

Institute for Work & Health Accomplishments Report 2009



Institute
for Work &
Health

Research Excellence
Advancing Employee
Health



2009 Accomplishments Report

**Research
Knowledge Transfer & Exchange
Publications, Presentations & Awards**

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2009 ACCOMPLISHMENTS REPORT

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Introduction

The mission of the Institute for Work & Health is to conduct research to protect, promote and improve the health of working people and to share this research with workers, labour, employers, clinicians and policy-makers including our primary funder the Workplace Safety and Insurance Board. The Institute is dedicated both to conducting high quality research and making this research evidence available, understandable and usable for decision-makers to assist in creating safer and healthier workplaces.

Our transdisciplinary research is focused in two key areas: preventing work related injuries and illnesses before they occur (primary prevention); and preventing and managing work disability should injuries or illness occur (work disability prevention and management). Prevention of work related injury and illness, evidence-based health care and return to work practices to manage disability are critical elements in an effective health and safety system. They are prominent in the Fundamentals of the WSIB's Five Year Strategic Plan: *The Road to Zero*.

The Institute has a special interest in work-related musculoskeletal conditions (which constitute approximately 70 per cent of disability compensation claims involving time lost from injury) and has acquired considerable expertise in this field. We also investigate broader matters such as labour market experiences and their population health consequences, and conduct research on the design of disability compensation systems and their behavioural consequences.

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

Since 1990 we have provided research and other evidence-based products to inform and assist clinicians, employers, labour and other researchers. We also provide evidence to support the policy development processes of federal and provincial institutions, including workers' compensation boards and other organizations in Canada. We provide training and mentorship for the next generation of work and health researchers by sponsoring Masters and PhD students and Post-doctoral fellows as well as, through our seminar and workshop programs. Over the past 18 years the Institute has hosted over 62 in-residence trainees and sabbaticants.

Research at the Institute

A summary of our 2009 progress and accomplishments in Primary Prevention of Work Related Injury & Illness research; and in Prevention and Management of Work Disability research and in the three Foundation Programs: Data and Information Services, Measurement of Health & Function; and the Systematic Reviews which support this research portfolio are described below.

Knowledge Transfer & Exchange at the Institute

The overall strategic direction of Knowledge Transfer & Exchange (KTE) is to engage the Institute's stakeholders in research and knowledge transfer to ensure that the research evidence that is generated is available, understandable and usable for decision-making, program planning and practice. Enhancing the visibility of the Institute through communications and marketing is also part of this goal so stakeholders know that the Institute is a dependable resource for research evidence. The KTE accomplishments in 2009 are presented in two ways. A summary of the relevant KTE initiatives in primary prevention and in work disability prevention and management completes each of these sections, providing an integrated picture of how KTE is linked to the research. In addition, there is a separate KTE section that more fully describes accomplishments in our stakeholder relationship and exchange activities, as well as our communications activities.

Presentations, Publications, Awards and Collaborators & Staff

The third and fourth sections report on 2009 publications, presentations, grants and awards, and provide details on professional collaborations and staff appointments as well as information on our academic and service contributions. It is important to note that many of our scientific staff are cross-appointed to other organizations which may require a substantial time commitment. The information reported here, is therefore a reflection of IWH-related activity only.

The final pages of the report also list all IWH staff in 2009, as well as IWH adjunct scientists who have contributed to our activities in the past year.

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Prevention of Work Related Injury and Illness

The goals in the WSIB Five Year Strategic planning document *The Road to Zero* includes identifying and prioritizing prevention activities and developing initiatives that assist employers and workers in saving lives and eliminating workplace injuries and illness to promote healthy workplaces. The strategic plan sets as a target a 23% reduction in lost time injury claims over this period and it anticipates the use of evidence-based best practices and research to achieve and demonstrate this kind of significant improvement in outcomes and performance.

Almost half of the Institute's core budget in 2009 was devoted to research and KTE activities that focus on evidence based strategies for the primary prevention of workplace injury and illness. This work spans a wide range of methodologies and issues. In synthesizing the evidence on workplace based prevention strategies we are concluding four years of pilot program funding from the WSIB. These results will be of benefit to the prevention system partners including the HSAs as they work with employers to reach annual targets for injury reduction. Our analyses of workers' compensation administrative data including no-lost-time and lost-time workers' compensation claims provide a comprehensive picture of the trends in claim rates across industries and labour force sub-groups. This information is fundamental to planning effective prevention strategies targeting those sub-groups at highest risk. We already know that some groups of workers are at higher risk than others. Workplace policies and practices have significant effects on health and safety within a company. Our research explores how OHS policies and practices in different work environments influence injury and illness. We have made significant progress this past year in several evaluation projects that are examining specific interventions and preventative strategies in the work place including testing safety climate measurement tools and evaluating participatory ergonomic interventions. These evaluations should be of value to the prevention system partners and to individual employers interested in improving their safety record. Our research also leads to the development of tools that can be used by stakeholders, such as the ongoing development of a workbook for use by workplace parties interested in evaluating the cost effectiveness of prevention strategies in their workplace.

2009 Quick Statistics

Completed projects (8)
Ongoing projects (22)
Papers published or in press (9)
Peer review papers submitted (7)
Reports to WSIB or other Prevention System Partners (2)
Presentations of results & stakeholder consultations (28)
External grants awarded (19)

Synthesizing the Evidence

In 2004, the Institute for Work & Health launched a prevention systematic review initiative. Funded by the WSIB, this four year pilot produced systematic reviews of the effectiveness of interventions to prevent workplace injury, illness and disability. The prevention review initiative was undertaken in response to a concern raised by non-research partners in the prevention system that there was limited accessible evidence about the effectiveness of interventions for protecting workers' health. To ensure that our reviews are relevant to our stakeholders, IWH researchers routinely meet with prevention system partners including WSIB staff to refine the literature search and to clarify the interpretation of findings from the reviews. The final report and a general audience summary for each completed review are available on our website and over 500 partners are alerted at the completion of each new review.

In March of 2007, the external Five Year Review Panel evaluating the work of IWH since 2003 assessed this systematic review program as very effective. In particular, the Panel noted the achievements of the program in involving research users in the development of review topics and disseminating the central findings of the reviews. With the submission in 2008 of the final three reviews, we have completed 14 systematic reviews, eight scoping reviews, one narrative review, and one methodological paper. We have reviewed over 100,000 articles and engaged over 60 reviewers in four countries in addition to the 49 stakeholder consultations that were held. In partnership with WSIB's Prevention Branch and the Research Advisory Council, we have also conducted a series of rounds and workshops with WSIB staff to highlight the results of completed reviews. A legacy of this pilot initiative was a monthly Research Discussion Forum with IWH researchers and staff from the Occupational Disease Policy and Research, Professional Practice Department and others at the WSIB held in 2007/2008. This forum considers the use and interpretation of systematic reviews and other research papers on topics relevant to policy and program development at the WSIB.

2009 Quick Statistics

Completed projects (3)
Ongoing projects (1)
Papers published or in press (4)
Peer review papers submitted (1)
Reports to WSIB or other Prevention System Partners (1)
Presentations of results & stakeholder consultations (9)
External grants awarded (1)

Systematic Review: Prevention of Injuries in Small Businesses (0961)

Project Status: Completed

Introduction: Small businesses (SB) typically have higher injury and disability rates than large businesses and thus have unique prevention needs and challenges. A feasibility and assessment review by IWH summarized the existing literature on work and health in small businesses. That review found that the bulk of literature focused on the inadequacy of OHS-related educational materials, interventions and policy for small businesses. The review also found that the literature was focused on the particular organizational features of small businesses that distinguish them from large organizations. Based on this review of the literature, we initiated a full systematic review in 2007. This review combined both qualitative and quantitative features.

Objectives:

- Conduct a systematic review to address the questions:
 1. How does the small size of workplaces (including micro enterprises) affect OHS practice and outcomes?
 2. What interventions (broadly defined, including legislative) improve OHS in small business and prevent injuries?

Methods: The review focused on peer-reviewed intervention studies conducted in small businesses with 100 or fewer employees, that were published in English and several other languages, and that were not limited by publication date. Multidisciplinary members of the review team identified relevant articles and assessed their quality. Studies assessed as medium or high quality had data extracted, which was then synthesized. This mixed-method review was conducted in consultation with stakeholders.

A comprehensive literature search identified 5067 studies. After screening for relevance, 20 qualitative articles and 24 quantitative intervention articles were identified.

Results: The quantitative review found that five studies were of medium or high quality, and proceeded to data extraction and evidence synthesis. The types of interventions identified: a combination of training and safety audits; and a combination of engineering, training, safety audits, and a motivational component, showed a limited amount of evidence in improving safety outcomes. The qualitative review found that 14 studies were of medium or high quality and proceeded to data extraction and evidence synthesis. The qualitative synthesis found that SBs have distinctive social relations of work, apprehensions of workplace risk, and legislative requirements. Seven themes were identified that consolidate knowledge on how small businesses workplace parties understand OHS hazards, how they manage risk and health problems, and how broader structures, policies and systems shape the practice of workplace health in small businesses. Overall findings suggest that interventions need to involve multiple components and include elements at the legislative and workplace levels.

Researchers: Ellen MacEachen (Principal Investigator), Ben Amick, Curtis Breslin, Rachel Couban, Kim Cullen, Emma Irvin, Agnieszka Kosny, Natasha Kyle, Quenby Mahood, Sara Morassaei, Philip Bigelow, L. Brosseau (Consultant), M. Facey (University of Toronto), Harry Shannon (McMaster University)

Stakeholder Involvement: As is the usual practice for our Prevention reviews, stakeholder meetings were held twice during the review: once to gather feedback from the relevant business community about the detailed nature of the questions and to assist IWH in refining the search strategy for the literature review; and toward the completion of the review to gather feedback from the business community on the relevance and interpretation of the findings from the literature.

Potential Audiences and Significance: This topic will be of interest to researchers and IWH prevention partners. In particular it aligns with the OHSCO Strategic Initiative 2006-2008: Small business

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Publications:

Breslin FC, Kyle N, Bigelow P, Irvin E, Morassaei S, Mahood Q, Couban R, Shannon HS, Amick BC and The Small Business Systematic Review Team. Effectiveness of health and safety in small enterprises: A systematic review of quantitative evaluations of interventions. In press: Journal of Occupational Rehabilitation [2009-083].

Eakin JM, Champoux D, MacEachen E. Health and safety in small workplaces: “upstream” perspective on regulatory, intervention and service misalignments. In press: Canadian Journal of Public Health [2009-041]

MacEachen E, Kosny A, Scott-Dixon K, Facey M, Chambers L, Breslin FC, Kyle N, Irvin E, Mahood Q, and the Small Business Systematic Review Team. Workplace health understandings and processes in small businesses: A systematic review of the qualitative literature. In press: Journal of Occupational Rehabilitation – Special Edition 2009. [2009-045]

Presentations:

Eakin J, Champoux D, MacEachen E. Health and safety in small workplaces: refocusing upstream. 20-23 Oct 2009; Elsinore, Denmark: USE 2009: Understanding Small Enterprises – a healthy working life in a healthy business.

MacEachen E. Revisiting the paradigm war: social, theoretical, and methodological dynamics in two mixed-method systematic reviews. 8-11 Jul 2009; Harrogate, North Yorkshire, UK: 5th Annual International Mixed Methods Conference and Workshops.

MacEachen E, Breslin FC, Kyle N, Irvin E, Kosny A, Bigelow P, Mahood Q, Scott-Dixon K, Morassaei S, Facey M, Chambers L, Couban R, Shannon HS, Cullen K, Amick BC. A systematic review of qualitative and quantitative literature on occupational health and safety in small enterprises. 20-23 Oct 2009; Elsinore, Denmark: USE2009: Understanding Small Enterprises - a healthy working life in a healthy business.

Systematic Review: Prevention of Upper Extremity Musculoskeletal Disorders (0971)

Project Status: Completed

Introduction: Inappropriate design of workstations and work processes contributes significantly to the development of common work related musculoskeletal disorders. This review will compliment the current literature on this topic to answer the question of how effective are workplace (based) interventions on the prevention of upper extremity disorders.

Objectives:

- To facilitate stakeholder involvement throughout the process of doing the systematic review. Key organizations are targeted and invited to provide input at key stages of the review.
- To disseminate review findings to appropriate audiences.

Results: Finalization of review's general audience summary and posting of finalized review documents on IWH website. Dissemination of review findings to appropriate audiences, as per the prevention review dissemination protocol.

Researchers: Ben Amick (Principal Investigator), Carol Kennedy-Yee, Emma Irvin, Quenby Mahood, Dwayne Van Eerd, Shelley Brewer (Chemplan, Florida), Brad Evanoff (Washington University, St. Louis), Fred Gerr (University of Iowa), David Rempel (University of California, Berkeley), Jack Dennerlin (Harvard University), Starly Catli (WSIB), Renee Williams (McMaster University), Consol Serra (Universitat Pompeu Fabra, Barcelona, Spain), Al Franzblau (University of Michigan)

Stakeholder Involvement: As is usual practice for our prevention reviews, stakeholder meetings will occur during the process of conducting the review to gather feedback about the detailed nature of the question, to assist IWH in refining the search strategy for the literature review and the extraction of key messages and dissemination strategies.

Potential Audiences and Significance: The results of this review will be of interest to researchers and prevention partners.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Publications:

Kennedy CA, Amick BC, Dennerlein JT, Brewer S, Catli S, Williams R, Serra C, Gerr F, Irvin E, Mahood Q, Franzblau A, Van Eerd D, Evanoff B, Rempel D. Systematic review of the role of occupational health and safety interventions in the prevention of upper extremity musculoskeletal symptoms, signs, disorders, injuries, claims and lost time. In press: Journal of Occupational Rehabilitation – Special Edition 2009. [2008-096].

