parties will in turn improve the effectiveness of workplace level policies and procedures to prevent workplace incidents and injuries. The regulation introduced along with the mandatory awareness training intervention requires employers to provide and document that their employees have received a minimum level of training on a variety of topics. The introduction of mandatory awareness training was designed to improve the OH&S of Ontario's most vulnerable workers. It also represents a large public investment in OH&S by the province. It is therefore important to evaluate the impact of this program using rigorous methods and relevant measures, as the findings of such an evaluation will provide unique information that can be used to support or modify existing and future primary prevention efforts. The aim of this research study is to evaluate the impacts that the introduction of mandatory awareness training has had on worker level of OH&S vulnerability.

### **Objectives:**

- To measure four dimensions of the work context that are thought to place workers at a higher risk of work injury in a sample of workers in Ontario and BC prior to the introduction of mandatory awareness training.
- To examine changes in these dimensions after the introduction of mandatory awareness training in Ontario to changes occurring in British Columbia, where no similar program is taking place
- To examine if changes in Ontario at the population level are similar within labour market sub-groups (e.g. Age, workplace size) and if there are implications on inequalities in work-injury risk in Ontario workers.

**Researchers:** Peter Smith (Principal Investigator), Curtis Breslin, Ron Saunders, Emile Tompa, A Lamontagne (Deakin University)

**Collaboration and Partnerships:** The proposed project involves collaborations with three Health and Safety Associations (Public Services Health & Safety Association, Workplace Safety & Prevention Services, and the Workers Health & Safety Centre). The research team will also consult with staff at the Ministry of Labour Prevention office.

**Potential Audiences and Significance:** This project is relevant to multiple stakeholder groups involved with primary prevention activities. These include policy makers, workplaces, organised labour and workers.

**Links to MOL Prevention Strategy:** Preventive workplace culture, vulnerable workers

### **Project Targets for 2017:**

- First Quarter:* Complete work on evaluation of mandatory awareness training in Ontario and present results at IWH plenary.
- Second Quarter:* Commence fourth vulnerability survey.
- Third Quarter:* Submit study findings to peer-review and analyse new vulnerability survey.
- Fourth Quarter:* Complete project.

## Evaluation of caregiver-friendly workplace policy interventions on the health of full-time caregiver-employees: implementation and cost-benefit analysis (1325)

**Project Period:** 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 a university and an Ontario regional county government. The university intervention is a training and communication program targeted at increasing awareness and use of the university’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)

**Researchers:** Emile Tompa (Institute Coordinator), A Mofidi, A Yasdani, A Williams (Principal Investigator; McMaster University),

**Collaboration and Partnerships:** The university intervention site has the active involvement of Human Resources and labour and labour. The second site is an Ontario regional county government. Human Resources for the regional county are actively involved in developing the intervention.

**Potential Audiences and Significance:** Workplace stakeholders. Other important knowledge users are Vanier Institute of the Family, Mental Health Commission of Canada, Canadian Center for Health and Safety, and Bayshore HealthCare, as well as other caregiving service providers.

**Links to MOL Prevention Strategy:** Preventive workplace culture

### **Project Targets for 2017:**

- First Quarter:* Complete mid-period measurement at the university site.  
Set up baseline measurement protocol for the regional county government site.  
Begin costs-benefit analysis of the university site.  
Submit study on baseline measures from university site.  
Submit study on recruitment from university site.
- Second Quarter:* Continue costs-benefit analysis of the university site.  
Begin baseline measurement at regional county government site.
- Third Quarter:* Collect end of period data at the university site and complete analysis.  
Complete analysis of the university site.  
Complete baseline measurement at regional county government site.
- Fourth Quarter:* Draft economic evaluation manuscript on the university site and submit to a journal.  
Begin intervention execution at the regional county government site.

## **Employer investments in occupational health and safety: establishing benchmarks for Ontario (1345)**

**Project Period:** Ongoing, to be completed in Q2 of 2017

**Introduction:** This research study will obtain detailed estimates of firm-level expenditures and investments in occupational health and safety (OHS) for a representative sample of employers in the province of Ontario. The study will replicate a study design pioneered by the International Social Security Association (ISSA) and the German Social Accident Insurance funds (DGUV). This groundbreaking study, titled “Calculating the International Return on Prevention for Companies: Costs and Benefits of Investments in Occupational Safety and Health” obtained detailed estimates of firm-level OHS expenditures and investments for more than 330 companies in 19 countries. The ISSA/DGUV study reported that the average investment per employee per year was more than €1,200. There is no comparable source of information on employer expenditures and investments in occupational health and safety in the province of Ontario. This study will address this gap by replicating the features of the ISSA/DGUV structured interview design in a sample of approximately 350 Ontario employers recruited from among firms that have previously participate in the Ontario Leading Indicators Project (OLIP).

### **Objectives:**

- To obtain detailed estimates of firm-level expenditures and investments in occupational health and safety (OHS) for a representative sample of employers in the province of Ontario.
- To obtain estimates of OHS expenditures and investments on the following five dimensions: 1. Management and supervision, 2. Training, 3. Personal protective equipment, 4. External consulting services and 5. OHS improvements attributed to new capital investment in facilities, vehicles and equipment.

**Researchers:** Cameron Mustard (Principal Investigator), Emile Tompa

**Collaboration and Partnerships:** The study will include a knowledge user advisory committee to provide guidance in the implementation of this project and in the interpretation and dissemination of the project findings. The Knowledge User Advisory Committee is comprised of the Canadian Manufacturers and Exporters Association, the Business Council on Occupational Health and Safety and two health and safety associations

**Potential Audiences and Significance:** Participating employers will receive a benchmark report comparing their OHS expenditures to peer organizations in the economic sector. Safety Group sponsors and trade associations will have interest in the findings of this research as well as provincial Ministries of Labour and provincial workers' compensation authorities.

**Links to MOL Prevention Strategy:** Preventive workplace culture

### **Project Targets for 2017:**

*First Quarter:* Continue employer recruitment and data collection  
Initiate data analysis

*Second Quarter:* Complete employer recruitment and data collection  
Complete data analysis  
Distribute benchmark reports to participating employers  
Complete project final report

*Third Quarter:*

*Fourth Quarter:*

## Implementation of workplace violence legislation in the Ontario acute healthcare sector (1355)

**Project Period:** Ongoing, to be completed in Q4 of 2017

**Introduction:** Healthcare workers experience high rates of work-related violence, including physical abuse and harassment. Workplace violence legislation directs employers to adopt measures to reduce the risk of workplace violence in Ontario, yet recent inspections conducted by the Ministry of Labour demonstrated a number of inadequacies with respect to the implementation of violence prevention requirements under the Occupational Health and Safety Act (OHSA). This study is designed to enhance the successful implementation of measures for the prevention of workplace violence in Ontario's acute health care sector. A multiple case study design will be used to examine the conditions that support and limit the successful implementation of requirements under the OHSA for the prevention of workplace violence.

### Objectives:

- To examine the measures organizations use to address workplace violence and perceptions of how these measures have played out in practice.
- To understand decisions made about implementation strategies and processes used to prevent violence.
- To identify contextual factors (internal and external to the workplace) that have supported or challenged implementation of violence prevention policies and practices.
- To gain input (e.g. from organizational informants; front-line workers, regulators, policy makers) about ongoing challenges associated with the prevention of workplace violence and strategies for improvement.

**Researchers:** Agnieszka Kosny (Principal Investigator), Monique Gignac, Cameron Mustard, A Chambers (Public Health Ontario)

**Collaboration and Partnerships:** This study will be guided by an advisory community that includes the Ontario Nurses' Association, the Ontario Hospitals Association, health and safety associations, health care worker and employer representatives, and three hospitals in the province. In addition, we will work closely with appropriate Working Groups supporting the Leadership Table on Workplace Violence Prevention in Healthcare. Through the in-depth study of acute care settings and active engagement with key stakeholders, this study will result in a clear set of guidelines for implementing policies, programs and practices aimed at reducing work-related violence in the Ontario acute healthcare sector.

**Potential Audiences and Significance:** The findings from this field research will provide valuable information to the Workplace Violence Prevention in Health Care Leadership Table, identifying those areas of policy and practice which are inconsistently implemented in Ontario acute care settings, and identifying the implementation strategies that have been most effective in strengthening organizational violence prevention programs. Key findings from this research will provide practical guidance to Ontario healthcare institutions on those factors that facilitate successful implementation of effective workplace violence prevention programs.

**Links to MOL Prevention Strategy:** Preventive workplace culture

### Project Targets for 2017:

- First Quarter:* Data collection of case studies 2-3.
- Second Quarter:* Data collection of case studies 4; data analysis
- Third Quarter:* Data analysis
- Fourth Quarter:* Final report

## Evaluation of the implementation and effectiveness of the Ontario working at heights training standard (1360)

**Project Period:** New in 2017

**Introduction:** The recommendations of the Expert Advisory Panel on Occupational Safety & Health (2010) included an emphasis on the development of mandatory fall protection training for workers working at heights. In response to this recommendation, the Prevention Office, Ontario Ministry of Labour, has implemented regulations defining training program standards and has established a program for the accreditation of training providers in Ontario. The Occupational Health and Safety Awareness and Training Regulation requires employers in Ontario to ensure that workers on construction projects successfully complete a working at heights training program if they may use specified methods of fall protection. The program must be delivered by a training provider approved by the CPO. The training requirements came into force on April 1, 2015. In the first 12 months of the mandatory training standard (April 2015 to March 2016), approximately 100,000 construction sector workers were trained by 91 accredited training providers. A similar number of trainees are expected to complete mandatory training in the fiscal year 2016-2017.