Tullar J, Brewer S, Amick BC, Irvin E, Mahood Q, Pompeii L, Wang A, Van Eerd D, Gimeno D, Evanoff B. Interventions in healthcare settings to protect musculoskeletal health: A systematic review literature description. Submitted: Journal of Occupational Rehabilitation – Special Edition 2009 [2009-046]

Presentations:

Amick BC. Effective interventions to prevent work-related MSDs – lessons from systematic literature reviews. 16-17 Oct 2009; Dresden, Germany: DGUV Conference on Work-related MSD

Amick BC. Ontario use of workers' compensation data for risk reduction. 22-23 Sep 2009; Washington, DC: Using Workers' Compensation Data for Occupational Injury & Illness Prevention.

Amick BC, Kennedy C, Dennerlein JT, Brewer S, Catli S, Williams R, Serra C, Gerr F, Irvin E, Mahood Q, Franzblau A, Van Eerd D, Evanoff B, Rempel D. What ergonomics programs and practices work in preventing upper extremity MSDs: A systematic review. 9-14 Aug 2009; Beijing, China: 17th Triennial Congress of the International Ergonomics Association.

Kennedy CA, Amick BC, Brewer S, Catli S, Dennerlein J, Evanoff B, Franzblau A, Gerr F, Irvin E, Rempel D, Serra C, Van Eerd D, Williams R. What workplace programs and practices work in preventing upper extremity MSDs: A Systematic Review. 14-17 Sep 2009; Quebec City, QC: XLth Annual Conference of the Association of Canadian Ergonomists.

Van Eerd D, Keown K. What works in MSD prevention. 22 Apr 2009; Toronto, ON: Health and Safety Canada 2009 IAPA Conference & Trade Show.

Van Eerd D. Applied research on the translation of knowledge about workplace participatory ergonomics programs to control MSD risks. 11-12 May 2009; Toronto, ON: Scientific Advisory Committee Meeting.

SR - Effectiveness of Education & Training Strategies for the Protection of Workers (0975)

Project Status: Completed

Introduction: There is considerable interest in the effectiveness of training (and certification) as a generic prevention strategy for workers of all ages. The factors affecting training effectiveness are of particular interest, including those related to the individual, training, workplace and external environment. After identifying broad stakeholder interest in the review topic, IWH conducted a preliminary survey of the number and quality of published reviews of research evidence on the effectiveness of education and training strategies for worker protection. The survey identified a review conducted by the U.S. National Institute of Occupational Safety and Health (NIOSH) in 1998, covering more than 80 studies. As a result, the IWH and NIOSH are working together to update the review and answer the following questions:

Primary Questions:

1. What quantitative effect does OHS training/education have on workers, firms and society?
2. What is the magnitude of effect of various factors (i.e., those related to the individual, the training/education intervention, the workplace, and the external environment) upon the effectiveness of OHS training/education interventions?

Secondary Questions:

1. What is known about OHS training/education interventions from cost-effectiveness or cost-benefit analyses?
2. What is the methodological quality of the research literature concerned with the effectiveness of OHS training/education?

Objectives:

- Develop general audience summaries for posting on the website.
- Develop and implement a targeted e-alert to stakeholders.
- Develop a KTE strategy to take the messages from the reviews to appropriate audiences/stakeholders.
- Develop media and publication strategies.
- Determine if further action is required.

Methods: Literature review and consultation with OH&S stakeholders.

Results: Web posting and KTE dissemination plan to occur in January 2010.

Researchers: Kiera Keown (Project Leader), Jane Brenneman Gibson, Lynda Robson

Stakeholder Involvement: WSIB, HSAs, Workplace Parties, Kinesiology EIs, HSAs, WSIB, MOL

Potential Audiences and Significance: HSAs, workplace parties, WSIB, ergonomists, MOL, organized labour and employer organizations.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Publication:

Robson LS, Stephenson C, Schulte P, Amick BC, Chan S, Bielecky A, Wang A, Heidotting T, Irvin E, Eggerth D, Peters R, Clarke J, Cullen K, Boldt L, Rotunda, Grubb P. A systematic review of the effectiveness of training and education programs for the protection of workers. Toronto, IWH; Cincinatti, OH: NIOSH [2009-011]

A Systematic Review of the Quality and Types of Performance Measures Used to Assess KTE Implementation (3110)

Project Status: Ongoing

Introduction: Knowledge transfer and exchange (KTE) is a burgeoning organizational practice at research institutions worldwide. Funders and policy makers demand to know whether their investments are making a difference. However, the effectiveness of current KTE practices has not been routinely or consistently evaluated. KTE practitioners note the need to evaluate both how well plans are being implemented and the impact of these plans and to be able to improve KTE practices. The paucity of valid and reliable tools may be one reason for this lack of evaluation. As the concept of knowledge to action moves to the forefront in the research community, a common set of quality tools will provide opportunities to consistently evaluate the effectiveness and impact of KTE implementation.

Objectives:

- The primary objective of this knowledge synthesis project is to systematically search and review the KTE literature across contexts, outcomes, KTE implementation processes to answer the following research question: Are there reliable and valid tools to apply in the assessment of KTE implementation and its impact?
- In answering this question we will provide a synthesis that documents/describes the tools/instruments used in assessment and evaluation (including their measurement properties) and the common elements are these tools.
- Since the literature that describes tools for KTE will include implementation evaluation, our secondary objectives will be to: a) make recommendations about common elements of KTE that are most effective; and b) make recommendations about how to evaluate the impact of KTE.

Results: Received funding from CIHR, and hired a coordinator. Prepared and tested a literature search strategy. Assembled review team and formulated review question. Met with decision makers and stakeholders.

Researchers: Dwayne Van Eerd (Principal Investigator), Ben Amick, Jane Brenneman Gibson, Donald Cole, Emma Irvin, Kiera Keown, David Clements (Canadian Health Services Research), John Garcia (Cancer Care Ontario), Andreas Laupacis (St. Michael's Hospital), Rhoda Reardon (College of Physicians and Surgeons)

Stakeholder Involvement: The decision makers (who represent the stakeholders for this project) will be updated quarterly throughout the project. In addition we will identify and meet with KTE practitioner stakeholders at a separate meeting this year.

Potential Audiences and Significance: A summary of this project will be produced using a four-page "Sharing Best Evidence" format and will be made available on the IWH website and via our quarterly newsletter. Stakeholders from the CHSRF and CPSO have already indicated that the websites and resources of their institutions will be available to assist in dissemination. We will also update the IWH KTE workbook "From Research to Practice" (Reardon, Lavis, Gibson; 2006) that is available on the IWH website. We will share the results with the Ontario KTE Community of Practice which has over 70 members all who are KTE practitioners and researchers. As KT Canada begins to build its presence, we will approach them to assist in dissemination of the results. In addition, specific briefings will be arranged to present the results of this study to the relevant stakeholder groups, including those who have partnered with us on this proposal. The results from this study may also be published in a variety of trade media, including professional association newsletters and business media outlets.

Funding:

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

Working Conditions and Health

Projects in the area of working conditions and health include ongoing research on the changing nature of working conditions in Canada, studies describing causes of death over a 10-year period for a sample of Canadian workers, and a study of the prevalence of hand disorders among workers using hand-held computing devices such as Blackberries.

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

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

2009 Quick Statistics

Completed projects (2)
Ongoing projects (5)
Papers published or in press (4)
Peer review papers submitted (5)
Reports to WSIB or other Prevention System Partners (0)
Presentations of results and stakeholder consultations (5)
External grants awarded (4)

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

Project Status: Ongoing

Introduction: Over the past seven years, the Institute has established capacity to conduct research using Statistics Canada master files of longitudinal, repeated measure, health and labour market interview surveys (the National Population Health Survey (NPHS), the Survey of Labour Income Dynamics (SLID) and the National Longitudinal Survey of Children and Youth (NLSCY)). The longitudinal cohort in the NPHS now extends to ten years, with the most recent cycle (2004) added at the end of 2007. The SLID now contains information across four different panels from 1993 to 2005. Each survey contains detailed information on health status, disability status, labour market entry, labour market exit and labour market trajectories.

Objectives:

- Apply methods to measure changes in working conditions and examine their effects on different health outcomes.
- Using path analysis examine the relationships between childhood living conditions and adult health and labour market conditions over time.
- Examine if these relationships are consistent across selected groups (e.g., gender, social class).

Methods: To date the work under this project has been primarily directed in two areas. The first has been on how best to measure occupational position, and discrepancies between occupational attainment and personal educational potential. These methods have been used to publish a peer-reviewed paper, and will be implemented in future papers under this project. The second area of investigation has been the measurement of change over time. There has been some work to date on how to measure change in working conditions (e.g., job control) between the 1994 and 2000 cycles of the NPHS. This work has been incorporated into a paper currently under peer-review on changes in working conditions and levels of physical activity in Canada.

Results: Work was completed and manuscript (S Morassaei, lead author) was submitted to Health Promotion International. Status as of January 2010 is to revise and resubmit. Preliminary work on a study examining labour market experiences and cardiovascular disease in the NPHS has been started by Brendan Smith (PhD student at U of T)

Researchers: Cameron Mustard (Institute Coordinator), Sara Morassaei, Brendan Smith, Peter Smith

Potential Audiences and Significance: The results will interest policy-makers, workers' compensation bodies and government departments involved in settings policies related to the provision of health benefits for labour market participants and policies aimed at worker protection through employment regulations.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Publications:

LaMontagne AD, Smith P, Louie A, Quinlan M, Shoveller J, Ostry A. Unwanted sexual advances at work: variations by employment arrangement in a sample of working Australians. Forthcoming: Australian & New Zealand Journal of Public Health [2008-041]

LaMontagne AD, Smith PM, Louie AM, Quinlan M, Ostry AS and Shoveller J. Psychosocial and other working conditions: Variation by employment arrangement in a sample of working Australians. Submitted: American Journal of Industrial Medicine. [2009-084]

Morassaei S, Smith PM. Examining the effects of psychosocial working conditions on leisure time physical activity in Canada: evidence for tailored interventions. Revise and resubmit: Health Promotion International. [2009-053]

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

Project Status: Ongoing

Introduction: In 1997, the legislative mandate of the Ontario Workplace Safety & Insurance Board (WSIB) expanded to include an increased focus on the prevention of work-related injuries. IWH has responded to this broadened mandate through an added emphasis on research which seeks to understand the nature and patterns of work and workplace injuries. This secondary surveillance of working conditions and workplace injuries is an integral part of a comprehensive prevention strategy. Effective surveillance involves the accurate reporting of working conditions and injury estimates. Both between particular labour force sub-groups as well as between time points.

Part of the work undertaken in this project is done in parallel with work undertaken in measurement methodology studies (IWH Project 925)

Objectives:

- To conduct surveillance research of policy relevant to the MOL and WSIB.
- 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.
- To examine the measurement properties of commonly used measures examining labour market experiences (e.g., job control, job satisfaction).

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

Results: Analysis of WES has not been started. Preliminary work on trends has been completed. Paper in draft form as of December 2009. The team were unable to recruit a suitable Masters student, however the project was initiated and preliminary results were presented at the ICOH conference in Poland in September 2009. Measurement course material was developed, although the measurement course did not run due to low enrolment. As of December, two papers examining job satisfaction were almost complete. The first examines the determinants of job satisfaction. The second examines trends in job satisfaction in Canada (along with other psychosocial work measures) between 1994 and 2003-2005. OSCHO analysis is partially completed.

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

Stakeholder Involvement: Stakeholders at the MOL and the WSIB, as well as possible stakeholders in similar positions in other provinces will be identified.

Potential Audiences and Significance: The results of this project will be directly relevant to policy makers at the MOL and the WSIB.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness; Return to Work: Prevention & Management of Work Disability; Health Services: Effectiveness & Efficiency of Clinical Care

Publications:

Smith PM, Frank JW, Mustard CA. Trends in educational inequalities in smoking and physical activity in Canada: 1974 to 2005. *Journal of Epidemiology and Community Health*, 2009; 63(4):317-323. [2008-102]

Smith PM, Glazier RH, Sibley LM. Examining relative and absolute differences in self-perceived health status across socioeconomic groups in Canada. *Journal of Clinical Epidemiology*, 2009 [Epub ahead of print]. [2007-073]

Wu JSY, Beaton DE, Smith P, Hagen NA. Patterns of Pain and Interference in Patients with Painful Bone Metastases: A Brief Pain Inventory Validation Study. *Journal of Pain and Symptom Management* 2010; 39(2):230-240. [2008-092]

Presentations:

Smith PM. Measurement in work-disability prevention research. 10 Jun 2009; Montreal, Quebec: Work Disability Prevention Strategic CIHR Training Program.

Smith PM, Saunders R. Trends in workers' compensation claims and labour force characteristics in Ontario. 18 Jun 2009; Toronto, ON: Canadian Manufacturers & Exporters.

Refining Exposure Measurements in VDU Workers: Comparison of Four Methods (0129)

Project Status: Completed

Introduction: Work-related complaints of the musculoskeletal system in the upper extremities are prevalent in video display unit (VDU) workers. Primary and secondary preventive action that are taken to address these complaints, however, are seldom evidence-based. Interventions on work-rest schedules are potentially effective in the prevention of upper extremity disorders in VDU workers (Brewer et al, 2006). Other research has found that extended keyboard and mouse use are associated with upper extremity complaints (Ijmker et al, 2007). There is a call for interventions based on the findings from this research. We propose a clinometric measurement study alongside an intervention study.

Objectives:

- To explore and compare four methods for estimating mouse use and hand-on-mouse time in an office setting.
- To examine the feasibility of each of four methods in workplace intervention studies.

Methods: We compared four methods of exposure assessment of mouse use by computer workers. The methods were: a) self report, b) electronic activity monitoring (keyboard activity and mouse activity), c) enhanced electronic activity monitoring (includes monitoring hand-on-mouse time with transducer in the mouse), and d) observation of the worker's hands.

a) Self report was assessed through web-based questionnaires. The questions addressed the amount of time participants used a keyboard, mouse and computer for two different time periods: over an hour and over a full work day. Questionnaire data was collected using an intranet-based approach over 15 consecutive working days. This three week period ensured that we captured beginning, middle and end of month work periods. In addition, at random points during the work day participants were asked to complete a very brief questionnaire concerning their keyboard, mouse and computer use for the past hour. This procedure has proven to be feasible in earlier research. The web-based questionnaires were very short, taking less than two minutes each to complete. Therefore the response burden was quite low for the participants.

b) The second exposure assessment method used an electronic activity monitoring software to monitor the activity on keyboard (key press) and mouse (mouse movements, scroll wheel movement, and mouse key clicks). This method is less intrusive and less expensive than observation and therefore more feasible in epidemiological studies. The activity monitoring is unobtrusive and the participant was not burdened in any way. The electronic monitoring was done over a four month work period.

c) As a third method we looked at enhanced electronic activity monitoring which includes monitoring of hand-on-mouse time, by using a transducer in the mouse. The tactile feedback mouse contains a transducer that registers the small electrical potential of the computer user's hand when the latter is placed on the mouse (www.hoverstop.com). By installing software (Hoverstop monitor) in a user's personal computer profile, the mouse was used to register hand-on-mouse time, mouse movements, scrolls and clicks. Continuous monitoring of the position of the users hand, relative to the mouse, provided more information about the exposure to mouse use and associated postures. The enhanced electronic monitoring was done over a four month work period at the same time as the electronic monitoring.

d) Digital video was taken using a web camera. Since the focus of this study was on monitoring keyboard and mouse use, the webcam was focused only on the worker's hands, to be as unobtrusive as possible and minimize the ability to identify the individual. The webcam was programmed to record for two minute periods, randomly over the course of five consecutive working days. There were between 10 and 15 periods in the course of a single day. The observation of the video was performed using Noldus Video Observer software which allowed a trained video analyst to rewind and slow down the video to ascertain hand contact with the mouse or keyboard to the nearest millisecond.

Results: Sample characteristics: Of the 52 workers who were invited to participate in the study, 28 volunteered. Nineteen were female and nine were male. One person did not provide any self-report data

and was excluded from the analysis. With 27 subjects each with data from up to 15 days there are 405 possible data comparison points. There were 272 files available from the electronic monitoring software. The missing monitoring data files were due to network (subject logon) issues and technical problems. There were 236 self-report data files completed and available for comparison. Overall, 194 (out of 405 possible files) complete comparisons were available for the comparisons between methods. We compared the two methods a number of ways.

Comparison between self-report (SR) and electronic monitoring (EM) (Hoverstop): Correlation between and within methods: Pearson correlations were calculated for both methods using all available data for each calculation. The Pearson correlations between SR and EM for computer use ($r=0.68$) and mouse use was reasonable ($r=0.54$), but was lower for keyboarding ($r=0.38$). The Pearson correlation between SR mouse and computer use, SR keyboard and computer use, and SR mouse and keyboard use were reasonably high ($r=0.73$ to 0.80). Whereas the Pearson correlation between EM mouse and computer use was very high ($r=0.95$), EM keyboard and computer use was reasonable ($r=0.66$), and EM mouse and keyboard use was lower ($r=0.40$).

Internal consistency within methods: Cronbach's alphas were calculated for both methods on files without missing values. The internal consistency between the self-report questions was moderate (Alpha= 0.83 [0.79, 0.86]). The Cronbach's alpha between monitored mouse time and monitored keyboard use was low (Alpha=0.43 [0.28, 0.55]). Reliability between the methods of exposure assessment: The ICCs between self report mouse and electronic monitoring of mouse use was low (0.60 [0.46, 0.70]), between self report keyboard use and electronic monitoring of keyboard use was low (0.25 [-0.08, 0.43]) and between self report of computer use and electronic monitoring of computer use (the sum of mouse and keyboard use) was moderate (0.78 [0.71, 0.84]). A factor analysis indicates that self-report and electronic monitoring measure the same construct.

Limits of agreement: Bland and Altman plots indicate that measurement error is quite well scattered all along the scale. Although the crude 95% limits of agreement might not be best way to represent the data. Measurement error seems to follow a distinct pattern along the scale for each activity. The mean difference in score is expressed in seconds. Self report of mouse use gives an 81 minutes lower estimate when compared to the monitoring software. The difference in keyboard use is 163 minutes and the difference in computer use is 95 minutes. The percentage of observations in our sample fall within the 95% limits of agreement in all comparisons, which confirms that the data has a good distribution. The limits of agreement however are very wide.

Video coding compared to electronic monitoring: Three videos with different camera angles were selected for this analysis. From each video a two minute clip was selected to ensure that each: 1) had the office worker present for the entire duration of the video clip (e.g. worker not on break) and 2) involved a significant amount of mousing activity. The video clip was slowed to half the speed for coding as this speed was slow enough to identify movements, but not slow enough to distort movements such that they could no longer be accurately identified. Coders completed at least 10 practice trials in the weeks prior to coding trials. There were 4 coders and 3 videos. Each coder studied each video twice in one day on two separate days to code five tasks: 1) Hand off mouse, 2) Hand on mouse – passive (no motion), 3) Hand on mouse – moving, 4) Hand on mouse – clicking, 5) Hand on mouse – scrolling.

Coding was performed using Observer software (Observer 6.0, Noldus Information Technology, VA, USA) and involved the synchronized depression of keyboard keys to initiate the coded task. The end of the task was determined to be the same time that a subsequent task was initiated. The videos were coded in two separate blocks, with each video appearing in each block. Each block had the three videos randomly ordered. This allowed for each video to be coded in random order before the second attempt at coding the video was performed. For each task, a time history was created such that it was coded as "0" when nothing was happening and "1" when that task was occurring. Comparisons between time-histories were in the form of Root-Mean-Squared (RMS) errors, which would be zero if there was complete agreement and 1.0 if the two curves (e.g. Hand off mouse trial 1/Day 1 versus trial 2/Day 1 for coder 1, Video 1) were never in agreement.

The preliminary results of the RMS error analysis suggest little inter-rater reliability and that there were differences among the videos in terms of reliability as well. The suggested lack of reliability indicated that

a comparison to other methods may not be useful. We will examine the reliability issues with the video data further before attempting these comparisons.

Comparison of electronic monitoring software programs: A direct comparison of the two electronic monitoring programs is underway. Initial steps included comparing summary statistics as compiled by each program which revealed differences in estimates of duration for keyboarding and mouse use. Next steps include sampling sections of the raw data output from each program and comparing at this level. This has proven to be difficult and quite time consuming due to output and program differences. Therefore our plan is to only complete this on a small subset of the available data. However duration differences between software programs are disconcerting and suggest that all such programs should be tested (against a gold standard if possible) to ensure the values are in the ranges expected.

Implications for the prevention of Musculoskeletal Disorders: The foundation of good quantitative research depends on the use of well validated measurement tools. Conclusions based on data collected with highly biased tools should be interpreted with caution. This study aims to improve measurement of an important risk factor for the occurrence and persistence of work-related musculoskeletal disorders. This study has further highlighted differences between exposure assessment methods for office-based computer users. Duration of computer work has been assessed in a number of epidemiological studies either by self-report, by means of electronic monitoring and in some cases through observation. The strength of a possible association depends on the accuracy of measurement of both risk factor and outcome. Electronic monitoring software is widely used (Ijmker, Blatter, van der Beek, van, & Bongers 2006) and seems to correlate highly with observation (Homan & Armstrong 2003). However it seems to result in a (systematic) underestimation when compared to observation. The identification of injury mechanisms for work-related musculoskeletal disorders (MSDs) is dependent on the accurate identification and quantification of exposure. The current pilot study suggests that self-report and electronic monitoring may be capturing different concepts of exposure. Further work needs to be done to identify how these different concepts are associated with the development of MSDs.

Researchers: Ivan Steenstra (Principal Investigator), Philip Kiff, Trevor King, Colette Severin, Dwayne Van Eerd

Presentations:

Steenstra IA, Severin C, Van Eerd D, Cole DC, Ibrahim S, Amick BC, Beaton DE. Refining exposure measurements in VDU workers: comparison of assessment methods. 9-14 Aug 2009; Beijing, China: 17th Congress of the International Ergonomics Association.

Van Eerd D, Steenstra I, Severin C, Cole DC, Bigelow P, Amick B, Beaton D. Exposure assessments in computer workers: a comparison of methods. 14-17 Sep 2009; Quebec City, QC: XLth Annual Conference of the Association of Canadian Ergonomists (ACE).

Funding:

Steenstra I, Van Eerd D, Cole DC, Amick B, Bigelow P. The sensory feedback mouse study, pilot study of a randomised controlled trial of the effectiveness of sensory feedback in VDU workers. CRE-MSD: \$10,000 (2008-2009)

Van Eerd D, Steenstra I, Cole DC, Bigelow P, Amick B, Beaton DE. Refining exposure measurements in VDU workers: Comparison of four methods. CRE-MSD: \$10,000 (2008-2009)

Ten-year Mortality Follow-up for Occupations in the 1991 Canadian Census (0461)

Project Status: Ongoing

Introduction: The relationship between life expectancy and occupation has been described poorly in Canada relative to surveillance and monitoring efforts in other OECD countries. Evidence is accumulating that the cumulative impact of labour market experiences influences the initiation and progression of chronic disease processes. This research uses a new population-based longitudinal person-oriented database formed by Statistics Canada from the linkage of two existing databases: 1) respondents to the long-form of the 1991 census and 2) the Canadian Mortality Data Base. Over the ten year follow-up period of 1991 census respondents, approximately 300,000 deaths are expected to occur in this sample. The resulting database will consist of records for approximately 4.5 million persons, with approximately 45 million years of follow-up. The linkage undertaken by this project will complement the limited Canadian occupational mortality surveillance data currently available. In addition, through the integration of job exposure matrix information from health interview surveys in Canada, mortality risk in relation to position in the occupational hierarchy and in relation to adverse occupational psychosocial and physical work exposures will be estimated.

Objectives:

- Provide current estimates of socioeconomic mortality differences for the Canadian population. An important emphasis will be to estimate mortality rates - by cause of death - for Canadian occupations. These estimates are currently unavailable.

Methods: There are two phases to this project. The first phase, conducted by Statistics Canada, involved the linkage of a 15% sample of the census records to the Canada Mortality Data Base. This phase was completed in the spring of 2008 and the analysis dataset was established at the Toronto Regional Office of Statistics Canada. The analysis phase of the project commenced in the spring of 2008, focused on the description of occupational mortality for all causes and for cancer, circulatory system disorders, accidents and avoidable mortality. Analytic work will be conducted both by Statistics Canada and by a working group at the Institute for Work & Health.

Results: Write manuscripts: 1) describing the occupational gradient in cardiovascular disease mortality in Canada; 2) describing the magnitude of the occupational mortality gradient in Canada, the impact of disability on mortality risk among working-age adults and gender differences in occupational mortality risk; 3) describing the impact of disability on mortality risk among working-age adults and gender differences in occupational mortality risk.

Researchers: Cameron Mustard (Principal Investigator), Jacob Etches, Kristan Aronson (Queens University), Russell Wilkins (Statistics Canada)

Stakeholder Involvement: Reimer Gaertner (Manager, Occupational Disease Policy Section, Workplace Safety & Insurance Board; S Paradis (Director, Policy and Major Projects, Health Canada); Richard Lessard (Director of Public Health, Montreal Centre Regional Health Authority)

Potential Audiences and Significance: There will be many audiences for this information, ranging from Health Canada and provincial ministries of health to regional health authorities and municipalities. WSIB staff with expertise in occupational disease epidemiology have joined the project team. The results will be broadly influential in policy settings concerned with the allocation of public expenditures to protect and improve the health of the population. The contribution of the project to improved understanding of occupational mortality will be important to workplace parties and to government regulatory and insurance agencies.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Publications:

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

Mustard CA, Bielecky A, Etches J, Wilkins R, Tjepkema M, Amick BC, Smith PM, Aronson KJ. Avoidable mortality by occupation in Canada, 1991-2001. Submitted: Canadian Journal of Public Health [2009-078]

Mustard CA, Bielecky A, Etches J, Wilkins R, Tjepkema M, Amick BC, Smith PM, Gnam WH, Aronson KJ. Suicide mortality by occupation in Canada, 1991-2001. Submitted: Canadian Journal of Psychiatry [2008-068]

Funding:

Mustard CA, Aronson K, Amick B. Mortality by occupation in Canada: A ten year follow-up of a 15% sample of the 1991 census. WSIB RAC: \$224,300 (Jul 2007-Aug 2009)

The Prevalence of Hand Disorders Amongst Hand Held Device Users (0203)

Project Status: Ongoing

Introduction: While numerous trade publications speak about “blackberry thumb”, there is little scientific evidence on the relationship of upper extremity musculoskeletal disorders and the use of hand-held devices.

Objectives:

- To identify an employer interested in participating.
- To develop a short usable on-line questionnaire.
- To demonstrate the relationship between upper extremity musculoskeletal disorders and hand-held device use.

Methods: A cross-sectional survey administered via the web to a sample of over 2000 hand-held device users.

Researchers: Ben Amick (Principal Investigator), Richard Wells (University of Waterloo)

Stakeholder Involvement: We have not engaged multiple stakeholders, rather one piece of the project is to obtain employers interested in participating.

Potential Audiences and Significance: This is relevant to the broad spectrum of employers using hand-held computing devices and to clinical communities providing treatment.

Presentation:

Amick BC. The prevalence of hand disorders amongst hand held device users and their relationship to patterns of usage. 30 May – 4 Jun 2009; Toronto, ON: American Industrial Hygiene Association Conference and Exposition.

Funding:

Wells R, Amick BC. The prevalence of hand disorders amongst hand held device users and their relationship to patterns of device usage. Office Ergonomics Research Committee: \$23,720 (2008-2009)

Activity Limitation and Depression: A Longitudinal Analysis of Canadian Workers (0332)

Project Status: Completed

Introduction: Depression and activity limitation are both costly and affect a significant proportion of the work force. Relationship between the two is complex. Co-occurrence of activity limitation and depression can be a risk factor for permanent disability. There are previous longitudinal studies of the co-occurrence of activity limitation and depression. However, most studies have not described the overall course of these phenomena or the factors influencing the overall course of these conditions.