**Objectives:** the evaluation of the implementation and effectiveness of the working at heights training standard will involve the following components:

- To analyze the administrative data describing characteristics of working at heights learners (employer size, employer sector, geographic region) and trends over time in the incidence of falls from heights.
- To survey construction employers to assess their perceptions of the working at heights training requirements
- To conduct a pre-post effectiveness study of learners to assess changes in knowledge and self-reported work practices attributable to the training, as well as barriers to transferring learning to the work site
- To survey training providers to assess influence of the training standard on the nature of the working at heights training they provided.

**Researchers:** Lynda Robson (Principal Investigator), Cameron Mustard (Co-Principal Investigator), Ben Amick, Peter Smith,

**Collaboration and Partnerships:** To be determined

**Potential Audiences and Significance:** There is strong interest on the part of stakeholders in the construction sector to document the effectiveness of the mandatory training standard and learn from the experience of its implementation.

**Links to MOL Prevention Strategy:** preventive workplace culture, hazard assessment and control

### Project Targets for 2017:

<i>First Quarter:</i>	Initiate administrative data analysis Pilot employer interview
<i>Second Quarter:</i>	Conduct employer interviews Initiate learner recruitment and baseline interviews
<i>Third Quarter:</i>	Initiate training provider interviews Complete employer interviews
<i>Fourth Quarter:</i>	Complete learner followup interviews Complete administrative data analysis

## Health and safety practices in the Manitoba construction industry (1365)

**Project Period:** New in 2017

**Introduction:** The project is a partnership with the Construction Safety Association of Manitoba (CSAM) and its 5,678 member employers. The primary research goal is to identify relevant leading indicators of injury and illness in the construction sector using the Organizational Policies and Practices Questionnaire (OPPQ), the IWH-OPM tool, and a tool assessing Joint Health and Safety Committee functioning. Having a set of tools that CSAM and OHS leaders can use will potentially improve OHS management practices, impact workplace hazard reduction, and improve worker health and safety. The data will be used to develop evidence-based organizational benchmarking reports and to build a dashboard that will allow firms to manage and improve their occupational health and safety metrics over time, contributing to a new conversation about best practices in OHS performance and a community of practice to share these best practices within the CSAM. The intent is to affect a significant shift in the health and safety culture of construction businesses, especially small businesses who have limited time and resources to engage in OHS safety improvements.

### **Objectives:**

- To examine the reliability and validity of the OPPQ, IWH-OPM and JHSC Functioning.
- To examine the relationships between historical Workers' Compensation Board (WCB) claim rates and organizational and management metrics.
- To develop evidence-based benchmarks representative of all employers in all regions in the construction sector in Manitoba to support the dissemination of benchmarking information To develop and test the usability of a benchmarking dashboard to help organizations improve their OHS performance over time.

**Researchers:** Ben Amick (Principal Investigator), Christopher McLeod, Colette Severin, Dwayne Van Eerd, M Jones (Construction Safety Association of Manitoba),

**Collaboration and Partnerships:** IWH will partner with CSAM and its members on this project.

**Potential Audiences and Significance:** Construction Safety Association of Manitoba (CSAM) member employers, WCB of Manitoba's/SAFE Work Manitoba, and Workplace Safety and Health Manitoba.

**Links to MOL Prevention Strategy:** Hazard assessment and control, preventive workplace culture

### **Project Targets for 2017:**

<i>First Quarter:</i>	Obtain ethics approval; finalize communication materials Hold Advisory Board meeting; complete survey pilot Finalize contact list; begin recruitment/data collection
<i>Second Quarter:</i>	Finalize data sharing agreement with WCB Manitoba; obtain WCB data
<i>Third Quarter:</i>	Begin linkage of WCB data; begin analysis Begin development of benchmarking reports
<i>Fourth Quarter:</i>	Finalize recruitment/data collection Develop propensity scores for weighting sample data Continue development of benchmarking reports

## **Implementing participatory organizational change: evaluation a participatory intervention in long-term care (1281)**

**Project Period:** New in 2017

**Introduction:** The long-term care (LTC) sector is fast-paced and demanding putting workers at significant risk for occupational-related injuries. Among LTC workers, musculoskeletal disorders (MSDs) and slips, trips, and falls (STFs) are a major source of occupational injuries. MSDs accounted for 45.5% of all lost-time claims in the healthcare sector and STFs accounted for 18.5%. LTC staff in Ontario facilities consists of various worker groups considered vulnerable, typically including new/immigrant workers (potentially low literacy and/or ESL), workers with low education and unlicensed workers operating in unclear working relationships.

This project builds on our on-going collaboration with PSHSA and labour representatives (OPSEU). The Public Sector Health & Safety Association (PSHSA) has developed a participatory ergonomic program, "Employees Participating in Change" (EPIC), to reduce the incidence of musculoskeletal disorders (MSDs) and slips, trips, and falls (STFs). Previous pilot work in a for-profit LTC corporation suggests positive impacts from EPIC such as the development of comprehensive hazard reduction campaigns, worker safety training, material purchases and upgrades, as well as practice changes at both management and worker levels. Process evaluation results suggest the program is feasible to implement in LTC facilities. This project will examine the EPIC implementation process and addresses the health and safety of vulnerable workers within LTC facilities.

**Objectives:** to document the implementation of a participatory organizational change intervention and its effects on important intermediate outcomes such as self-efficacy, norms development and hazard reduction.

**Researchers:** Dwayne Van Eerd D (Co-PI), Ben Amick BC (Co-PI), Sheilah Hogg-Johnson, Cameron Mustard, Lynda Robson, I Steenstra (Morneau Shepell), H Van hulle (Public Services Health & Safety Association), R Wells (University of Waterloo),,

**Collaboration and Partnerships:** PSHSA, OAHNSS, City of Toronto

**Potential Audiences and Significance:** LTC facilities and workers in Ontario

**Links to MOL Prevention Strategy:** Hazard assessment and control, preventive workplace culture

### **Project Targets for 2017:**

*First Quarter:* PRE-INTERVENTION PROCESSES, Meet with stakeholders finalize work plan, Revise and test all data collection tools, Recruit sites

*Second Quarter:* BASELINE DATA COLLECTION Selection of EPIC committees *and target departments*, EPIC Steering and Change Committee Training, *Conduct MSD & STF site observational assessments and interviews, Collect MSD & STF surveys*

*Third Quarter:* PROGRAM IMPLEMENTATION Monthly EPIC team facilitated meetings, Hazard identification, solutions and controls development, OHS educational intervention at control sites, 3 month data collection follow up

*Fourth Quarter:* IMPLEMENTATION ongoing with monthly EPIC team meetings, hazard ID and control implementation, 6 month data collection follow up, *Presentation to OAHNSS safety meeting*

## The measurement and surveillance of working conditions and lost-time claims in Ontario (0417)

**Project Period:** 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.

**Researchers:** Peter Smith (Principal Investigator), Curtis Breslin, Cynthia Chen, Sheilah Hogg-Johnson, Cameron Mustard, Kathy Padkapayeva

**Collaboration 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.

**Links to MOL Prevention Strategy:** Vulnerable workers, hazard assessment and control

### **Project Targets for 2017:**

- First Quarter:* Engage relevant stakeholders concerning key measures associated with the societal burden of work-related injury and illness.
- Second Quarter:* Continue conversations with relevant stakeholders concerning key measures associated with the societal burden of work-related injury and illness.
- Third Quarter:* Initiate work on an implementation strategy to estimate the societal burden associated with the health consequences of work.
- Fourth Quarter:* Complete an implementation strategy to estimate the societal burden associated with the health consequences of work.

## **Examining gender/sex differences in the relationships between work stress and disease, work injury risk, and the consequences of work injury (1310)**

**Project Period:** 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.

**Researchers:** Peter Smith (Principal Investigator)

**Collaboration and Partnerships:** This research project will have in place an independent advisory committee with members from various stakeholder communities. The advisory committee will be set up early in 2017 and meet at least annually thereafter.

**Potential Audiences and Significance:** The research program outlined in this proposal 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 Canadian.

### **Project Targets for 2017:**

- First Quarter:* Continue to look for funding opportunities specifically related to either examining differences between work and health outcomes for men and women, or improving the measurement and analytical methods to undertake gender-sex sensitive analyses.
- Second Quarter:* Continue work examining methods currently used in work and health research to examine gender/sex differences. In particular methods that infer interactions between other factors and sex on risk estimates using interaction methods
- Third Quarter:* Complete manuscript on the use of interactions in work and health as a tool to examine gender/sex differences.
- Fourth Quarter:* Submit manuscript on methods to examine interactions between gender/sex and other factors in work and health to peer-review

## **Developing a gender/sex-sensitive understanding of how the psychosocial work environment is related to chronic disease (1315)**

**Project Period:** Ongoing

**Introduction:** Male and female labour force participation rates in Canada have changed dramatically over the last three decades. The percentage of female labour force participants increased from 39% to 48% between 1980 and 2011. Despite this increase in female labour market participation, our understanding of how aspects of work impact on health status is still male-centric. This is evident than in the area of psychosocial work environment and chronic disease, where much of our understanding 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. Creating 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.

**Researchers:** Peter Smith (Principal Investigator), Cameron Mustard, C Brisson (Unité de recherche en santé des populations), R Glazier (ICES)

**Collaboration and Partnerships:** Institute for Clinical Evaluative Sciences (ICES) and the Canadian Centre for Occupational Health and Safety (CCOHS).

**Potential Audiences and Significance:** Research findings 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 help develop a cross-disciplinary and jurisdictional, team of researchers for future work exploring gender and the relationships between work environment and risk of disease.

**Links to MOL Prevention Strategy:** Vulnerable workers

### **Project Targets for 2017:**

- First Quarter:* Conclude analyses using ICES data to examine the relationships between occupational exposures and various administrative health outcomes.
- Second Quarter:* Conclude analyses using NPHS to examine the relationships between psychosocial work exposures and health behavior and BMI trajectories
- Third Quarter:* Submit various papers from this project for peer-review
- Fourth Quarter:* Conclude study project findings, and engage with research group and other researchers on funding opportunities to extend this work.