Objectives:

- To identify trajectory classes of activity limitation and depression.
- Evaluate the impact of educational attainment and chronic work stressors (job strain, job insecurity, work social support) on trajectory class membership.

Data and Methods:

We used data from the National Population Health Survey (NPHS). The NPHS began in 1994/95 and interviewed a nationally representative sample of Canadians, using a stratified, multi-stage sample. The survey, which is repeated every two years, covers household and institutional residents in all provinces and territories, excluding those living on Indian reserves, on Canadian Armed Forces bases, and in some remote regions of Ontario and Quebec. The longitudinal cohort consists of 17,276 randomly chosen respondents interviewed in the first wave in 1994 or 1995. Response rates have been over 80% for all cycles to date. The overall attrition rate at the end of cycle 6 was 25%. Of the 17,276 eligible members of the longitudinal panel in 1994, 7990 were aged 18-54 and were in the labor force. This age group was chosen so that the maximum age at the end of the study (in 2004) will be below retirement age of 65. Of these 1740 respondents had missing values for work stress or health variables in 1994. Of the remaining 6250 respondents, 2053 were lost due to attrition between 1994 and 2004. Work stress variables were measured in the 1994/95(cycle one), 2000/01 (cycle four), 2002/03 (cycle five) and 2004/05 (cycle six) surveys. For the purpose of this paper we restricted our sample to those respondents aged 18-54 at baseline, who answered a modified and abbreviated version of Karasek's Job Content Questionnaire in each cycle it was asked, and who remained in the same educational social class for all the three time points. After deleting those with missing values for relevant variables we had a final sample size of 2631.

Measures: Health Outcomes

Depression: Depression was measured using the Composite International Diagnostic Interview-short form (CIDI-SF). This provided one-year population prevalence rate of major depressive episode (MDE). Depression scores ranged from 0 to 8. Respondents scoring 5 or more were classified as depressed.

Activity limitation: The set of questions on activity restrictions tapped both long term physical or mental conditions or health problems that limited the type or amount of activity the respondent could do in various spheres of life, and long term disabilities or handicaps. A derived variable, restriction of activity, was constructed by Statistics Canada to capture yes responses to any of these questions.

Work stress variables: Psychosocial work stress dimensions were measured using an abbreviated 12-item measure of the job-content questionnaire. These included psychological demands, decision latitude, work social support, physical demands and job insecurity. All work stress variables used a 5 point scale format with responses ranging from strongly agree to strongly disagree. Psychological demands ($\alpha = .39$ in cycle1, $.37$ in cycle4, $.40$ in cycle5, $.36$ in cycle6) was measured using a two-item scale comprising hectic work and conflicting demands others make. Decision latitude ($\alpha = .63$ in cycle1, $.58$ in cycle4, $.57$ in cycle5, $.56$ in cycle6) was measured using a 5-item scale consisting of learning new things, job requiring a high level of skill, freedom to decide how to do your job, doing things over and over, and having a lot to say about what happens in the job. Using Karasek's model, job strain (ratio) was formulated as a ratio of psychological demands to decision latitude. Social support at work ($\alpha = .41$ in cycle1, $.44$ in cycle4, $.42$ in cycle5, $.41$ in cycle6) was measured using a three item scale: being exposed to hostility or conflict from the people you work with, supervisor helpful in getting the job done, and co-workers helpful in getting the job done. Low work social support was defined as those scoring below the median on social support

score. Job insecurity was measured using a single item: your job security is good. Those agreeing or strongly agreeing that their job was insecure we categorized as having job insecurity.

Educational social class: We used educational grouping as a proxy for social class: those with Bachelors degree vs. those less than Bachelors degree for the duration of the study.

Any chronic condition (co-morbidity): Co-morbidity is a dichotomous variable indicating whether the respondent had been diagnosed with at least one of: high blood pressure, heart problem, intestinal ulcer, back problem, diabetes, epilepsy, stroke, urinary incontinence, arthritis, cataracts, Alzheimer's disease, sinusitis or epilepsy.

Other control variables: Included were demographics in 1994 (age, gender), marital status, smoking status and part-time/fulltime work hours.

Missing data:

The original study sample aged 18 to 54 and working totaled 7990. A total of 1740 respondents had missing information on baseline variables. These respondents were more likely to be younger male respondents. An additional 2053 respondents were lost due to attrition. These respondents were more likely to be male, younger, but were not significantly different in baseline health outcomes and baseline job strain. Another 340 respondents did not respond to work stress or relevant health questions for subsequent time points. These non-respondents were more likely to be younger, male but were not different in baseline health outcomes, baseline job strain and baseline job insecurity. For our analysis of the chronic effect of educational social class we only included those respondents who remained in the same educational category for each survey cycle. Those respondents who changed social class were younger but were similar in gender and health outcomes. All analyses were weighted to account for survey selection and non-response, as suggested by Statistics Canada.

Results: Three trajectory groups were discovered:

Trajectory Group 1 – moderately depressed-highly limited in activity (11.1%)

Trajectory group 1 has a higher probability of depression over the years compared to group 3 over the study period. It also had a higher probability of activity limitation which significantly increased over the years.

Trajectory Group 2 – highly depressed moderately limited in activity (5.6%)

Group 2 is characterized by a higher level of depression compared to the other two classes. It also had a higher probability of activity limitation compared to class 3, but lower than class 1.

Trajectory Group 3 – healthy (83.3%)

Group 3 represents about 83% of the respondents and is characterized by low probability of depression and activity limitation across the years compared to classes 1 or 2. It also had a slight but statistically significant increase in probability of activity limitation over the study period.

Predictors of group membership:

Those reporting higher job strain were more likely to be members of group 1 compared to group 3. Low work social support and higher age were both marginally related to group 1 membership ($p=.07$) compared to group 3. Those who reported at least one chronic condition were 4.1 times more likely (95% CI = (2.6, 6.5)) to belong to group 1 compared to group 3. Being female increased the probability of belonging to group 2 instead of group 1 or group 3. Respondents with high job insecurity were more likely to belong to group 2 (OR = 2.8, 95% CI = (1.2, 6.4)) instead of group 3. Those reporting presence of any chronic condition were more likely to belong to group 1 compared to group 3. Education class did not show any association with group membership.

Researchers: Selahadin Ibrahim (Principal Investigator), Curtis Breslin, Sheilah Hogg-Johnson

Potential Audiences and Significance: Workplace parties, policy makers, WSIB

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Vulnerable Workers

For the past several years, new and young workers have been a key population of interest to IWH researchers. These workers are most at risk of injury during the first month on a job. In 2008, we broadened our interest in young workers to examine the relationships between learning disabilities, type of job held and work injury risk. We also explored the level of risk among young workers who had not finished high school.

Another population that may be considered vulnerable to workplace injury or illness are immigrants, who make up an increasing segment of the Canadian labour force. IWH researchers initiated a WSIB RAC funded study with focus on the labour market experiences of immigrant workers in Ontario and Canada using a number of secondary data sources originally collected by Statistics Canada in 2007. This project compared immigrant workers' risk of workplace injury with Canadian-born workers. IWH researchers investigated the nature of these risks or protective factors relating to immigrant workers, including characteristics related to workers themselves (e.g. ethnicity, gender), type of occupations (physical demand), and organizational factors (workplace size, industry).

2009 Quick Statistics

Completed projects (1)
Ongoing projects (2)
Papers published or in press (0)
Peer review papers submitted (0)
Reports to WSIB or other Prevention System Partners (1)
Presentations of results and stakeholder consultation (0)
External grants awarded (3)

Geographic Distribution of Work Injury (0437)

Project Status: Ongoing

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

Objectives:

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

Methods: The primary data will be the combined Canadian Community Health Survey 2003 and 2005 cycles, cross-sectional surveys that include over 110,000 respondents who reported working in the past 12 months as well as reports of work injury. Additional data to operationalize constructs such as regional labour market characteristics, and regional socioeconomic status will be obtained from Census data, other Statistics Canada surveys, and provincial Ministries of Labour. To provide descriptive information in a form appropriate for dissemination to stakeholders, we will be calculating and mapping work injury rates per 100 FTE at the provincial level and at the subprovincial level. Separate calculations will be conducted for provincial acute work injury rates and repetitive strain work injury rates. More detailed descriptive analyses include, for example, calculating the provincial and subprovincial work injury rates stratified by gender. Multilevel logistic regressions will examine provincial differences as well as the region- and individual-level characteristics affecting work injury variable. We will also examine gender differences and possibly stratify the analyses by gender, if indicated.

Results: Data analysis in progress

Researchers: Curtis Breslin (Principal Investigator), Ben Amick, Selahadin Ibrahim, Sara Morassaei, Peter Smith, James Dunn and Ketan Shankardass (St. Michaels Hospital)

Stakeholder Involvement: OSSA, CAW, Ministry of Labour

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

Funding:

Breslin FC, Amick B, Dunn J, Ibrahim S, Shankardass K, Smith P. Geographic variation in occupational injury and its correlates among Canadian men and women. CIHR: \$146,879 (2009-2011)

Vulnerable Young Workers Using Employment Centres (0423)

Project Status: Completed

Introduction: Young people 15 to 24 years old who are out of school (and especially those with less than a high school diploma) are at particularly elevated risk for work injury. Recently, a Ministry of Labour action group made recommendations to improve safety preparation and reduce work injuries in this “high-risk” subgroup of young workers. One potential partner mentioned in the action group’s recommendations was youth employment centres because many of these “high-risk” youth use their services.

Objectives:

- What occupational hazards and injuries has this subgroup encountered, and how does their work and injury experience compare to Ontario youth in general?
- What work safety education and training has this subgroup received, from what sources, and what is their current knowledge of work safety?

Methods: Population/inclusion criteria. In all, we surveyed nearly 2000 15 to 24 year old respondents who were using Ontario employment centres. These respondents had also worked for pay for an employer at some point in the previous 12 months. Recruitment for respondents was handled by the Ontario Association of Youth Employment Centres (OAYEC), an organization that has an ongoing working relationship with employment centres. In particular part of that relationship is to help the centres meet their research needs. To recruit survey sites, OAYEC staff described the study to the 70 employment centres in Ontario, with the objective of recruiting a representative sample of employment centres. For those employment centres agreeing to participate, OAYEC provided training and support for the employment centre staff to administer the survey on their computers. To recruit participants, the employment centre staff asked all young people using the employment centre who met the inclusion criteria whether they would be interested in participating in a 20-minute survey regarding work and safety. For those expressing interest, the staff provided informed consent and the participant completed the internet-based survey at the employment centre. Participants were provided \$10 for their time. The information collected in this cross-sectional survey included demographics, characteristics of their last job, OHS experience and safety preparation.

Results: Results suggest that young people who use youth employment centres frequently encounter unsafe work conditions and often sustain work injuries.

Researchers: Curtis Breslin (Principal Investigator), Sara Morassaei, Peter Subrata

Stakeholder Involvement: We had staff from the OAYEC as our research partner. As part of the advisory committee we had representatives from the Ministry of Labour, Health and safety associations and representatives from Youth Employment Centres.

Potential Audiences and Significance: The issue of addressing vulnerable youth was important enough that a Minister’s working group was formed and made recommendations last year. This group of young workers is of interest to the MOL, WSIB, HSAs, and the education system.

Links to WSIB Policy & Program Priorities: Health & Safety: Prevention of Injury & Illness

Publication:

Breslin FC, Wood M, Mustard CA. Bridging the safety gap for vulnerable young workers using employment centres. Report to WSIB. Toronto, ON: Institute for Work & Health, 2009. [2009-039]

Funding:

Breslin FC, Wood M, Mustard CA. Bridging the safety gap for vulnerable young workers using employment centres. WSIB RAC: \$60,000 (Mar 2008-Feb 2009)

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

Project Status: New

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

Objectives:

- The objective of this study is to gain an understanding of how TWAs are organised and how they manage injury prevention and return to work in light of their non-standard organization, and to examine industry-specific policy, legislation, industry norms and practices. What are the responsibilities of client firms for the protection of workers' health and safety? How do TWAs manage a diverse workforce and client firms who hire the workers? How do agency managers communicate with workers and clients about workplace safety? What injury prevention and management systems and practices exist within TWAs? A final objective of this study is to identify practices that can help protect and restore the health of TWA workers.

Methods: This study will use qualitative methods which are suited to the examination of experience and process, and exploratory topics about which little is known. The method will consist of five parts: 1) Analysis of legislation, case law, and policy governing Ontario temporary work agencies and their approaches to workplace health; 2) focus groups with workers employed by TWAs; 3) focus groups with employers who hire labour from temporary work agencies; 4) in-depth interviews with TWA managers who interact with workers and clients across a representative range of Ontario industries, 5) situational grounded theory and discourse analysis of focus group and interview data considered together with the legal-policy analysis. An Advisory Group consisting of WSIB, Health & Safety Associations, Ministry of Labour, and Worker and Employer representatives will guide the research.

Researchers: Ellen MacEachen (Principal Investigator), Agnieszka Kosny, Ron Saunders, Katherine Lippel (Université du Québec a Montréal (UQAM))

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

Funding:

MacEachen E, Kosny A, Lippel K, Saunders R. Understanding the management of injury prevention and return to work in temporary work agencies. WSIB RAC: \$208,941 (2009-2012)

Preventing Musculoskeletal Disorders

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

2009 Quick Statistics

Completed projects (0)

Ongoing projects (2)

Papers published or in press (0)

Peer review papers submitted (0)

Reports to WSIB or other Prevention System Partners (0)

Presentations of results and stakeholder consultation (1)

External grants awarded (2)

Evaluation of a HSA-initiated Collaborative Partnership to Implement Participatory Ergonomic Programs (0233)

Project Status: Ongoing

Introduction: MSDs and musculoskeletal pain are major problems for the electrical and utilities sector and traditional prevention techniques have not led to long-term solutions. Participatory approaches have been shown to be more effective but have not been widely adopted. The Electrical & Utilities Safety Association (E&USA) is partnering with the IWH, CRE-MSD and eight firms to implement and evaluate best-practice participatory ergonomic (PE) programs. This research will evaluate this unique partnership approach to the implementation of sustainable PE programs in the sector. Findings from this research will help Health and Safety Associations (HSAs) improve the effectiveness of their MSD prevention efforts.

Objectives:

- Complete longitudinal data analyses that include process indicator variables as well as outcome variables.
- Complete qualitative data collection and analysis.
- Prepare manuscripts on evaluation findings. Complete WSIB final report.

Methods: Questionnaire distribution, data entry, data coding, descriptive analyses.

Researchers: Philip Bigelow (Principal Investigator), Donald Cole, Peter Subrata, Dwayne Van Eerd, Sue Ferrier (Contract), Renée-Louise Franche (Occupational Health & Safety Agency for Healthcare, BC), Mardon Frazer (University of Waterloo), Dee Kramer (University of Waterloo), Suzan Krepostman (Electrical and Utilities Safety Association), Shannon Maracle (Electrical and Utilities Safety Association), Nancy Theberge (University of Waterloo), Richard Wells (University of Waterloo)

Stakeholder Involvement: Electrical & Utilities Safety Association (E&USA) personnel were integral in the development of the intervention and are partners in all aspects of the project. The participating firms have worked with E&USA in designing and implementing their PE programs. CRE-MSD is also a major partner in the project. They provided scientific and technical assistance to all partners (ergonomics, MSD prevention). All the partners are actively engaged in the program evaluation (Horizon Utilities Corp, Guelph Hydro Electric Systems Inc, Hydro Ottawa, Thunder Bay Hydro, Kitchener-Wilmont Hydro, and Belleville Water); CRE-Prevention of Musculoskeletal Disorders at the University of Waterloo

Potential Audiences and Significance: Workplace parties, regulatory agencies, WSIB, other workplace insurers, policy-makers, researchers in MSD prevention

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Funding:

Kramer D, Bigelow P, Vi P, Garritano E, Wells R. In search of innovations: Identifying new tools and processes to prevent MSDs in the construction sector. WSIB RAC: \$59,639 at CRE-MSD (2008-2009)

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

Project Status: Ongoing

Introduction: As the Canadian economy shifts to a service industry base, questions about how to reduce musculoskeletal injuries among knowledge workers become more important. Numerous studies have documented the role of occupational health and safety training in improving workplace health. While many companies offer computer-based training there is little evidence on the effectiveness of computer-based training compared to in-person training.

Objectives:

- To produce new knowledge about the effectiveness of in person training programs as compared with computer-based training programs for knowledge workers in seated environments. Specifically: 1) to contribute to the nascent intervention effectiveness literature in office environments by identifying key pathways for reducing MSK injury risk and demonstrate economic benefits; 2) to provide evidence to support Ontario in progressing along to *The Road to Zero*; 3) to contribute to the evidence base on the effectiveness of worker health and safety training in office ergonomics.

Methods: To test the primary health and lost productivity outcome hypotheses, the research team will conduct a longitudinal study at OPG where groups will be randomly assigned to either intervention or control. Cluster randomization will be used to avoid contamination.

Results: Finalized questionnaire and worked with client to field one protocol.

Researchers: Ben Amick (Principal Investigator), Dorcas Beaton, Philip Bigelow, Donald Cole, Peter Smith, Ivan Steenstra, Emile Tompa, Michelle Robertson (Liberty Mutual Research Institute for Safety)

Stakeholder Involvement: Ontario Power Generation, Liberty Mutual

Potential Audiences and Significance: MOL, WSIB, HSAs, Employers, Labour, Training Companies

Presentation:

Steenstra IA, Amick B, Van Eerd D, Severin C, Tompa E, Robertson M, Ibrahim S, Hogg-Johnson S. A randomized controlled trial of the effectiveness of office ergonomic training approaches for seated environments. 9-14 Aug 2009; Beijing, China: 17th Congress of the International Ergonomics Association

Funding:

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

Effective Occupational Health and Safety Practice

IWH has initiated a number of research projects to refine the measurement of organizational policies and practices that support optimal workplace practices. In 2008 we received funding to assess whether the Ontario Ministry of Labour's High Risk Firm Initiative (HRFI) produced changes in Ontario firms' health and safety practices and final outcomes, including compensation claim rates; costs and consequences of the initiative with costs appropriate to effectiveness and benefits. In another study, we sought to determine the safety case for business, by examining best practices in safety and business operations, and the effects of these best practices on both economic and safety outcomes.

2009 Quick Statistics

Completed projects (1)

Ongoing projects (5)

Papers published or in press (0)

Peer review papers submitted (0)

Reports to WSIB or other Prevention System Partners (0)

Presentations of results and stakeholder consultations (1)

External grants awarded (3)

Development of Leading Indicators for the Prevention of Injuries and Illness (1105)

Project Status: Ongoing

Introduction: It is recognized that to better understand how the occupational health and safety system is performing in protecting workers from injury and in helping injured workers to return to work and function effectively in their job, Ontario Prevention System Partners must know about the characteristics of the firms that are leading the observed injury and illness rates in the Province. However, information on these leading indicators is not readily available in administrative data. To resolve this information gap, OHSCO has led the development of a survey to be administered by HSAs to measure key organizational performance indicators. The focus of this effort is on safety culture.

Objectives:

- To conduct a pilot study to demonstrate the feasibility of collecting this information from employers, the types of reports needed by the WSIB, MOL and the HSAs to make the information useful and to determine how well the safety culture measures are associated with injuries and illnesses.

Methods: HSAs were invited to participate in a survey of organization benchmarking indices. A simple two-page questionnaire was constructed to be completed by a representative of a workplace. The questionnaire contained eight questions about health and safety practices within the firm and also was designed to gather information about who the respondent was and the size of the company. Participating HSAs were asked to sample 100 firms each - with the sampling strategy left up to the HSA. Hard copy questionnaires were returned to IWH for data entry. Firm level claims information for each of the participating firms (at least those providing a firm number) were extracted to give information about claim history from January 1, 2006 to December 31, 2008. Psychometric properties of the eight questions were evaluated. Comparisons of the eight health and safety items and claims statistics will be conducted shortly.

Results: To date, 386 questionnaires have been data entered, and we anticipate entering approximately 400-500 more. To this point, we have eight health and safety questions. Principal Component Analysis (PCA) suggests that they represent a single dimension or construct - that they all likely arise from the same underlying latent construct (so that one summary score would be appropriate). Cronbach's alpha is another way to check this - alpha above 0.70 would suggest that we have adequate internal consistency between the eight measures to put them together.

Researchers: Ben Amick, Sheilah Hogg-Johnson (Principal Investigators), Michael Swift

Stakeholder Involvement: WSIB, MOL, HSAs, Employers, Labour, Clinicians, Disability Managers, Injured Workers. This is a stakeholder driven initiative. IWH will be the data repository for the surveys and link the survey data with WSIB claims data. The project is being driven by OHSCO with IWH research support. The lead organization is EUSA.

Potential Audiences and Significance: There is very keen interest in the prevention system partners now for establishing leading indicators of health and safety. The questions used on this questionnaire may provide valuable information about prevention performance in firms.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

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

Project Status: Ongoing

Introduction: In 2005, the Ontario Ministry of Labour (MOL) led the development of the Ontario High Risk Firm Initiative, a comprehensive approach to workplace health and safety that aligns the efforts of the MoL inspectorate and the technical consulting and training staff of the Health and Safety Associations (HSAs). Under this initiative, the Ontario government committed to the goal of reducing workplace injuries by 20 per cent over a four-year period. The initiative features two core elements: 1) enhanced inspection and enforcement of health-and-safety systems in Ontario workplaces; and 2) the delivery of education, training and consultation services. The initiative targets Ontario workplaces with the poorest health-and-safety performance. Early in 2005, the Institute for Work & Health was invited to lead in the development of options for an evaluation of the High Risk Firm Initiative. These evaluation options were discussed at a workshop held in Toronto on June 23, 2005 with participation from program staff at the MOL, the WSIB and the HSAs. At this workshop, Dr. Ben Amick, Dr. Barbara Silverstein and Dr. John Mendeloff participated as external discussants. They gave a strong endorsement of the value of a rigorous evaluation of the Ontario High Risk Firm Initiative.

Objectives:

- To assess whether the High Risk Firm Initiative (HRFI) produces changes in health and safety practices and final outcomes (claims rates; costs and consequences of the initiative) in Ontario firms with costs appropriate to effectiveness and benefits. Specific research questions include:
- Is there an overall reduction in firm level lost time (LT) and no-lost time (NLT) claims rates (frequency) and durations (severity) corresponding to implementation of the initiative over time?
- Do firms receiving different aspects of the intervention (inspection & enforcement, consultation & education) show differential changes in LT and NLT claims rates and durations and in organizational policies and practices for health and safety, as compared to each other and to untargeted firms?
- What are the firm level and system level costs and consequences associated with responding to different aspects of the intervention?
- How do interveners (inspectors and health & safety association staff) implement the intervention process and what practical strategies are used to enhance firm compliance or positive responses? Correspondingly, what processes of organisational change and learning occur in firms receiving different interventions?

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

Results: There were 6814 firms in the study sample, 3616 from the manufacturing sector (1463 high risk, 600 HSA targeting, 619 Priority Inspection, 934 Referent) and 3198 from the service sector (2026 high risk, 510 HSA targeting, 250 Priority Inspection, 412 Referent). From the service sector, 3005 of the 4177 firms on the last chance list were excluded from the randomization process, while 978 of the 3131 firms on the manufacturing last chance list were excluded. For each of the four study arms within each sector, we compared different firm-level measures of yearly claim activity from 2002 to 2008 inclusive, including counts of total claims registered, lost-time allowed claims, no-lost-time allowed claims, and days of disability compensated. Negative binomial models were used to compare study arms while controlling for firm size, geographic location, number of years in business and number of branches. Among the three last chance study arms in both sectors, all claims outcomes examined showed very similar trends across study arms over time, pre, during and post-intervention period. When the high risk firms were compared to the last chance firms within each sector, we see elevated claims counts and disability day counts in years

2003, 2004, 2005 - the years from which the selection data came. In 2006, there is a sudden decrease in these outcomes and by 2007, these outcomes are very comparable to those of the last chance firms.

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

Potential Audiences and Significance: The results of this research project will have major and broad implications for policy makers interested in the prevention of work-related injuries and the communication and enforcement of workplace safety standards at a system-wide level, both within and outside of Canada. This project will, for the first time, provide policy makers with detailed information on the differential impact of both increased inspections and enforcement and increased intensive education on lost-time and no-lost-time work injuries and firm-level safety practices. Further, we will also estimate the economic costs and benefits of these different approaches to work injury prevention at both the workplace and province-wide level.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Presentation:

Hogg-Johnson S. Evaluation of the Ontario High Risk Firm Initiative. 6 Nov 2009; Hopkinton, MA: Workers Compensation Research Group.

Funding:

Hogg-Johnson S, Cole DC, Amick B, Bigelow P, Mustard CA, Robson LS, Smith P, Tompa E. A randomized controlled study of targeted occupational health & safety education, training and consultation in Ontario workplaces. WSIB RAC: \$59,700 (Jul 2008-Aug 2009)

Organizational Policies & Practices (0277)

Project Status: Ongoing

Introduction: This project builds on the work of Rene Williams and Ben Amick examining the measurement of distribution of organizational policies and practices in prevention of injuries and illnesses and in disability management. The research will examine the relationship between seven organizational policies and practices (people-oriented culture, active safety leadership, safety training, safety diligence, ergonomics policies and practices, disability management and labour management climate) and workers' compensation based injury rate calculations to determine which, if any, predict injuries and illnesses.

Objectives:

- Clean a data set.
- Ensure the correct firm WSIB data is linked to the survey data.
- Analyze the relationship between OPPs and injuries and illnesses.

Methods: This is a secondary analysis of data collected in 2001-2204 from approximately 500 employers in the health care, educational and hotel and motel sectors of the Ontario labour market. The survey collected information on organizational policies and practices. This project is designed to link the survey data to WSIB injury and illness data to determine whether the OPPs predict the outcome.

Results: We are continuing to clean and link data.

Researchers: Ben Amick (Principal Investigator), Marjan Vidmar, Arold Davilmar

Stakeholder Involvement: None at this point - but strong interest from WSIB and HSAs.

Potential Audiences and Significance: WSIB and HSAs who are interested in trying to capture firm-level behavior in a meaningful way.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness;
Return to Work: Prevention & Management of Work Disability

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

Project Status: Ongoing

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

Objectives:

- To empirically exploring key relationships between safety and other organizational outcomes to address the following questions:
 - 1) What is the relationship between health and safety outcomes and other operational outcomes such as costs, operating revenues, innovation, quality, flexibility and delivery?
 - 2) How do best practices in operations affect health and safety outcomes?
 - 3) How do best practices in health and safety affect operational outcomes?

Methods: This project has two phases. In Phase 1 workplace parties will be interviewed in about 10 plants/facilities in the manufacturing and transportation sectors in Ontario. The interviews will provide deep insights and a cross sectional view of organizations. The information from Phase 1 will be used to develop a questionnaire for surveying a larger number of organizations by telephone. In Phase 2, the survey will be administered by phone to over 250 plants/facilities across Ontario. In both Phases data will be collected from multiple respondents at each organization to get various stakeholder perspectives, specifically operating management, health and safety specialists and workers and/or their representatives. For Phase 2, health and safety outcomes will primarily be measured with WSIB data. Statistical modeling will be undertaken to estimate the impact of health and safety on operational outcomes, and the impact of operational outcomes on health and safety.