## Incidence of work-related aggression and violence in Canada (1350)

**Project Period:** Ongoing, to be completed in Q3 of 2017

**Introduction:** In 2004, almost one in five Canadian victims of violence reported that the violence took place at work; with approximately 356,000 incidents of workplace violence being reported. The importance of violence at work has led to the development of specific legislation and resources in most Canadian provinces. Yet, workplace violence in Canada appears to be on the rise. This increase in violence is particularly alarming as work-related injuries that are not due to workplace violence have declined substantially. As part of a comprehensive primary and secondary prevention approach to workplace violence it is important to understand how often workplace violence occurs, which groups are at the highest risk for workplace violence, if risk for workplace violence differs depending on the work context or the time of day. This study will examine the incidence and consequences of workplace violence using different population-level data sources and workers' compensation data.

### Objectives:

- To describe the incidence of workplace violence in Canada, both overall and for particular demographic (e.g. men versus women) and workplace groups (e.g. industries).
- To identify groups of workers who are at risk of workplace violence, and to understand the relationships between these risk groups, and to examine if risk groups differ depending on data source, or type of workplace violence (e.g. sexual violence versus non-sexual violence, or workplace violence from co-workers/supervisors compared to violence from clients).

**Researchers:** Peter Smith (Principal Investigator), Cameron Mustard, P Donnelly (Public Health Ontario), S Geoffrion (University of Montreal), S Guay (University of Montreal), A Marchand (University of Montreal)

**Collaboration and Partnerships:** Stakeholders involved in the work of the Leadership Table on Workplace Violence Prevention in Healthcare will assist in disseminating results of the project to relevant stakeholders, and involve them with the interpretation of our research findings.

**Potential Audiences and Significance:** The results of this project will help employers, policymakers and health care providers develop ways to handle workplace violence that are sensitive to the different experiences of men and women. In particular, provincial workers' compensation agencies will be interested in the analyses that compare the incidence and consequences of workplace violence across provinces. The results from this project will help towards applied solutions to prevent, and minimise the consequences of, workplace violence in Canada.

**Links to MOL Prevention Strategy:** Preventive workplace culture, vulnerable workers

### Project Targets for 2017:

*First Quarter:* Conduct assessment of workplace violence reporting systems in selected hospitals in Ontario.

*Second Quarter:* Write up and submit a series of papers to peer-review focused on surveillance of workplace violence.

*Third Quarter:* Conclude project. Examine additional funding opportunities to continue work in this area.

*Fourth Quarter:*

## Evaluation of prevention strategies for reducing the future risk of cancer in the Ontario construction industry (2285)

**Project Period:** New in 2017

**Introduction:** The construction industry has long been considered a high-hazard industry. Construction workers are at increased risk of serious and fatal injuries. However, they also have an increased risk of cancer and other chronic diseases due to occupational exposures to airborne and dermal chemical and physical hazards. Construction workers are exposed to a variety of toxic substances including dusts, fibres, metals, organic chemicals and solar radiation as a result of outdoor work. In this study we will estimate attributable fractions for Ontario construction workers who are exposed to carcinogens at work based on current practices, and then estimate the effectiveness and cost-effectiveness of intervention programs to reduce exposures up to the year 2060. Different scenarios will be considered such as high labour force and low labour force growth. We will estimate the costs and benefits of efforts to reduce exposures with a focus on direct, indirect and intangible costs.

### Objectives:

- To estimate the number of cancer cases due to carcinogen exposure in the Ontario construction sector over the period to 2060
- To identify prevention studies that could reduce airborne/dermal chemical, and physical hazards in Ontario construction
- To evaluate prevention strategies in terms of costs and impacts on the future burden of occupational cancer in Ontario construction

**Researchers:** Emile Tompa (Principal Investigator), Young Jung

**Collaboration and Partnerships:** The Infrastructure Health and Safety Association (IHSA), the Provincial Building and Construction Trade Council of Ontario, and the Occupational Health Clinics of Ontario Workers (OHCOW) are collaborating with Occupational Cancer Research Centre and IWH as partners in this study.

**Potential Audiences and Significance:** IHSA, the Provincial Building and Construction Trade Council of Ontario, and OHCOW (partners). The OHS Branch of the MOL and the Provincial Labour Management Health and Safety Committee of the construction industry (Section 21 committee) (knowledge users).

**Links to MOL Prevention Strategy:** high hazard work resulting in occupational disease, workplace exposures

### Project Targets for 2017:

- First Quarter:* Develop methods to project labour-force participation rates in Ontario construction under different scenarios.  
Undertake a scan of prevention initiatives to reduce airborne, dermal chemical and physical hazards in construction.  
Develop methods for undertaking a cost-benefits analysis of prevention efforts.
- Second Quarter:* Complete projections of labour-force participation rates in construction.  
Complete scan of prevention initiatives and synthesize information on costs and benefits to consider with such initiatives.  
Complete methods on cost-benefit analysis.  
Gather data on costs of interventions to be considered in the study.
- Third Quarter:* Begin analysis, related costing of cases with different prevention scenarios.
- Fourth Quarter:* Complete first draft of cost-benefit analysis of prevention initiatives.

## Central nervous system agents and the risk of workplace injury and death: a systematic review of the literature (3200)

**Project Period:** New for 2017

**Introduction:** Psychoactive prescription medications are now recognized as a public health risk for serious harms. Prescription drug-related emergency department visits and deaths continue to rise, largely driven by the use of opioids and sedative-hypnotics/anxiolytics. Currently, there is a shift in views occurring in the medical community, with some touting medicinal cannabis as an alternative to opioids for chronic pain. Recent polls also find most Canadians support either the legalization or decriminalization of recreational cannabis and the Canadian government has committed to introducing legislation in 2017 to legalize and regulate cannabis possession. There is a need to balance the therapeutic benefits of these central nervous system (CNS) agents and a worker's personal autonomy against the potential risks these drugs pose in the workplace. Given current trends, this will remain a challenge for clinicians, employees, employers, and workers' compensation systems for the indefinite future. This systematic review will consider some of the most deleterious potential workplace outcomes of these agents: workplace injury and fatality.

### Objectives:

- To examine the current literature to ascertain the level and quality of evidence for an association between CNS agents and the risk of workplace injury, re-injury, near misses, and death
- To examine outcomes occurring at the level of the worker exposed to these agents, as well as outcomes affecting co-workers and others in the immediate workplace environment
- To examine whether certain factors modify the relationship, including exposure characteristics, industry/occupation, and demographics
- To examine whether there is evidence of risk-taking behaviours that mediate the relationship between these CNS agents and risk of workplace injury and death

**Researchers:** Nancy Carnide (Co-PI), Andrea Furlan (Co-PI), Kim Cullen, Emma Irvin, Quenby Mahood, Christopher McLeod, Dwayne Van Eerd, P Farnan (HealthQuest Occupational Health Services), G Franklin (Washington State Department of Labor and Industries), L Rieb (Orchard Recovery Centre), P Rothfels (WorkSafeBC)

**Collaboration and Partnerships:** the main partner for this project is WorkSafe BC

**Potential Audiences and Significance:** Compensation agencies, clinicians and policy

### Project Targets for 2017:

*First Quarter:* Meet with stakeholders to review search terms, inclusion/exclusion criteria.  
Run search strategy, download searches, and remove duplicates.  
Title and abstract search, retrieve papers, and select relevant publications.

*Second Quarter:* Review and critically appraise relevant papers.  
Extract and organize relevant data for synthesis.

*Third Quarter:* Synthesis of data for the review.  
Draft of preliminary results.

*Fourth Quarter:* Two in-person meetings with key stakeholders.  
Analyze feedback from meetings. Write up of final report.

## **Prevention and Management of Work Disability**

The prevention of work disability will remain a strong focus of research at the Institute for Work & Health and will address ongoing and emerging issues including optimal return to work practices that prevent work disability and a better understanding of workplace environments that meet the needs of workers with health conditions/injuries in order to sustain productivity and avoid work disability. In addition to these research activities, members of the Institute's Knowledge Transfer and Exchange group will engage in a number of activities with our non-research partners to support the ways that research evidence is used to shape policy and practice. KTE will continue to sustain relationships with workplace parties (employers, organized labour, health and safety associations, ergonomists, and clinical practitioners) to ensure their early participation in formulating work disability prevention research, and to ensure we have well-established communication channels for disseminating findings.

### **The role of clinicians in preventing work disability**

Over the past 15 years the Institute has focused on research relevant to the clinical management of work-related disorders, including the measurement of diverse health outcomes, function, productivity, and psychosocial factors that may impact work disability, a better understanding of the role of clinicians in preventing work disability and research on the effectiveness of clinical interventions. In 2017, we will continue 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 Cochrane Back and Neck Group, hosted by the Institute for Work & Health, 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.

### **Workplace practices for sustainable return-to-work**

The Institute for Work & Health has conducted actionable research for more than two decades that supports improvement in workplace practices to prevent disability. The Institute will continue this commitment in 2017. Institute scientists have been engaged for a number of years in research evaluating disability management practices in the workplace. New in 2017, Institute scientists will partner with Ontario municipalities to work on strengthening disability management through audits and benchmarks of disability management practices. Also in 2017, the Institute will complete an evidence-based guide on managing depression in the workplace through a series of stakeholder panels and consultations. Moreover, we will look at workplace communication and accommodation from the perspective of older workers and those with episodic and chronic health conditions.