Researchers: Mark Pagell (Principal Investigator) (York University), Emile Tompa (Institute Coordinator), Ben Amick, Sheilah Hogg-Johnson, Kiera Keown, Sara Macdonald, Ian Moore, Sara Morassaei, Lynda Robson, Anna Sarnocinska-Hart, Markus Bieh, David Johnston (York University), Robert Klassen (University of Western Ontario), Anthony Veltri (Oregon State University)

Stakeholder Involvement: We will have a stakeholder workshop consisting of labour representatives at the end of Stage 1 of the study, and a second workshop towards the end of Stage 2.

Potential Audiences and Significance: Workplace parties (employers, workers, unions), Workplace Safety & Insurance Board

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Funding:

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

A Comparative Analysis of the Occupational Health & Safety Incentives of Workers Compensation Premium Setting in Ontario & British Columbia (1130)

Project Status: New

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

Objectives:

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

Methods: We will use regression modeling techniques to identify the effects of experience rating features and other contextual factors on measures of safety performance. Since the outcome measures will be rates or counts of claims by type, we will consider the Poisson and the negative binomial regression models. Another modeling approach we will consider is multi-level modeling, because some categories of firm characteristics such as size or industry may have less variability within than across categories. Time period, jurisdiction, industry, and firm-level contextual factors that bear on outcomes will be controlled for in the analyses.

We plan to use a range of outcome measures at the firm level based on claims data that provide insight into safety and claims management activities. To overcome the fact that claims are not synonymous with injuries, we will use categories of claims that are less likely to be affected by reporting bias such as permanent impairments, acute trauma injuries and fatalities and compare them to those more likely to be affected. We will also use claims data in other creative ways to uncover specific behavioural consequences of the programs.

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

Stakeholder Involvement: Senior policy makers at WorkSafeBC to serve on an advisory committee.

Potential Audiences and Significance: The findings of this study will provide information on the type, magnitude and consequences of behavioural incentives created by features of experience rating programs. Specific questions to be addressed are: What are the different incentives of prospective versus retrospective program? How do other features of experience rating affect injury outcomes? What is the magnitude of primary and secondary prevention effects from experience rating? What types of injuries are most likely to be the focus of prevention efforts? What evidence is there of claims management? How do the above issues vary by firm size and industry?

WorkSafeBC and workplace parties in British Columbia will be particularly interested in the study findings, as they have a vested interest in the ER program. The findings will also be of interest to policymakers at the Workplace Safety and Insurance Board of Ontario and at workers' compensation boards across

Canada and the United States. Researchers investigating work and health issues, and particularly system level incentives for health and safety, are another target audience of this research.

Funding:

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

Regulation and Incentives

In the thematic area of regulation and incentives, Institute scientists will continue their work evaluating the Ontario prevention system. Specifically, work initiated in 2008 examining the causes and nature of injuries reported as no lost time claims in Ontario over a 15 year period, and will continue to examine the impact of experience rating on the incidence of workers' compensation claims.

2009 Quick Statistics

Completed projects (1)

Ongoing projects (5)

Papers published or in press (1)

Peer review papers submitted (1)

Reports to WSIB or other Prevention System Partners (0)

Presentations of results and stakeholder consultations (1)

External grants awarded (4)

Examining Trends in the Incidence and Cost of Workers Compensation Claims in the Ontario and British Columbia Long Term Care Sectors 1998-2007 (0439)

Project Status: Ongoing

Introduction: The goal of this study is to examine trends over time in compensation claim activity and benefit expenditures for work-related health conditions among employees in the long-term care sectors in the Canadian provinces of British Columbia and Ontario. There are more than 60,000 full-time equivalent workers in the long-term care sector in Ontario and more than 14,000 workers in British Columbia. The study has a particular interest in understanding the influence of insurance premium experience rating programs and other policy initiatives in the two provinces on practices within the long-term care sector related to the prevention of work-related injury and illness (primary prevention) and separately, practices related to the management of work disability (secondary prevention).

Objectives:

- Assess evidence that the effectiveness of primary and secondary prevention of work-related injury has differed in British Columbia compared to Ontario.
- Describe disability management practices in a representative sample of long-term care facilities in British Columbia and Ontario in 2008.

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

Researchers: Cameron Mustard (Principal Investigator), Jeremy Petch, Peter Smith, Emile Tompa, Mieke Koehoorn, Christopher McLeod (University of British Columbia)

Stakeholder Involvement: This project will invite representatives of key stakeholder groups to participate as members of an Advisory Committee. In British Columbia, representatives of the Healthcare Employees Union and the Occupational Health & Safety Agency for Healthcare, BC have accepted invitations to participate in the Advisory Committee. Invitations will be extended to agencies and organizations in Ontario to participate in the Advisory Committee. These agencies and organizations would include the Occupational Health and Safety Association for Health Care, the Canadian Union of Public Employees, the Service Employees International Union and the Ontario Long-Term Care Association. These agencies and organizations have previously worked with the Institute for Work & Health.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness;
Return to Work: Prevention & Management of Work Disability

Funding:

Mustard CA, Tompa E, Smith PM, Koehoorn M, McLeod C. Examining trends in the incidence and cost of workers' compensation claims in the Ontario and British Columbia long term care sectors: 1998-2007. WorkSafe BC: \$327,500 (2008-2010)

Causes and Nature of Injuries Reported as No-lost Time Claims in Ontario, 1991-2005 (0419)

Project Status: Ongoing

Introduction: Between 1991 and 2005 the number of claims submitted to Ontario's Workplace Safety and Insurance Board (WSIB) for work related injuries requiring time off work (lost-time claims) decreased by approximately 42%. However, over the same time period work-related injuries that required health care, but not time off work (no-lost-time claims) only declined by 4%. As a result, there are currently over twice the amount of no-lost-time claims (NLTCs) reported to the WSIB, than lost-time claims (LTCs); with the health care spent on NLTCs by the WSIB in the year 2000 in excess of \$20 million. Unfortunately, no information on the types of injuries reported as NLTCs is routinely stored and/or reported by the WSIB. Therefore, little is known about why these claims have not decreased or how they might be prevented. The goal of this project is to extract detailed information from the injury reports submitted with NLTCs over four time periods between 1991 and 2005. We will also examine the overall trends in the rates and health care costs of NLTCs between 1991 and 2005 across different labour force subgroups. The results of this study will provide stakeholders in workplace safety with valuable information on how NLTCs might be prevented.

Objectives:

- To examine trends in rates of NLTCs, and the ratio of NLTCs to LTCs between different labour force subgroups (e.g., gender, industry or age groups).
- To examine the health care expenditures associated with no-lost-time claims over time; and to examine if these trends in health care expenditures have been consistent across different labour force subgroups.
- To examine the types of injuries that are reported as no-lost-time claims to the WSIB, and examine if these injury types have changed over time.
- To report if certain types of no-lost-time claims increased over time (e.g., have certain types of injuries been less affected, or not affected at all, by previous and current prevention initiatives in Ontario)?
- To examine if there are differences in the nature of injuries reported as no-lost-time claims from firms who get premium rebates, firms who pay premiums surcharges and firms who do not pay premiums (i.e., Schedule 2 employers)?

Methods: This project uses a mixture of descriptive and multivariate regression analyses to examine the trends in NLTCs, both in general and relative to LTCs across various labour market subgroups. Initial descriptive analyses will examine differences in the trends in NLTCs, and the health care expenditures associated with NLTCs, across different industry, gender and age subgroups. These analyses will then be extended to examine differences in the reporting of NLTCs relative to LTCs across firms with better than average safety performance, as assessed by the WSIB's experience rating program, compared to firms with worse than average safety performance; and to firms covered under schedule two. A final series of analyses will utilize detailed information extracted from a random selection of 9,228 NLTCs, from four different periods between 1991 and 2005. This analysis will examine if there are differences in the types of injuries reported as NLTCs; both over time, and between different subgroups of workplaces and labour force participants.

Results: Coding was completed by Linda Kacur in October 2009. Plenary was given as scheduled. Team meeting completed. As of the end of 2009 a draft of the first paper on administrative data is almost completed. An additional paper examining health care costs has been delayed by data gathering issues (which have been resolved). This paper will be completed by the end of the first quarter of 2010. No presentations have been given as analyses have not been completed. A plenary, plus presentations to HSAs, WSIB groups on request will be given in the second quarter of 2010.

Researchers: Peter Smith (Principal Investigator), Cynthia Chen, Sheilah Hogg-Johnson, Cameron Mustard, Michael Swift, Marjan Vidmar, Linda Kacur (WSIB)

Potential Audiences and Significance: This research project will provide a comprehensive overview of the type of work-related injuries that result in no-lost-time claims in Ontario, and trends in these claims over the last 15 years. This overview will be of interest to numerous policy portfolios, both at the provincial and federal levels, various provincial health and safety partners such as Health and Safety Associations (HSA's), as well as management and workplace groups. Given the limited information currently available on claims that do not require time off work, these results will also be of interest to other Workers Compensation Boards across Canada.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Funding:

Smith P, Mustard CA, Hogg-Johnson S. Examining changes in injuries submitted as no-lost-time claims in Ontario between 1991 and 2005. WSIB-RAC: \$204,650. (Feb 2008- Jan 2010)

Occupational Health and Safety Council of Ontario (0249)

Project Status: Completed

Introduction: The Institute for Work & Health has played an active role in the development and production of a performance measurement report on the Ontario Prevention System. Reports have been produced for each of the years in the period 2003-2007. This has been done in collaboration with representatives of other Prevention System organizations. The new Performance Measurement and Information Management Committee of Occupational Health and Safety Council of Ontario currently oversees the development and production of the report.

Objectives:

- To identify areas for improvement in the performance report.
- To investigate and develop new data sources and computation methods as required.
- To improve the efficiency, reliability and validity of the methods of data collection as required.
- To collect required data and produce report.

Methods: Data are collected from various sources: a survey by the Sub-committee of OHSCO members; Statistics Canada Labour Force Survey; websites of WSIB, MOL, and AWCBC; key informants in the WSIB, MOL and WSIB. Indicators are generated from gathered data. Time trends in indicators are described. Data are reported in the form of text, tables and graphs in an annual report.

Results: Final report on 2008 was completed in 2009.

Researchers: Lynda Robson (Institute Coordinator), Cameron Mustard, John Speers (IAPA)

Stakeholder Involvement: All prevention system organizations have been involved in the development of the report. All provided information used in the report. The Performance Measurement and Information Management Committee of OHSCO oversees the development and production of the report.

Potential Audiences and Significance: The primary audience is OHSCO. Other jurisdictions carrying out performance measurement activities are also interested.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Publication:

Robson LS, Mustard CA, Speers J. Development of a performance measurement report for the prevention system in a Canadian province. 15-16 Oct 2009; Dresden, Germany: Research on the effectiveness of prevention measures at the workplace. In: Hook J, ed. Proceedings of the Colloquium of the ISSA International Section for Research on Prevention. Berlin-Mitte:DGUV, pp. 101-104.

Presentation:

Mustard CA, Robson LS, Speers JC. Development of a performance measurement report for the prevention system in a Canadian province. 15-16 Oct 2009; Dresden, Germany: Colloquium of the ISSA International Section for Research on Prevention: Research on the effectiveness of prevention measures at the workplace.

The Impact of Experience Rating and Occupational Health and Safety on Claims Experiences in Ontario (0416)

Project Status: Ongoing

Introduction: Experience rating of workers' compensation insurance premiums is a common practice in North America. It is meant to create incentives for firms to invest in safety by varying their premiums based on their claims activity. Though experience rating is a principal policy lever of workers' compensation insurance providers, few studies have investigated its effects with direct measures of program features. The few published studies that exist have relied on crude proxy measures. The dearth of studies is largely due to the lack of access to data from insurers.

The principal experience rating program in Ontario is called the New Experimental Experience Rating (NEER) program. Since its introduction in 1984, only a handful of studies have been undertaken on it, and none consider the impact of varying the degree of experience rating or the incentive created by the rebates and surcharges of the program. In this study, we will investigate various features of the NEER program through rigorous statistical methodologies, using direct measures, in order to identify the range of behavioural incentives created by the program.

Objectives:

- To investigate the impact of various features of the NEER program on safety and claims management.
- To assess the incentive effects of the degree of experience rating (using a direct measure).
- To assess the incentive effects of the retrospective aspect of the program (using the proportion of rebates and surcharges).
- To assess the impact of programmatic changes introduced in 2004 and 2006 (increasing the rating factors and the maximum per claim and per firm costs considered in the program).

Methods: Regression modelling techniques based on micro data at the firm level to be undertaken using panel data methods.

Results: For both NEER and CAD-7 experience rating was found to be significantly related to lost-time, no-lost-time and total injury rates, as well as a number of other claims outcome measures. Specifically, a higher degree of experience rating is associated with a lower claim rate. A higher unemployment rate is associated with a lower claim rate.

Researchers: Emile Tompa (Principal Investigator), Ben Amick, Miao Fang, Sheilah Hogg-Johnson, Ian Moore, Lynda Robson, Marjan Vidmar

Potential Audiences and Significance: This project is relevant to the WSIB and workers' compensation boards in other jurisdictions. It is also of interest to employers and injured worker representatives

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness; Return to Work: Prevention & Management of Work Disability

Publication:

Tompa E, Fang M. The impact of experience rating and firm size dynamics on occupational health and safety performance. Revise and resubmit: Relations Industrielles/Industrial Relations [2004-091]

Funding:

Tompa E, Amick B, Hogg-Johnson S, Robson L. The behavioural incentives of experience rating: An investigation into the health and safety consequences of the new experimental experience rating program in Ontario. WSIB RAC: \$122,016 (2009-2010)

Accounting for all the Benefits: How Should We Judge the Worth of Occupational Health & Safety Programs in the Healthcare Sector (1135)

Project Status: Ongoing

Introduction: In this project we plan to work with employers and unions to develop a jointly supported framework (a set of detailed tools and methods) to conduct comprehensive rigorous economic evaluations of occupational health and safety (OHS) programs in the healthcare sector. The framework will then be applied to the case of patient ceiling lifts in healthcare facilities throughout BC to examine program impacts on all stakeholders and on WorkSafeBC costs. It will provide a detailed return-on-investment accounting for our public healthcare system.