### **The economic impact of work disability**

Institute scientific staff have conducted important research over the past decade on the adequacy of workers' compensation benefits and the economic impact of work disability on individuals and households. The Institute will continue a strong portfolio of research work on this theme in 2017, including the work of the Centre for Research on Work Disability Policy (CRWDP), a 7-year transdisciplinary initiative into the future of work disability policy and labour-market engagement in Canada.

### **Measuring health and function**

The Institute for Work & Health has a long tradition of research on the recovery and return-to-work of workers with musculoskeletal disorders. The measurement of health and function in recovery from a work-related injury will continue to be a focus of Institute research.



## **B. Prevention and Management of Work Disability**

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## **Cochrane back and neck review group: systematic reviews of the scientific literature on spinal disorders (0440)**

**Project Period:** 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 back and neck 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 back and neck pain and spinal disorders.
- To maintain a specialized database of trials on back and neck pain and spinal disorders for literature searches, and to help identify gaps in the literature and suggest areas for further study.
- To communicate regularly with our CBN stakeholders.

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

**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.; 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:** 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.

### **Project Targets for 2017:**

*First Quarter:* Arrange to hold editorial board member meeting; attend Co-Ed meeting in Europe; start updating the CBN trials register

*Second Quarter:* Initiate process to update reviews that are well out of date; Prepare SPOR application; continue to update the trials register

*Third Quarter:* Support the updating of reviews; work on optimizing the trials register as a sole source for searches for our reviews

*Fourth Quarter:* Support the updating of reviews

## **Predicting successful return to work in workers on disability due to low back pain (2210)**

**Project Status:** Ongoing, to be completed Q4 of 2017

**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.

**Researchers:** Sheilah Hogg-Johnson (Principal Investigator), Ben Amick, Teresa D'Elia, Andrea Furlan, G McIntosh (CBI Health Group), I Steenstra (Morneau Schepell)

**Collaboration and Partnerships:** CBI Health Group (Greg McIntosh )

**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.

### **Project Targets for 2017:**

*First Quarter:* Cleaning and merging all databases

*Second Quarter:* Building prediction tools for all outcome: present to work stakeholders  
Prepare manuscripts for publication and presentation at conferences

*Third Quarter:* Prepare application for evaluation of tool to CIHR  
Prepare manuscripts for publication and presentation at conferences

*Fourth Quarter:* Workshops on findings and roll out of KT strategy

## **Understanding why gender and age differences exist in return-to-work following a musculoskeletal Injury (2250)**

**Project Period:** Ongoing, to be completed in Q3 of 2017

**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 are more efficacious among these groups; then this would inform the development of targeted secondary interventions to improve recovery and economic outcomes of 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

**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, results from this study will be presented to an advisory committee consisting of leading research and policy makers in OHS 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.

### **Project Targets for 2017:**

*First Quarter:* Write up analyses focusing on gender differences in RTW and submit to peer-review.

*Second Quarter:* Write up analyses focusing on age differences in RTW and submit to peer-review.

*Third Quarter:* Complete project.

*Fourth Quarter:*

## **Strengthening disability management in the Ontario municipal sector (2275)**

**Project Period:** New in 2017

**Introduction:** This initiative will partner with a minimum of six Ontario municipalities to work with the Institute for Work & Health over a 24 month period of funding support to audit and benchmark disability management practices with the goal of identifying innovative practices that have the potential to reduce the incidence of avoidable disability days. There are opportunities to improve the quality and consistency of current disability management practices in the Ontario municipal sector. These quality improvement initiatives in workplace disability prevention practices will focus on reducing the incidence of avoidable disability days, defined as days of work absence that are due to delays in return-to-work planning and implementation and delays in establishing suitable accommodations and modified work. In this project, we will undertake six specific activities with our municipal partners to assess current practice and identify opportunities for innovation. These activities include key informant focus group interviews, the administration of a nationally-recognized disability management program audit, the development of a program logic model as an evaluation framework for measuring the economic costs and benefits of innovative practices in disability management and the specification of a formal plan to implement the quality improvement initiatives in each participating municipality.

### **Objectives:**

- To apply audit and benchmarking protocols to identify promising innovations in disability management practices that are feasible to implement in the Ontario municipal sector
- To support partner municipalities in preparing formal plans to implement the quality improvement initiatives and
- To support the implementation of quality improvement initiatives

**Researchers:** Cameron Mustard (Principal Investigator), Arif Jetha, Agnieszka Kosny, Morgan Lay, Christopher McLeod, Lynda Robson, Basak Yanar

**Collaboration and Partnerships:** This research partnership brings together the internationally-recognized research expertise of the Institute for Work & Health in the social and health sciences with leading human resource professionals in Ontario municipalities employing more than 25,000. The partnership also includes non-profit professional service organizations that support the work of municipal human resource leaders, including the Ontario Municipal Human Resources Association, the National Institute for Disability Management and Research and the Public Services Health and Safety Association.

**Potential Audiences and Significance:** We expect that municipal employers and unions representing the municipal labour force across Canada will be the primary users of the knowledge arising from this research project. Additional groups who may be interested in the results of this research initiative include policy-makers in provincial workers' compensation authorities, disability benefit trusts and private sector disability insurance plans and representatives of organized labour in the public sector.

### **Project Targets for 2017:**

- First Quarter:* Complete recruitment of partner municipalities
- Second Quarter:* Conduct disability management audits, Conduct key informant interviews
- Third Quarter:* Briefings to individual municipalities, Host municipality consensus meeting
- Fourth Quarter:* Application to Phase 2 of the CIHR/SSHRC Signature Initiative

## Managing depression at the workplace (3195)

**Project Period:** New in 2017

**Introduction:** The burden associated with managing the effects of depression in the workplace is extensive. Workers with depression; lose significantly more health-related productive time, have higher rates of absenteeism and short-term disability and, experience higher rates of job turnover than those without depression. Economic analyses have also shown that the costs of lost productivity associated with depression far exceed the costs of resources used to treat and manage the disorder.

Over the last decade, the Institute for Work & Health (IWH) has produced a series of systematic reviews on the effectiveness of intervention approaches that could be implemented or facilitated by employers to manage workers' depression, support return-to-work, and reduce associated productivity losses. However, there are information gaps that remain that may prevent employers from making investments to reduce the impact of depression in the workplace. The proposed project will draw upon this research evidence and integrates it with both practitioner expertise and worker values and preferences to help bridge the research-to-practice and research-to-policy gaps that currently exist for depression-related disability management programs and their implementation.

### **Objectives:**

- To unpack and identify strategies to implement the best practices in disability management approaches to RTW for mental health disorders

**Researchers:** Dwayne Van Eerd D (Principal Investigator), Kim Cullen (Co-PI), Siobhan Cardoso, Emma Irvin, Monique Gignac, Quenby Mahood, A Dubey (CAMH), J Geary (NIDMAR)

**Collaboration and Partnerships:** Unifor, Alberta Workers' Health Centre, BC Federation of Labour, The Mood Disorders Association of BC

**Potential Audiences and Significance:** Workplaces from all sectors who require strategies to manage and accommodate depression in the workplace

### **Project Targets for 2017:**

*First Quarter:* Distribute online survey; conduct focus groups; conduct face to face interviews; retrieve and catalogue grey literature sources  
Analyses: quantitative analysis of survey results (counts and level of agreement).  
Qualitative approach determining themes that emerge from focus groups and interviews

*Second Quarter:* Syntheses: combining findings from peer reviewed and grey literature along with practices and themes from survey, focus groups, interviews in meaningful way for stakeholder meetings. Hold meeting to develop implementation guide: present findings from data collection and synthesis.  
Determine meaningful information and formats for guide development.

*Third Quarter:* Develop implementation guide: present the synthesis findings according to the stakeholder decisions in the development meeting. Build upon knowledge transfer and exchange principals, Hold meeting for feedback on implementation guide: gather further feedback for guide improvements and suggested dissemination activities

*Fourth Quarter:* Complete and disseminate implementation guide and write report

## Conceal or reveal? Facilitators and barriers to older workers' communication of accommodation (2280)

**Project Period:** New in 2017

**Introduction:** The unprecedented size of the baby boom generation (born 1946-1964) has created concerns about the greying of the workforce. One strategy to sustain labour force growth and personal financial security is to help individuals work longer. Yet apprehensions about older workers have been raised, including whether there are age-related changes in motivation to learn new skills (e.g., new technology), life course changes in responsibilities (e.g., caregiving), and changes in physical capacity (e.g., fatigue, physically demanding work). The extent to which these are problematic is unclear. Some studies find negative aging stereotypes are not supported by workplace data. But, whether due to negative stereotypes or actual work-personal life changes, emerging research suggests that older workers can be concerned about communicating their needs to others. This raises alarms that communication is a significant barrier to receiving supports, accommodations and training that could sustain work productivity and high job satisfaction. Ultimately, the absence of supports may impact work outcomes like absenteeism, productivity or even forgoing employment, which in turn, may fuel continued negative perceptions of older workers. Currently, there is little data examining how older workers make decisions about whether, to whom, what to say, and when to communicate their job needs. By understanding processes related to communication, we can inform workplace practices and policies and help older workers to sustain employment and take advantage of the financial, personal and social benefits of work.

**Objectives:** The overarching goal of this research is to help sustain the employment of aging workers, often categorized as individuals aged 50+ years, to capture those born during the baby boom generation. We will use a mixed-methods design with focus groups and a cross-sectional survey to:

- understand reasons older workers choose to communicate or not communicate personal needs for accommodation, support or training/development,
- examine factors that relate to the content of communications, their timing and goals, and
- examine the relationships between facets of communication (e.g., reasons; timing; recipients of disclosure), support and employment outcomes.

**Researchers:** Monique Gignac (Principal Investigator), Arif Jetha, Agnieszka Kosny, Vicki Kristman, J Cameron (University of Toronto)

**Collaboration and Partnerships:** Not Applicable

**Potential Audiences and Significance:** Results of the research will be relevant to older workers, employers (e.g., supervisors, HR professionals), disability managers, occupational health professionals, insurers, government, and community organizations focused on aging, employment, disability or caregiving.