Objectives:

- Decision makers from management and union constituencies will be engaged to agree on appropriate ways of conducting, interpreting and framing economic evaluations of OHS programs in healthcare. The study objectives are as follows:
 1. Identify the relevant costs and consequences that should to be included (from the perspective of workers, employers, insurers and the Ministry of Health Services) in a comprehensive economic evaluation of an OHS intervention in the healthcare sector.
 2. To determine how these costs and consequences be measured and integrated in the economic evaluation, given data availability and stakeholder preferences.
 3. To apply the economic evaluation framework to ceiling lift intervention to assess the feasibility of the framework.

Methods: The Alliance research project has been divided into four themes. The first theme examines the broader disability compensation system and its ability to provide a social safety net. The research will examine the current system's policies and regulations, and will analyse the gap between the ideals put forward in this documentation and the real experience of injured and ill workers. This theme will also be concerned with future needs in legislation and policy.

Results: Economic evaluation lay document completed; first partner retreat held. Environmental scan underway; questions for in depth interviews completed.

Researchers: Jaime Guzmán (Principal Investigator) (Occupational Health & Safety Agency for Healthcare, BC), Sara Macdonald, Emile Tompa, Hasanat Alamgir, Mieke Koehoorn

Stakeholder Involvement: Stakeholders will be involved as partners in the project, and as participants in a Delphi panel, and in key informant interviews. Stakeholders include key decision makers from WorkSafeBC, Health Authorities, Union Representatives, Ministry of Labour, and Ministry of Health Services, as well as worker and patient representatives.

Potential Audiences and Significance: All future economic evaluations undertaken by OHSAH will use the framework. OHS directors of health authorities are part of the working group, and thus part of the team devising a tool that they can use in OHS economic evaluations and in subsequent resource allocation. The four major healthcare unions in BC, also part of the working group, can work to develop and endorse the framework that best serves their constituents and best accounts for all the benefits of such initiatives for the healthcare workers they represent. WorkSafeBC and the Ministry of Health Services will be better informed in identifying effectiveness, and in allocating resources through study of the economic evaluations of OHS initiatives presented to them.

Funding:

Guzmán J, Keen D, Alamgir H, Tompa E. Accounting for all the benefits: How should we judge the worth of occupational health and safety programs in the health care sector? WorkSafeBC: \$222,976 (2009-2011)

Breakthrough Change in Workplace OHS Performance (1145)

Project Status: Ongoing

Introduction: This project will address the need of workplaces and their stakeholders to understand better the degree to which large change in a workplace's rate of injury and illness (breakthrough change) is possible and what factors are critical to making such change (e.g., new technology, senior management commitment, an OHS management system, or worker participation). New research on breakthrough change is needed because there is little research to date that focuses on such change, although there are reports in the lay literature.

Objectives:

- Determine the incidence of breakthrough change (BTC) in Ontario firms.
- Determine the critical success factors involved in BTC changes within individual firms.
- Determine the critical success factors common across BTC firms.

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

Results: None to date.

Researchers: Lynda Robson (Principal Investigator), Sheilah Hogg-Johnson, Liz Mansfield, Ben Amick

Stakeholder Involvement: Project partners are: MOL, EUSA, SWPSO, MHSA, WHSC, BCOHS. They will advise the team on research protocols, may assist in the recruitment of firms to be case studies, will assist in the interpretation of results, and will be involved in developing and disseminating research products.

Potential Audiences and Significance: Research products are the following: description by sector of the incidence of BTC, well documented stories of BTC, and a preliminary list of critical success factors for BTC. Partners may choose to disseminate product documents to their membership; e.g., HSA news magazine.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Preventions of Injury & Illness

Evidence Guides and Tools

Stakeholders are always interested in seeing research information developed into highly practical and applied tools. Some primary prevention projects at IWH lead to this type of product, such as the economic evaluation workbook, which is currently under development. Others focus more on the validation of existing tools. Included also in this section are projects assessing the measurement properties (e.g., reliability and validity) of an existing tool, and developing a prevention system monitoring report.

2009 Quick Statistics

Completed projects (0)

Ongoing projects (2)

Papers published or in press (0)

Peer review papers submitted (0)

Reports to WSIB or other Prevention System Partners (0)

Presentations of results and stakeholder consultations (11)

External grants awarded (2)

Economic Evaluation Workbook for Workplace Parties (0218)

Project Status: Ongoing

Introduction: After completing a systematic literature review of workplace occupational health and safety (OHS) interventions with economic evaluations, we have become aware of how underdeveloped the methods are in this literature. Though we found a fair number of intervention studies with economic evaluations undertaken in a variety of sectors, many were of low quality. The greatest number of studies was undertaken in the healthcare sector, yet we were unable to make a strong statement about the evidence on the economic merits interventions in that sector due to the quality of studies. We also found that most intervention studies do not undertake an economic evaluation. Consequently, workplace parties are often not provided evidence on the resource implications of work-related injuries and illnesses or the returns from undertaking health and safety initiatives to prevent them. To fill the gap, we plan to develop sector-specific economic evaluation workbooks for workplace parties, starting with the healthcare sector, in order to provide them with high level summaries of the existing evidence, assist them in being informed consumers of economic evaluation research, and provide them with guidance on how they might themselves apply the methods in their workplaces.

Objectives:

- To develop industry-specific economic evaluation workbooks to serve the information needs of workplace parties and systems partners on the resource implications of OHS interventions.

Methods: To develop the workbook software, we will draw on existing tools developed by others, and research undertaken on the economic evaluation of health and safety interventions. We will also draw on research we have undertaken, which includes a systematic review of workplace interventions with economic evaluations, a methods text for occupational health and safety researchers, and several economic evaluations of workplace interventions. The one-year time period of the grant will be used to develop the software and field test it with the assistance of the partners participating in the grant.

Results:

- First prototype of software completed; recruitment for focus groups completed.
- Second prototype of software completed based on partners' feedback.
- Focus group sessions completed; IAPA Conference workshop presentation given.
- Third prototype of software completed; product layout and design completed.
- Field testing questionnaire development underway.
- Proposal to Manitoba WCB for Manitoba software submitted; proposal to WSIB-RAC for training workshop submitted.
- Fourth prototype of software completed.
- ACE workshop presentation given; BC Kelowna Health Care Conference workshop given; ECOSH Amsterdam workshop presentation given.
- Held discussion with OSHAH regarding integration of BC Healthcare software into WHITE database portal.
- Manitoba WCB proposal funded.
- Field testing in Ontario and BC underway and to be completed in Q1 2010.
- ISSA Dresden workshop presentation given; EU-OSH Bilbao workshop presentation given.
- Report back to WSIB-RAC and WorkSafeBC Research Secretariat completed by Dec 31, 2009.

Researchers: Emile Tompa (Principal Investigator), Ben Amick, Roman Dolinschi, Anita Dubey, Emma Irvin, Kiera Keown, Dylan Maccarone, Sara Macdonald, Cindy Moser, Hasanat Alamgir (Occupational Health and Safety Agency for Healthcare, BC), Chris McLeod (University of BC), Bruce Minor (Lakehead University)

Stakeholder Involvement: The workbook is being prepared in conjunction with system partners from OSSA and IAPA in Ontario, and with senior administrators from regional health authorities in British Columbia.

Potential Audiences and Significance: Workplace parties (employers, workers, unions), researchers undertaking interventions studies, WCBs, Ministries of Labour.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Presentations:

Tompa E, McLeod C, Amick B, Keown K, Dubey A, Macdonald S, Irvin E, Maccarone D. Stakeholder meeting with CHSPR (UBC), OHSAH, Alberta Health Services, Interior Health, Fraser Health. 7 Dec 2009: Economic evaluation workbook for healthcare.

Tompa E, Keown K, Macdonald S, Amick BC, McLeod C, Hasanat A, Irvin E. A new economic evaluation software for the healthcare sector: demonstration and workshop. 14-15 Sep 2009; Vancouver, BC: Workplace Health, Safety and Wellness Conference

Tompa E, Culyer AJ, Dolinschi R, Keown K, Macdonald S, Maccarone D, Dubey A, Amick BC, McLeod C, Alamgir H, de Oliveira C, Irvin E, McLeod K. An economic evaluation methods initiative for occupational health and safety. 15-16 Oct 2009; Dresden, Germany: ISSA International Section for Research on Prevention.

Tompa E, McLeod C, Amick B, Keown K, Dubey A, Macdonald S, Irvin E, Maccarone D. Stakeholder meeting with OSSA, IAPA, WSIB. 26 Nov 2009: Economic evaluation workbook for healthcare

Tompa E. Current state of the art in economic evaluations of OSH interventions. 17-18 Sep 2009; Amsterdam, Netherlands: Economic Consequences of Occupational Safety and Health Workshop.

Amick BC. Economic evaluation tool. 20-22 Apr 2009; Toronto, ON: Health & Safety Canada 2009 IAPA Conference and Trade Show.

Macdonald S, Tompa E, Keown K, Dubey A, Maccarone D, Irvin E, Amick BC. OHS economic evaluation software for the service sector. 4,5,9 Feb 2009; Mississauga, ON: Ontario Service Safety Alliance Advisory Committee.

Macdonald S, Tompa E, Keown K, Dubey A, Maccarone D, Irvin E, Amick BC. Economic evaluation workbook: a cost benefit tool for the manufacturing sector. 10 Jun 2009; Mississauga, ON: Industrial Accident Prevention Association.

McLeod C, Macdonald S, Tompa E, Maccarone D, Keown K, Dubey A, Irvin E, Amick BC, Hasanat A. A new economic evaluation software for the health care sector: demonstration and workshop. 14-15 Sep 2009; Vancouver, BC: Health, Safety and Wellness Conference 2009.

Tompa E, Keown K, Macdonald S, Dubey A, Amick BC, Irvin E. Health and safety economic evaluation tool. 20 Apr 2009; Toronto, ON: IAPA 2009 Conference Workshop

Tompa E. Economic evaluation workbook software for OHS intervention evaluations. KTE Advisory Committee Meeting, Toronto, Ontario. June 24, 2009.

Funding:

Tompa E, Amick B, Keown K, Dubey A, Irvin E. Economic evaluation workbook for workplace partners and systems partners. WSIB: \$40,000 (Jul 2008-Jun 2009)

Tompa E, Amick B, McLeod C, Alamgir H, Keown K, Dubey A, Irvin E. Economic evaluation workbook for workplace parties in the healthcare sector. WorkSafe BC: \$50,000 (Jul 2008-Jun 2009)

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

Project Status: Ongoing

Introduction: This project will address the needs of the English as a Second Language (ESL) population in Ontario's service sector. The initial focus of the project will be MSD's, which account for 30% of long-term claims, 53% of lost time days and 49% of benefit costs in Ontario's service sector. The pictogram approach has been proven to be a successful way to share important messages across various barriers, including cultural, language, age and education.

OSSA members need support in effectively communicating ergonomic hazards in their workplaces. This project will continue to support OSSA's alignment with other system partners and initiatives. (Specifically, extending the reach of the MSD Guidelines and Tool Kit).

Objectives:

- To increase the accessibility of the MSD Guideline and Tool Kit to small businesses.
- To provide tools that would be suitable for vulnerable workers (youth, older workers, immigrants, ESL workers).
- To provide health and safety in a manner that is simplified and easily understood.
- To ensure an evaluation component is developed.
- To transfer knowledge into the health and safety system.

Results: Focus groups were conducted to determine appropriate pictograms. An implementation and evaluation plan was developed. Pictograms were implemented in a pilot evaluation study and results provided to OHSCO.

Researchers: Ben Amick (Principal Investigator), Kim Cullen, Emma Irvin, Kiera Keown

Stakeholder Involvement: Kim Grant, Sandra Miller (OSSA), Anne Duffy (MOL), WSIB, IAPA

Potential Audiences and Significance: OSSA, WSIB, MOL, Prevention partners, OHSCO

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Knowledge Transfer & Exchange Focus on Prevention of Work-Related Injury and Illness

Introduction: KTE have taken a lead role in facilitating stakeholder engagement in the Prevention Reviews program, preparing summaries and developing strategies to disseminate and discuss their results.

KTE has continued to sustain relationships with workplace parties (employers, organized labour, health and safety associations (HSAs), ergonomists and kinesiologists) to ensure their early participation in formulating primary prevention research, and to ensure we have well established communication channels for disseminating findings. Creating stronger employer relationships will be a focus for IWH and the Centres of Research Expertise via the KTE Hub.

Audience: Workplace parties, prevention partners WSIB, MOL, and HSAs (E&USA, IAPA, OHCOW, OSSA).

Focus and messages: Evidence-based messages on the prevention of workplace injury with emphasis on MSDs.

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Prevention and Management of Work Disability

The WSIB has a stated vision in The “*Road to Zero*” of eliminating all workplace fatalities, injuries and illnesses with the aim of reducing the lost time injury rate and the number of traumatic fatalities by 35% from 2007 levels. There is however ongoing recognition of the importance of evidence based strategies to manage and prevent further disability when injury and illness do occur. As the second of five fundamentals in the WSIB Strategic Plan 2008-2012, return to work is a critical focus and the Institute is well aware of the WSIB’s considerable interest in evidence on the quality and effectiveness of interventions to support safe sustainable return to work. Addressing the challenge of optimal return to work outcomes which support the functional recovery of injured workers and minimize workplace and societal costs requires coordination between workplace parties, the compensation insurer and healthcare system institutions and providers.

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

In 2009, our portfolio of research included the continued examination for the risk factors for chronicity and understanding the phenomenon of claims persistency as well as the examination of several interventions designed to improve the process and sustainability in return to work. As part of our focus in disability management and prevention our research in the measurement of health and function continued to engage the clinical staff of the WSIB specialty clinics.