### Project Targets for 2017:

*First Quarter:* Qualitative data collection through focus groups

*Second Quarter:* Qualitative data analysis  
Refining of communication model

*Third Quarter:* Design of quantitative survey

*Fourth Quarter:* Quantitative survey launch and data collection

## **Sustainable work participation: work disability prevention and improvement of employment outcomes among those with chronic, episodic health conditions (2270)**

**Project Period:** New in 2017

**Introduction:** Many chronic physical and mental health diseases cause episodic disability and not continuous problems (e.g., arthritis, multiple sclerosis, depression, anxiety, lupus, diabetes). This includes periods of well managed disease punctuated by more severe disease activity. Privacy legislation has shifted disability management away from disease diagnoses (which workers are not obligated to disclose) to a focus on activity limitations and restrictions as the means of guiding accommodations. For episodic conditions where symptoms fluctuate, are often unpredictable and invisible to others, needs for accommodations are difficult to assess. A better understanding of similarities and differences across physical and mental health episodic disabilities and the processes whereby accommodations are communicated, delivered, utilized and changed is critical. Working with partners, we aim to reduce at-work disability and improve productivity and the employment sustainability of Canadian workers with episodic disabilities.

### **Objectives:**

- To enhance the breadth of our team's partnerships related to managing episodic physical and mental health conditions;
- To increase understanding of the impact of episodic disabilities on workers and workplaces;
- To better understand workplace planning and provision of accommodations over time, and their impact and effectiveness on worker and workplace outcomes;
- To illuminate communication processes and needs related to disclosure of episodic disabilities (e.g., initiating communication, changing needs);
- To begin development of a toolkit to help employers and workers to better communicate and implement accommodations

**Researchers:** Monique Gignac (Principal Investigator), Dorcas Beaton, Curtis Breslin, Sheilah Hogg-Johnson, Emma Irvin, Arif Jetha, Ron Saunders, Peter Smith, Emile Tompa, Dwayne Van Eerd, R Franche (Simon Fraser University), J MacDermid (University of Western Ontario), W Shaw (Liberty Mutual Research Institute for Safety)

**Collaboration and Partnerships:** Partners include the Ontario Ministry of Labour (OMOL), the Mental Health Commission of Canada (MHCC), Episodic Disabilities Network/Forum (EDN/EDF) and the Institute for Work & Health (IWH).

**Potential Audiences and Significance:** evidence-informed episodic disabilities toolkit that will help workers, supervisors, and disability managers prevent at-work disability and sustain employment.

### **Project Targets for 2017:**

<i>First Quarter:</i>	Initial data collection (key informant interviews) and resources coding
<i>Second Quarter:</i>	Complete initial data collection and resources coding Begin analyses and refining of conceptual model and focus group questions
<i>Third Quarter:</i>	Second part of data collection (focus groups)
<i>Fourth Quarter:</i>	Application to Signature Initiative (Phase 2 of the CIHR/SSHRC Signature Initiative)

## Benefits adequacy for workers compensation claimants, 1999-2005 (2150)

**Project Period:** Ongoing, to be completed by Q3 2017

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

### **Objectives:**

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

**Researchers:** Emile Tompa (Principal Investigator), Cameron Mustard (Co-PI), Ron Saunders (Co-PI), Qing Liao

**Collaboration 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.

### **Project Targets for 2017:**

*First Quarter:* Ongoing regression modeling of labour-market earnings post-injury.  
Submit manuscript on benefits adequacy across three Ontario programs.  
Submit manuscript on transitions to retirement following work injury.

*Second Quarter:* Complete regression modeling of labour-market earnings post-injury and related manuscript.

*Third Quarter:* Submit regression modeling of labour-market earnings manuscript.

*Fourth Quarter:*

## **Income security and labour-market engagement: envisioning the future of disability policy in Canada (2195)**

**Project Period:** 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.

**Researchers:** Emile Tompa (Principal Investigator), Curtis Breslin, Ron Saunders, E MacEachen (Co PI; University of Waterloo)

**Collaboration and Partnerships:** Stakeholders( disability communities and program provider representatives.

**Potential Audiences and Significance:** stakeholders in the Canadian work disability policy system, which includes injured worker and disability communities, employers, policymakers, disability program administrators, and service providers.

### **Project Targets for 2017:**

<i>First Quarter:</i>	Complete update of website Prepare and release 2014-2015 activity report Hold quarterly executive meeting Complete and submit mid-term report Hold student/new researcher capacity building committee meeting
<i>Second Quarter:</i>	Prepare and release spring issue of newsletter Complete and submit partner contributions roll up Help organize and attend BC and NL cluster meetings Hold quarterly executive meeting
<i>Third Quarter:</i>	Hold quarterly executive meeting Plan fall community event in Winnipeg (Canada 150 Celebration)
<i>Fourth Quarter:</i>	Help organize and attend ON and QC cluster meetings Hold student/new researcher capacity building committee Plan and execute student capacity building event. Hold quarterly executive meeting Attend community event in Winnipeg (Canada 150 Celebration)

## Assessment of the human and economic burden of workplace cancer (2205)

**Project Period:** Ongoing, to be completed by Q4 2017

**Introduction:** There is 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. 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.

**Researchers:** Emile Tompa (Principal Investigator), Christina Kalcevich, Young Jung, C McLeod (University of British Columbia), Martin Lebeau (IRSST),

**Collaboration and Partnerships:** We will communicate 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 build relationships with stakeholders, especially policymakers, who can use the findings to help inform policy change. CAREX Canada will also disseminate study findings via their communications program.

**Potential Audiences and Significance:** Information on the economic burden is extremely useful for government and industry decision making on the benefits of investing in prevention-related efforts. Key audiences are policy makers, workers, employers and physicians.

### Project Targets for 2017:

*First Quarter:* Submit manuscript on the burden of a) bladder cancer and b) skin cancer to journal.  
Complete analysis on nasopharynx and sinonasal cancers.  
Ongoing analysis of breast cancer.  
Begin analysis of stomach cancer and leukemia.  
Begin methods manuscript.

*Second Quarter:* Complete methods manuscript and submit to journal.  
Submit nasopharynx and sinonasal cancers study to journal.  
Complete analysis of stomach cancer and leukemia and submit to journal.  
Complete analysis of breast cancer.  
Complete Project Status Report for OCRC.

*Third Quarter:* Submit breast cancer study to journal.  
Complete summary report (methods and findings) of all occupational cancers for OCRC.

*Fourth Quarter:* Present study at an international conference.

## Extended working life and its interaction with health, wellbeing and beyond (2260)

**Project Period:** Ongoing

**Introduction:** In Europe and Canada, policymakers are facing particular challenges related to rising life expectancy, an aging workforce and the consequent increase in the prevalence of chronic illness and disability. But these increases in life expectancy are not experienced. Less skilled workers, for example, have a shorter life expectancy, earlier onset of chronic illness and disability, are more likely to suffer multi-morbidities as they get older and enjoy fewer years of life after retirement. Policymakers in Europe and Canada therefore face a dual challenge of extending health, quality of life and wellbeing into old age for all groups, whilst finding more effective and equitable ways of ensuring that all older people are fairly treated in strategies and policies to extend working life. This project will conduct transnational research that advances understanding of the differential impacts of health inequalities on the opportunity to work later in life and of strategies and policies for extending working life that take these health inequalities into consideration.

### **Objectives:**

- To examine how the pattern of different physical and mental health conditions vary over working life by socioeconomic status and gender in different country contexts.
- To determine what the employment consequences of these changing patterns of morbidity, co-morbidity, and caring responsibilities at older ages are.
- To find policy approaches that have been taken in the study countries to extend the working lives of people with chronic illness.

**Researchers:** Cameron Mustard (Principal Investigator), Emile Tompa

**Collaboration and Partnerships:** Dr Whitehead from the University of Liverpool, UK, and includes partners from the University of Copenhagen, Denmark and the Karolinska Institute, Sweden. Our partners and research users will be invited to be members of a Consortium Advisory Group (CAG), which will advise on and challenge our research at each stage of the programme.

**Potential Audiences and Significance:** This project brings together a coherent group of study countries - UK, Canada, Sweden and Denmark - which are addressing similar policy problems, but have been experimenting with a variety of strategies to tackle the problems. We will take an innovative approach that integrates comparative quantitative analysis of population datasets in each country with the knowledge generated through policy analysis and systematic reviews of qualitative and quantitative intervention studies. Through this research, there is scope for international policy learning on how best to extend the working lives of older people in ways that are effective and equitable.

### **Project Targets for 2017:**

- First Quarter:* Complete Canada-specific analysis to meet specifications of cross-country comparative analysis (WorkPackage 1).  
Initiate specification of search strategy to identify relevant publications for systematic reviews to be completed in WorkPackage 3
- Second Quarter:* Complete search strategy to identify relevant publications and initiate review of titles and abstracts (WorkPackage 3).
- Third Quarter:* Complete quality appraisal and data extraction from relevant publications (WorkPackage 3).
- Fourth Quarter:* Draft working papers for review and comment by study collaborators

## The cost of exclusion of persons with disability in Canada (2265)

**Project Status:** Ongoing

**Introduction:** Exclusion of people with disabilities from paid work is widely documented in the literature, but has not been quantified in monetary terms. In Canada it is estimated that 795,000 people with disabilities are unemployed despite being able and willing to work. Many different barriers prevent these people from working, including discrimination and bias, employers' concerns about cost and productivity, and a lack of knowledge on how to appropriately accommodate different abilities. Not counted are the underemployed—individuals with skill levels higher than their job demands who are unable to secure appropriate work due to their disability. This study will develop a conceptual framework and methods for costing the exclusion of people with disabilities and apply it to the Canadian context. It will draw on the cost of illness/ economic burden methodology, and extend it into the sociological domain based on concepts of the disablement process. The question driving the review is: What is the cost to Canadians of excluding people with disability from fully participation in the paid labour market?

### Objectives:

- To develop a counterfactual framework of a more inclusive society for application in Canada context.
- To synthesize theoretical and methodological literature on a more inclusive counterfactual scenario.
- To develop a grounded counterfactual scenario for application in a cost of exclusion study based on the literature synthesis and to identify measures available to operationalize the scenario.
- To estimate the magnitude of key components of exclusion, e.g., labour-market output/ productivity costs, exclusion from social role engagement, expenses for support provision by social programs.
- To identify the distribution of costs of exclusion across stakeholders—people with disabilities and their families, employers, the public sector, and society at large.

**Researchers:** Emile Tompa (Principal Investigator), Young Jung

**Collaboration and Partnerships:** We will be draw on relationships we have established in various policy circles to help guide the development of methods and their execution in the Canadian context. Individuals to be contacted include representatives from Employment and Social Development Canada, the Public Health Agency of Canada, the World Health Organization and the International Labour Organization.

**Potential Audiences and Significance:** This study is of relevance to injured worker and disability communities, employers, policymakers, disability program administrators, and service providers. The methodology to be developed for this study will be of interest to international stakeholders in work disability arena, including the World Health Organization and the International Labour Organization.

### Project Targets for 2017:

*First Quarter:* Begin review of approaches to conceptualizing social exclusion associated with disability. Identify researchers in other countries interested in similar work in their jurisdictions.

*Second Quarter:* Complete methodology plan on cost of exclusion. Identify data sources to undertake cost of exclusion study in the Canada. Ongoing discussions with international researchers on their interest in contributing to a special issue journal edition

*Third Quarter:* Consult with policy contacts to discuss methods. Begin applications of methodology for the Canadian context. Hold a virtual meeting with international researchers to discuss special issue journal edition

*Fourth Quarter:* Complete estimation of cost of exclusion in Canada. Finalize content of special issues journal edition

## Measurement methodology studies (0925)

**Project Period:** 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 and advance 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 advance evidence based approaches to selection of outcome measurement instruments (BOSS Studies) (Best Outcome Selection Study)

**Researchers:** Dorcas Beaton (Institute Coordinator), Claire Bombardier, Cynthia Chen, Kim Cullen, Sheilah Hogg-Johnson, Emma Irvin, Peter Smith, Michael Swift, Dwayne Van Eerd, R Buchbinder (Monash University, Australia), F Guillemain (University of Nancy, France), J Katz (Brigham and Women's Hospital, Harvard University), M Kita (University of Toronto), Z Touma (University of Toronto), P Tugwell (University of Ottawa), G Wells (Ottawa Hospital Research Foundation) and many trainees (Pinsker, Engel).

**Collaboration and Partnerships:** Partners in this project include clinicians, researchers, trainees, and students, as well as organizations collaborating in our activities, including OMERACT, COSMIN, COMET, 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.

### Project Targets for 2017:

- First Quarter:* Methods for thresholds of meaning. MCID and PAS work with work productivity measures, and OAKQOL.  
Preparing Handbook for instrument selection with OMERACT  
Submit manuscript to quality of life research on review of critical appraisal instruments.  
Attend OMERACT Executive Retreat, present proposal for measurement database (OMeRR).
- Second Quarter:* Continue with methods development  
Attend EULAR 2017 for OMERACT Executive.
- Third Quarter:* Attend ACR and ISOQOL Meetings for setting standards in instrument selection.
- Fourth Quarter:* Support graduate trainees in measurement theory, concept of recovery (Pinsker).

## **Employment needs and experiences of workers with arthritis and diabetes: Keeping the boomers in the labour market (2230)**

**Project Period:** 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).

**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. It will also be relevant to employers, disability managers, human resource professionals, occupational health professionals, insurers, and consumer/patient organizations.

### **Project Targets for 2017:**

*First Quarter:* Topic area identified and analysis underway for potential third paper  
Submit retirement paper for peer-review.

*Second Quarter:* Discuss with team additional analyses and KT messages.  
Discuss availability of data for students/trainees and additional analyses.  
Continue with preparation for potential third paper.

*Third Quarter:* Complete analysis on third paper and submit for peer-review.

*Fourth Quarter:* Discuss additional presentations/papers with team. Work will continue with KTE

## Development and testing of the DASH outcome measure - DASH instrument (0425)

**Project Period:** 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 32 language translations and 16 languages currently in progress. In 2003, the 11-item QuickDASH was released. In 2011, we published a paper that outlined benchmarking scores for the DASH. 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. In 2016 we marked the 20<sup>th</sup> anniversary of the DASH with several presentations and invited talks at international meetings.

### **Objectives:**

- To continue work with the DASH and review of measurement properties
- To revise the scoring system for the DASH based on the findings of repeated factor analysis.
- To pro-actively address issues related to the DASH

**Researchers:** Dorcas Beaton (Institute Coordinator), Claire Bombardier, Kim Cullen, Sheilah Hogg-Johnson, Selahadin Ibrahim, Quenby Mahood, Michael Swift.

**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:** 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 Workplace Safety & Insurance Board

### **Project Targets for 2017:**

- First Quarter:* Prepare manuscript on the first 20 years of the DASH (Journal of Hand Therapy)  
Participate in two reviews on the DASH (both UK based).  
Assist in preparing grant on orthopaedic fracture outcome core sets
- Second Quarter:* Finalize scoring.  
Mentor hand therapists through the use of the DASH versus other measures.  
Enter DASH review into the instrument database (M Swift assists)  
Begin process of co-calibration of the DASH with the PROMIS database's UE Function instrument with group from Oxford (funding being sought)
- Third Quarter:* Systematic review of the factor structure of the DASH and see if there is justification between the PROMIS work and this work and original analysis we have to say we should move to two domain scores.  
Investigate use of shoulder and elbow clinic data for DASH analysis.
- Fourth Quarter:* Testing of the DASH in persons with OA of the thumb and with shoulder disorders  
Primary data, literature review.



## Foundation Programs

The Institute's Foundation program is composed of a number of activities within the Research Program whose scope of activities may cross cut all the research we undertake at the Institute. These activities include Data and Information Systems, Measurement of Health and Function and Systematic Reviews. These programs provide expertise to all relevant research projects in the Institute, hence the term foundation programs.

One of the foundation programs at the Institute is Data and 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.

Our data sources include current administrative data from the Workplace Safety and Insurance Board (WSIB). Data and Information Systems 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.

Data and Information Systems Program staff are very responsive to the needs of other Institute researchers, and as a result, is highly regarded by our scientists and staff. 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, along 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 are a small part of the portfolio of this group as program staff are primarily involved in support of projects described elsewhere.

The Scientists in the Measurement of Health and Function foundation program focus on providing reliable measurement methods and rigorous analytic approaches which are vital to research excellence. Among other things, they help scientists clarify the relationship between exposures and outcomes in epidemiologic studies.

Another foundation program at the Institute is the systematic review program. Systematic reviews provide an overview of the evidence from higher quality studies on a specific research question. The Cochrane Back Review Group, based at IWH, conducts systematic reviews of clinical research on back and neck pain. In addition, IWH has developed in-house expertise in systematic reviews of work-health research. Institute researchers and scientists are now conducting reviews of research into economic and other non-clinical aspects of occupational health and safety, especially in the area of prevention. This program which encompasses all types of reviews, encourages cross-disciplinary collaboration and the consistent use of systematic review methods across the Institute.

This program was initiated in part as a response to a growing demand among stakeholders for usable, evidence-based information regarding the prevention of workplace injury and illnesses.



### C. Foundation Programs

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## Workplace safety & insurance board data routine statistics (0307/0845)

**Project Period:** Ongoing

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

**Objectives:**

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

**Researchers:** Cynthia Chen (Institute Coordinator), 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.

**Project Targets for 2017:**

- First Quarter:* Respond to ad hoc requests for WSIB data as required  
Complete research agreements for feasibility studies prior to ad hoc requests  
Seek opportunities to expand knowledge of different WSIB resources
- Second Quarter:* Respond to ad hoc requests for WSIB data as required  
Complete research agreements for feasibility studies prior to ad hoc requests  
Seek opportunities to expand knowledge of different WSIB resources
- Third Quarter:* Respond to ad hoc requests for WSIB data as required  
Complete research agreements for feasibility studies prior to ad hoc requests  
Seek opportunities to expand knowledge of different WSIB resources
- Fourth Quarter:* Respond to ad hoc requests for WSIB data as required  
Complete research agreements for feasibility studies prior to ad hoc requests  
Seek opportunities to expand knowledge of different WSIB resources

## Methodological developments in systematic reviews (0951)

**Project Period:** Ongoing

**Introduction:** IWH is committed to continuously improving the field of systematic review methodology. In 2015, we propose to initiate, undertake, and advance 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.

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

**Collaboration 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.

### Project Targets for 2017:

- First Quarter:* Run UofT course on Systematic Reviews; Submit updated alcohol review; Complete Quality Appraisal descriptive paper; Initiate PICO descriptive paper
- Second Quarter:* Run UofT course on Systematic Reviews; Update Cochrane papers, Initiate update of Irvin 2010 methods piece; Initiate methods paper comparing ROB and best evidence synthesis
- Third Quarter:* Run UofT course on Systematic Reviews; Update Cochrane reviews; Initiate updating of SR stakeholders paper;
- Fourth Quarter :* Run UofT course on Systematic Reviews; Update Cochrane review; Complete Irvin 2010 methods paper and paper comparing ROB and best evidence synthesis

## 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. KTE at IWH is integrated into the research process. Stakeholders are involved in helping us to identify research priorities and frame research questions. They also help us communicate findings in ways and through channels that are useful for policy and practice. The target audiences for the Institute's research include policy-makers (provincial and federal ministries, workers' compensation agencies such as the Workplace Safety and Insurance Board), health and safety associations (HSAs), workplace parties (labour and employers), clinicians and other occupational health and safety professionals

The KTE process is supported by a corporate communications strategy that enhances the Institute's ability to communicate effectively with its stakeholders. The communication tools include our quarterly newsletter and monthly e-bulletin, the IWH website, social media, media relations, special events and the marketing of specific products such as evidence guides and workshops. In addition, KTE actively works to build capacity in our audiences to understand and use research evidence.

The work of IWH's KTE department falls into three goals:

1. **Relationships:** Strengthen stakeholder networks and relationships to enhance the applicability and uptake of IWH research. KTE creates formal and informal networks of stakeholders and works with intermediary organizations (health and safety associations, professional organizations, employer associations and labour groups) to allow us to link with stakeholders over time with different research messages. We have integrated the KTE projects with the relevant research themes (reported on earlier in this document) to make it easier for the reader to see these links. All the KTE projects are also listed in this KTE section of the plan.

2. **Reach:** Expand our audiences and support their access to and use of research evidence. KTE continues to explore creative and effective ways to expand evidence dissemination and facilitate knowledge exchange through the use of new and current technologies and techniques. The website continues as a major source of outreach along with the publication of our quarterly newsletter *At Work* and our monthly e-bulletin, *IWH News*. We will continue to pursue coverage in trade media and we are using social media both as another dissemination vehicle and to follow issues raised by our stakeholders. We will continue to provide tailored workshops and briefings focused on understanding research evidence and its application. The Institute website houses a searchable research module that lists all the research articles published by IWH researchers. Also when a visitor to our website searches for information on an IWH researcher, the most recently published articles by that researcher appear in the search.

3. **Products:** Develop evidence-based guides, tools and information products to support efforts to improve the safety and health of working people. KTE works with our scientists and stakeholders to develop products (tools, guides, Issue Briefings, newsletter articles, videos) to communicate and apply research findings.



## D. Knowledge Transfer & Exchange

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## Issue briefings (0611)

**Introduction:** Research findings of the Institute for Work & Health often have implications for decision makers in government, the WSIB, and the HSAs, 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.

**Audience:** 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.

### Objectives:

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

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

**Collaboration and Partnerships:** Issue Briefings are sent out in two stages. First, an Issue Briefing goes as an attachment to deputy ministers of labour, chairs and CEOs of workers' compensation boards, and to the policy and OHS committees of the Canadian Association of Administrators of Labour Legislation. About two weeks later, we post the Issue Briefing on our website and send a notice with a link to all who have subscribed to the Issue Briefing series. Recipients are invited to post the link to Issue Briefings on their organizations' websites and bulletins.

### Project Targets for 2017:

*First Quarter:* Begin Issue Briefing on IWH research on leading indicators  
Identify topic for subsequent Issue Briefing.

*Second Quarter:* Complete and publish Issue Briefing on leading indicators.

*Third Quarter:* Begin work on second Issue Briefing.  
Identify possible topics for 2017.

*Fourth Quarter:* Complete and publish second Issue Briefing.

## Educationally influential networks (0617)

**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 back pain, 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 began surveying EI groups (Ergos and Chiro) on their use and dissemination of research and their reach. We will continue surveying EI groups in 2017. In 2016, we held our inaugural EI summit to facilitate cross-disciplinary networking. Based on discussions with our network members during the meeting and the results from the evaluation survey we will continue using the summit format in place of discipline-specific meetings.

**Audience:** 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.

### 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.

**Team:** Ron Saunders (Co-Lead), Siobhan Cardoso (Co-Lead), Kim Cullen (Co-Lead), Sara Macdonald (Co-Lead), Kristina Buccat, Cindy Moser

**Collaboration and Partnerships:** Clinicians/practitioners, professional bodies (Associations/Regulatory Colleges)

### Project Targets for 2017:

<i>First Quarter:</i>	Discuss EI summit format for 2017
<i>Second Quarter:</i>	Begin planning EI summit (determine summit objectives and goals) Discuss and develop EI survey
<i>Third Quarter:</i>	Continue planning EI summit (create summit presentation agenda and cross network discussion topics for the roundtable).
<i>Fourth Quarter:</i>	Host EI summit. Survey EI groups

## Tracking KTE and evaluation (0629)

**Introduction:** Consistent with the IWH Five Year Strategic Plan, KTE has identified activities and indicators to be measured. In 2017, KTE will continue to track stakeholder engagement in IWH projects. We will continue to populate the templates that have been developed for tracking KTE activities associated with each research project and tools resulting from those projects. We will complete 5 new case studies of the impact of IWH research. In addition, we will focus on how our KTE tracking can be integrated with other Institute tracking systems in order to streamline the process across the organization.

**Audience:** IWH staff, IWH Board of Directors, external stakeholders, and KTE researchers.

### Objectives:

- To track KTE indicators that are part of the Five Year Strategic Plan.
- To track stakeholder engagement and other KTE activities in projects and systematic reviews.
- To document indicators of research use, e.g., downloads, media mentions, testimonials of research use.
- To document research impact through case studies (at least five to be completed in 2017).

**Team:** Siobhan Cardoso (Co-Lead), Kim Cullen (Co-Lead), Sara Macdonald (Co-Lead), Cindy Moser (Co-Lead), Ron Saunders (Co-Lead), Kristina Buccat, Emma Irvin, Dwayne Van Eerd

**Collaboration and Partnerships:** KTE systematic review stakeholders, project stakeholders, senior policy officials.

### Project Targets for 2017:

- First Quarter:* Track stakeholder engagement, e.g. participation in advisory meetings, dissemination of research results and uptake of findings, e.g. downloads and testimonials.  
Record uptake of tools.  
Identify candidates for new case studies.  
Begin work on new case studies.  
Assess current tracking methods and how they can be improved
- Second Quarter:* Track stakeholder engagement and tool uptake as above.  
Record uptake of tools.  
Continue work on case studies and identify candidates for new case studies.  
Discuss new methods for tracking, seeking input from Institute staff
- Third Quarter:* Track stakeholder engagement and tool uptake.  
Continue work on case studies.  
Assess how new methods may be implemented
- Fourth Quarter:* Track stakeholder engagement and tool uptake.  
Continue work on case studies and identify candidates for new case studies.

## Disability managers and OHS professional networks (0638)

**Introduction:** IWH established a new network of disability management (DM) professionals in 2012 and a network of OHS professionals in 2015,. The groups are currently composed of 55 and 60 members, respectively. Meetings are held annually at the IWH for knowledge exchange: Network members provide information and opinion to IWH (to improve our research and knowledge exchange efforts); and IWH shares research findings with the members who are encouraged to share with their peers. LinkedIn groups for the networks were created at the request of members. Approximately 30 members have joined the online groups. The platform is used to disseminate relevant research findings, generate discussion, and provide networking opportunities. All members also receive the monthly IWH news and quarterly At Work via email. Members are also often approached for interest in participating in research projects.

**Audience:** Members of the network include professionals from workplace parties, insurers, and clinical care settings/organizations.

### Objectives:

- To facilitate knowledge exchange among IWH researchers and individuals who are involved in the practice of disability management and OHS in Ontario.
- To facilitate the dissemination of research findings to the community of disability management and OHS 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 and prevention audiences.

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

**Collaboration and Partnerships:** HSA consultants, workplace parties, disability managers, health care and nursing organizations, labour unions, workplace OHS professionals (coordinators, managers and directors, and OHS consultants within HSAs).

### Project Targets for 2017:

- First Quarter:* Plan DM annual event.  
Continue reaching out to members to participate in research as opportunities arise.  
Plan update/renewal of DM membership.
- Second Quarter:* Host DM annual event  
Ask members of the DM network if they would be interested in a joint meeting with the OHS professionals.
- Third Quarter:* Plan renewal of DM membership  
Continue reaching out to members to participate in research as opportunities arise.  
Plan OHS professionals event (or joint meeting of OHS professionals and DMs)
- Fourth Quarter:* Host OHS professionals event (or joint OHS-DM event)

## Prevention partners networks (0640)

**Introduction:** KTE will continue to build relationships with the prevention partner community through vehicles like the Partners Knowledge Exchange Group (PKEG). Organizations participating in PKEG include: the six Ontario health and safety associations, the three Centres of Research Excellence (CREs) (including the Occupational Cancer Research Centre, OCRC), the Prevention Office and the Policy and Operations divisions of the Ontario Ministry of Labour (MOL), and the Workplace Safety and Insurance Board (WSIB). Capacity building in the use of evidence in programming and planning will continue through the review of evidence from the research organizations and key projects of the other participants. PKEG is also a vehicle for dialogue about how to improve knowledge exchange, both among the members of the committee and with workplace parties. IWH is participating as a member of a prevention system communications group and the Ergonomist Integrated Planning Action Committee (EIPAC) with other prevention partners. IWH also participates in the annual Partners in Prevention conference.

**Audience:** For PKEG: Health and safety associations (HSAs), Ministry of Labour, (MOL) Centres for Research Expertise (CREs) and Workplace Safety and Insurance Board (WSIB). For the Partners in Prevention Conference: workplace parties and OHS professionals are also among the audience.

### 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 IWH input into the Prevention Partners Conference and assist with research posters.

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

**Collaboration and Partnerships:** HSA Community (6 HSAs), Ministry of Labour, WSIB, OCRC, CRE-MSD, CRE-OD, IWH researchers.

### Project Targets for 2017:

- First Quarter:* Host quarterly PKEG meeting.  
Host learning day for prevention system ergonomists  
Participate in EIPAC and prevention system communications meetings.  
Plan booth and poster submissions for the Partners in Prevention conference.
- Second Quarter:* Host quarterly PKEG meeting.  
Participate in EIPAC and prevention system communications meetings.  
Coordinate activities for Partners in Prevention Conference and Trade Show, i.e., IWH corporate booth, panels' content and display materials.
- Third Quarter:* Host quarterly PKEG meeting.  
Participate in EIPAC and prevention system communications meetings.  
Submit abstracts for Partners in Prevention Conference 2018.  
Assist in planning of IWH activities related to global ergonomics month.
- Fourth Quarter:* Host quarterly PKEG meeting.  
Participate in EIPAC and prevention system communications meetings.  
Participate in global ergonomics month.

## Outreach (0650)

**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 launched knowledge exchange forums with leaders from the employer and labour communities. We will continue meeting with these parties in 2017, with the possibility of hosting a joint meeting with both groups. 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 (IKUs)”, many of whom work for one of Ontario’s health and safety associations, about ways to improve knowledge exchange. A formal IKU network was launched in 2015. Bi-annual meetings with this network will continue in 2017. In 2016, we connected with new academic institutions to further our reach with students. Efforts to connect more students with our research and products/tools will continue in 2017.

**Audience:** All stakeholder groups, with particular attention to workers, unions, employers, employer associations, and academic students.

### Objectives:

- To continue knowledge exchange with leaders from the employer and labour communities and with influential knowledge users.
- To continue to work with intermediaries to reach their members/clients.
- To continue to implement an 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 assist IWH researchers in linking with workplace parties.

**Team:** Ron Saunders (Project Leader), Kristina Buccat, Siobhan Cardoso, Kim Cullen, Sara Macdonald, Cindy Moser

**Collaboration and Partnerships:** Employer associations, unions, health and safety associations

### Project Targets for 2017:

- First Quarter:* Seek opportunities to present research to intermediary and other stakeholders.  
Host meeting of Influential Knowledge Users network.  
Develop and plan for Partners in Prevention conference.
- Second Quarter:* Seek opportunities to present research to intermediary and other stakeholders.  
Host Labour, Employer forum meetings.  
Host IWH booth at Partners in Prevention conference.
- Third Quarter:* Seek opportunities to present research to intermediary and other stakeholders.  
Host meeting of Influential Knowledge Users network.  
Update and implement academic outreach plan to share IWH tools and resources with students.
- Fourth Quarter:* Seek opportunities to present research to intermediary and other stakeholders.  
Host Labour, Employer forum meetings.

## Workshops (0643)

**Introduction:** IWH has considerable expertise in conducting systematic reviews to support evidence-based practice. Many researchers and students at the Institute are involved with the Cochrane Collaboration and the Institute's Systematic Review Program. The Institute has many requests to share its expertise and to contribute to the education and training of educators, researchers, clinicians and students. Institute personnel and colleagues have been offering a series of Systematic Review workshops that range from two hours to two-days since 2001 with plans to continue through 2017. We are moving our workshop online and hope to offer research modules by the end of this year. The Systematic Review workshop is designed to provide participants with tools and knowledge to identify measures that can provide the best estimate of a given concept in their clinical work or research.

**Audience:** The Systematic Review workshop is of particular interest to health care professionals, students, educators, clinicians, researchers, insurers and policy makers.

**Objectives:**

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

**Team:** Emma Irvin (Project Leader), Siobhan Cardoso, Kim Cullen, Andrea Furlan, Sheilah Hogg-Johnson, Sara Macdonald, Quenby Mahood, Lyudmila Mansurova, Ron Saunders, Dwayne Van Eerd

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

**Project Targets for 2017:**

- First Quarter:* Prepare for spring Systematic Review Workshop.
- Second Quarter:* Hold Systematic Review Workshop in Toronto (May 1-5)  
Evaluate workshop and consider fine-tuning the design.
- Third Quarter:* Prepare for fall Systematic Review Workshop.
- Fourth Quarter:* Hold Systematic Review Workshop in Toronto (November)

## Tool development and dissemination (0636)

**Introduction:** Research in knowledge transfer has shown the advantages of having evidence-based tools. IWH has developed several tools and guides to assist stakeholders to incorporate research evidence into their occupational health and safety, return-to-work, rehabilitation and treatment programs, e.g., Disabilities of the Arm, Shoulder and Hand (DASH) Outcome Measure, Prevention is the Best Medicine, the Participatory Ergonomics (PE) Guide, Red Flags/Green Lights Return to Work (RTW) Guide, the Health & Safety Smart Planner, and the Seven Principles of Return to Work. In 2016, we published two new tools: the IWH\_OPM and the Workplace Health and Safety Survey (measuring vulnerability to work injury), developed a draft guide to low back pain (LBP) and RTW with findings from the prognostic factors of LBP systematic reviews, and celebrated the 20th anniversary of the DASH. , . IWH develops new resources each year, including the popular “Five things we think you should know” guide based on our latest research findings.

**Audience:** All IWH stakeholders.

### Objectives:

- To create new and practical tools, guides or other resources from IWH research to assist workplace parties, prevention partners and health professionals in their efforts to improve the health of workers.
- To work with IWH Scientists to plan tool development in research funding applications, where applicable, and to develop business cases for the development of tools.
- To engage stakeholders in the planning, development and testing of tools.
- To disseminate tools to stakeholders.
- To renew tools with new IWH research findings, as appropriate.
- To administer and coordinate all procedures related to translations of the DASH and QuickDASH, and maintain related database.
- To monitor and maintain database of requests for commercial and non-commercial use of DASH.

**Team:** Siobhan Cardoso (Co-Lead), Kim Cullen (Co-Lead), Jocelyn Dollack (Co-Lead), Sara Macdonald (Co-Lead), Kristina Buccat, Jan Dvorak, Cindy Moser, Ron Saunders

**Collaboration and Partnerships:** Partners involved in this project include the health and safety community, workplace parties, clinicians, labour and workplace parties from Ontario and other provinces, and other stakeholders, as appropriate.

### Project Targets for 2017:

*All quarters:* Monitor, update and maintain DASH website, translation process, guidelines/ protocols, translation database, non-commercial and commercial requests and licenses database, as appropriate. Monitor DASH app uptake and document revenue. Promote the DASH scoring system. Track downloads of IWH tools. Look for opportunities for tool development and develop tools as they arise. Review and update dissemination plans for existing tools. Tool development to be determined quarterly based on study findings and successful grants.

*First quarter:* Prepare draft copy for Winter/Spring edition of DASH e-Bulletin. Complete “Let’s talk about Work”, a guide to LBP and RTW.

*Second Quarter:* Finalize and distribute Winter/Spring DASH e-Bulletin. Updated “Five things we think you should know” guide for conference distribution

*Third Quarter:* Begin preparing content for next edition of DASH e-bulletin.

*Fourth Quarter:* Finalize and distribute DASH e-bulletin.

## Corporate communications (0690)

**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 videos, 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 to assist in meeting our corporate goal of "being a model of a healthy workplace."

**Audience:** External audiences include workplace parties, worker and employer representatives, policy-makers, occupational health and safety professionals, disability management professionals, researchers, funders and the intermediaries of all of the above. Internal audiences include all IWH staff.

### 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 OHS and return to work.
- To support organizational excellence through strong internal communications.

**Team:** Cindy Moser (Project Leader), Kristina Buccat, Siobhan Cardoso, Kim Cullen, Jan Dvorak, Lyudmila Mansurova, Sara Macdonald, Ron Saunders, Uyen Vu

**Collaboration and Partnerships:** As required.

### Project Targets for 2017:

*All Quarters:*

- Write lay out, e-mail and post quarterly issues of *At Work* and monthly issues of *IWH News*
- Target and share single-story e-alerts with IWH network members for forwarding to others
- Write, design, layout and post Research Highlights of new and previous research
- Restructure and redesign website (key focus of the Communications team in 2017)
- Write research-based media releases as relevant research findings are published
- Write articles for stakeholder publications
- Tweet daily, post weekly on LinkedIn and populate YouTube channel, as needed
- Produce and post plenary slidecasts
- Produce and disseminate video cards
- Write and post case studies
- Look for opportunities for tool development and develop tools when opportunities found
- Write, publish and distribute 2016 annual report
- Plan and hold Alf Nachemson lecture
- Continue implementing academic outreach plan
- Exhibit at and attend stakeholder conferences, as required
- On a weekly basis, produce, distribute and post internal newsletter *thisweek@iwh*
- Keep IWH wiki-based intranet current and encourage its use
- Produce and implement plan to increase number of e-alert sign-ups
- Support researchers as needed (e.g. editing, writing, disseminating research findings)
- Attend H&S Partners Communication Forum to build relations with system partners



## **Corporate Services**

Corporate Services plays a crucial role in providing facilities, human resources management, finance and accounting capacity and oversees the purchase and maintenance of equipment and supplies. The administrative infrastructure and human resource function supports the diversity and complexity of Institute work. It also provides liaison and support to the Institute's Board of Directors.

In 2017, the department will continue work on our human resources policies, including the alignment of compensation practices with the expenditure constraint provisions contained in Bill 16. Corporate Services will also ensure compliance with the Ontario government directive concerning travel, meal and hospitality expenses.

Work continues to ensure staff awareness of new and revised policies as a result of the work of the Policy Review Committee with an annual review of the Policy and Procedures Manual.

The Joint Health & Safety Committee (JHSC) will work with members of the executive committee to address recommendations emerging from the most recent staff survey (conducted in November 2016). This survey is conducted on a bi-annual basis to measure staff wellness and identify problems areas. It is used to assist the Institute in creating a healthy workplace and optimal working conditions. The results provide useful input to Institute management and are shared with staff and our Board of Directors.