2009 Quick Statistics

Completed projects (11)
Ongoing projects (21)
Papers published or in press (16)
Peer review papers submitted (2)
Reports to WSIB or other Prevention System Partners (0)
Presentations of results and stakeholder consultations (20)
External grants awarded (18)

Measuring Health and Function

Over the past 16 years the Institute has focused on several aspects of research relevant to clinical care: the measurement of health and function includes understanding the course of disability and recovery; and the development of a clinical evidence base on the effectiveness of clinical interventions. These measurement tools and evidence on the clinically effective interventions for work related disability should assist the WSIB in their goal of increasing their capacity to measure other return to work and health care outcomes to improve the effectiveness of their business management.

Through 2009 researchers undertook a longitudinal cohort of injured workers who are attending the WSIB specialty clinic in Toronto and in London with the goal to understanding the usual course of persons attending the specialty clinic and to identify modifiable and non-modifiable factors that could predict likely course of injured workers.

2009 Quick Statistics

Completed projects (1)

Ongoing projects (5)

Papers published or in press (3)

Peer review papers submitted (1)

Reports to WSIB or other Prevention System Partners (0)

Presentations of results and stakeholder consultations (3)

External grants awarded (0)

Measurement Methodology Studies (0925)

Project Status: Ongoing

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

Objectives:

- Advance our understanding of the measurement of longitudinal data collection (change versus trajectories).
- Advance our understanding of transitions in health (pain becoming a problem and recovery - Note: Overlaps with project 115, its measurement and its interpretation, Minimal Clinically Important Difference (MCID), comparisons, Jacobson approach).
- Disseminate our findings through peer-review publications, presentations, and Continuing Medical Education activities.

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

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

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

Links to WSIB Policy & Program Priorities: Health Services: Effectiveness & Efficiency of Clinical Care

Publication:

Beaton DE, Cullen K, Hogg-Johnson S, Kennedy CA, Smith P, Van Eerd D, van der Velde G. Interpretability of serial changes of health status : a direct comparison of three approaches suggests final state or combined change and final state are most accurate. Submitted: Journal of Clinical Epidemiology [2009-138]

Managing the Tail of the Curve: The Course, Predictive Factors and Work-related Outcomes of Injured Workers One Year after Attending the WSIB Specialty Clinics for Upper Limb Disorders (0113)

Project Status: Ongoing

Introduction: It is known that the majority of disability and costs associated with lost time claims comes from those workers with the longest duration of lost time...the proverbial "tail of the curve". One access point to injured workers in the "tail" is through the WSIB specialty clinics that usually see workers only after about six months post injury. In this study we will be examining the usual course of work-related outcomes (absenteeism and at-work productivity losses) in workers recruited from two upper extremity specialty clinics. We will also examine the predictors of this course, and potentially identify those which are amenable to intervention/modification. The project will also introduce web-based, touch screen data collection and continue with our "just-in-time" summary reports of the workers responses. Six hundred workers will be followed for one year.

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

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

Results: Report sent to the WSIB in February 2009. Funding was received in principle from CREIDO, however, WSIB RAC funding was not received for linkage of clinics to database, though potential is still there. Plan for papers was developed. Analyses was finalized. Manuscripts are underway, however, none are submitted at this time. Presentations were made to stakeholders at the clinic and at the ISOQOL conference. Negotiations and collaborations established with CAMH. Ken Tang is a trainee assigned to the project, and a second coordinator will be hired in the first quarter of 2010.

Researchers: Dorcas Beaton (Principal Investigator), Claire Bombardier, Kim Cullen, Sheilah Hogg-Johnson, Ivan Steenstra, Pierre Côté (University Health Network), Renée-Louise Franche (Occupational Health & Safety Agency for Healthcare, BC), Joy MacDermid (McMaster University), Sonia Pagura and Robin Richards (Sunnybrook & Women's Health Sciences Centre)

Stakeholder Involvement: WSIB specialty clinics are integrally involved in the project. We are also in regular contact with the staff at the WSIB regarding our progress and research interests.; We have received funding to allow us to link to additional clinics (CIHR) and we will be doing so with some of our specialty clinic partners.

Potential Audiences and Significance: WSIB policy-makers, clinicians treating injured workers, researchers interested in the application of research findings directly into clinical practice.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

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

Project Status: Ongoing

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

Objectives:

- Understand the development, use and measurement properties of currently existing measures of work disability and work productivity.
- Conduct a concurrent comparison of different measures of at-work disability.
- Provide leadership to two research transfer initiatives: Outcome Measures in Rheumatological Clinical Trials (OMERACT) workshop/module and Canadian Arthritis Network (CAN-IWH) Strategic Service Resource (SSR) initiative.
- Make recommendations for the role of self-report measures of work disability in workplace studies at IWH and in the broader community.

Methods:

- Injured workers study - cross sectional comparison of four measures of at work disability at the WSIB shoulder and elbow clinic.
- Arthritis study - Canadian Arthritis Network (CAN) funded cross sectional study.
- OMERACT work productivity measurement.
- CAN-IWH SSR.
- Community / clinical work disability cohort (CAN funded longitudinal aspect of B + community cohort, 2005).
- NEW: A web-based survey of people with arthritis across Canada on their work disability experience.

Results:

- Injured workers study presented and now published.
- First paper from CAN funded study also published.
- Theoretical framework paper and ICF mapping paper published.
- This work is on hold.
- We continue to work on analysis of the cohort portion of the CAN Study. Several papers are underway with our working group.

Analysis of trajectories has continued and we have advanced our ability to blend absenteeism and presenteeism statistically. OMERACT 10 work plan was accepted. We are applying for a meeting grant from CIHR and CAN. A working group meeting in was held in Vancouver on the measurement of worker productivity from both clinical and economic perspectives. We also began working on a project called the: I CAN WORK - International Canadian Arthritis Network WORK initiative.

Researchers: Dorcas Beaton (Principal Investigator), Ben Amick, Claire Bombardier, Sheilah Hogg-Johnson, Selahadin Ibrahim, Emma Irvin, Dylan Maccarone, Cameron Mustard, Dwayne Van Eerd, Elizabeth Badley (University of Toronto), Monique Gignac (ACREU), Mieke Haase and Dianne Lacaille (OMERACT), Shanley Pitts (OT Student), Robin Richards (Sunnybrook & Women's Hospital Sciences Centre), Sherra Solway (Toronto Rehabilitation Institute), Peter Tugwell and Douglas Veale (OMERACT)

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

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

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability; Health Services: Effectiveness & Efficiency of Clinical Care.

Publications:

Escorpizo R, Cieza A, Beaton DE, Boonen A. Content comparison of worker productivity questionnaires in arthritis and musculoskeletal conditions using the International Classification of Functioning, Disability, and Health (ICF) framework. *Journal of Occupational Rehabilitation* 2009; 19(4):382-397 [2009-116]

Beaton DE, Bombardier C, Escorpizo R, Zhang W, Lacaille D, Boonen A, Osborne RH, Anis AH, Strand V, Tugwell P. Measuring worker productivity: frameworks and measures. *The Journal of Rheumatology* 2009; 36(9): 2100-2109. [2009-024]

Presentations:

Beaton DE. Measurement of worker productivity from an OMERACT perspective. Oct 2009; Philadelphia, PA: ACR annual meeting.

Buchbinder R, Osborne RH, Dionne CE, Irvin E. Workshops: A new approach for measuring the personal and societal burden of back pain. 15-16 Jun 2009; Boston, MA: 2009 Primary Care Research on International Low Back Pain Forum.

Assessing Prediction Rules for the Duration of Disability in Workers with Low Back Pain (0170)

Project Status: Completed

Introduction: Although intervention strategies based on prediction rules seem promising, both effectiveness and cost-effectiveness have not been proven yet. In this project we attempted to add evidence on the effectiveness of this approach. The project was divided in three parts:

1. Establishing prediction rules for duration of time until return to work with low back pain.
2. Establishing grouping/splitting rules to determine sub groups in the population of workers applying for disability benefits (finished in 2008).
3. Formulating interventions based on these prediction and grouping rules.

Objectives:

- To determine which combination of factors predicts the duration of time of work in a worker who has filed a claim for disability benefits.
- To determine if and which subgroups exist in the population of workers applying for disability benefits (finished in 2008).
- To establish an intervention strategy based on the results from 1&2.

Methods: The study focused on the 442 LBP claimants in the Readiness for Return-to-Work Cohort Study. Claimants (n=259) who had already returned to work, approximately 1 month post-injury were categorized as the low risk group. A latent class analysis was performed on 183 workers absent from work, categorized as the high risk group. Groups were classified based on: pain, disability, fear avoidance, physical demands, employer response, and depressive symptoms.

Results: Three classes were identified; 1) workers with 'workplace issues', 2) workers with a 'no workplace issues, but back pain', and 3) workers having 'multiple issues' (the most negative values on every scale, notably depressive symptoms). Classes 2 and 3 had a similar rate of return to work, both worse than the rate of class 1. Return-to-work status and recurrences at 6 months were similar in all 3 groups. This study largely confirms that several subgroups could be identified based on previously defined risk factors as suggested by an earlier theoretical model by Shaw et al.(2007). Different groups of workers might be identified and might benefit from different interventions.

Researchers: Ivan Steenstra, Sheilah Hogg-Johnson, Selahadin Ibrahim, David Tolusso, Renée-Louise Franche (Occupational Health & Safety Agency for Healthcare, BC), Jill Hayden (Dalhousie University)

Stakeholder Involvement: Anthony Mincone, Case Manager at WSIB was available to provide feedback during the process, informal contacts with the WSIB (Michell Schofield and Judy Geary), clinicians and return to work coordinators at Rehab Solutions, Toronto Western Hospital, Bill Shaw, Liberty Mutual (Hopkinton, MA, USA) and Steven Linton, Orebro University (Orebro, Sweden)

Potential Audiences and Significance: The results from this project will be of interest to WSIB case managers referring workers to different interventions, health care professionals delivering interventions for return to work, employers with workers on disability due to low back pain. This project will be of interest to researchers since new methods will be used to reach the objectives.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

Publication:

Steenstra IA, Knol DL, Bongers PM, Anema JR, van Mechelen W, de Vet HC. What works best for whom? An exploratory, subgroup analysis in a randomized, controlled trial on the effectiveness of a workplace intervention in low back pain patients on return to work. *Spine* 2009; 34(12): 1243-1249 [2007-040]

Developing Standardized Metrics for Work Disability Management Benchmarking (0237)

Project Status: Ongoing

Introduction: Lack of standardization of measures and inconsistencies across work disability management data systems pose challenges for workplace parties, insurers, and researchers trying to estimate the total burden of work disability and improve work disability management (WDM) practices. Many workplaces want benchmarks of WDM experience to assist them in identifying leaders in WDM. Researchers need detailed common information to be able to make cross-organizational comparisons and evaluate the relative effectiveness of different WDM strategies. We propose a benchmarking collaborative that would standardize recording and reporting of WDM metrics in ways that meet the needs of workplaces, their organizations, and researchers.

Objectives:

- To develop an ongoing workplace-level WDM information system in collaboration with workplace parties in Ontario to monitor WDM practices.
- To improve the measurement properties of metrics on absence and disability that will lead to valid and reliable tools as part of standardized benchmark.

Methods:

WDM Outcomes: We will compare organizations' current WDM relevant monitoring as assessed by the CADMAT audit to the standardized set of metrics being promoted by EMPAQ. Currently some of the EMPAQ metrics are standardized in Canada due to workers' compensation (WC) board requirements. The extent of modification of the participating organizations' systems to be EMPAQ compatible and conversely, the adaptation of EMPAQ standards to the Canadian context, will be assessed.

WDM Structures & Processes: We will start with an assessment of organizations' current WDM policies, programs and activities. The main data collection tool will be an adaptation of CADMAT. The consultant members of the research team will examine existing organizational documents and information systems and consult key informants to complete a review engagement and uncover areas in which organizations could improve their WDM performance, including their monitoring of WDM.

WDM Satisfaction: A component of the EMPAQ metrics package is an employee WDM satisfaction questionnaire for those employees who have had a WC or disability claim. We propose to extend this evaluation service to all employees from pilot workplaces who experience a WD episode i.e., have a work absence for a minimum number of days after which the collaborating organizations or their respective WDM consultants engage in active case management. We will distill sections of available questionnaires for employee cases and make the necessary adaptations for supervisors. Completion of the questionnaires may occur just after a facilitated RTW meeting among the supervisor, employee and a staff person from one of the consultant research team member's companies. Alternate options for those in which the RTW to either modified or full duties is fairly rapid without a meeting, is to include questionnaires in already addressed envelopes for return to the WDM consultant's staff or by logging on to an IWH website for completion. In different organizations, we will work with different mechanisms for data collection to assess the feasibility and acceptability of the various mechanisms.

Each of the above will go through a utility assessment to hone down the metrics, then collection trials, and finally reach agreement by sector on the WDMB metrics. Analyses of concordance among satisfaction ratings will also be carried out.

Results: Identify 20 new companies in the public sector and in the pharmaceutical sector to participate. Gain a commitment from the companies in the financial sector that participated in the initial round to participate again. Develop a formal training for all participating companies on how to provide data. Develop all IWH communication tools. Implement training for second round of data collection and collect data. Provide benchmarking reports. Convene meeting of participants to discuss significance of results.

Researchers: Ben Amick, Jason Busse, William Gnam, (Centre for Addiction and Mental Health), Roman Dolinschi, Sheilah Hogg-Johnson

Stakeholder Involvement: Three diverse organizations have participated as part of the WSIB grant, in collaboratively developing WDM benchmarking metrics and processes along with the research team. In addition eight financial services organizations are participating in a parallel project. Additional companies may be recruited in future rounds of data collection. Clarke, Brown & Associates and Organizational Solutions as WDM consulting companies interested in applied research so far have played major roles in interfacing with workplaces and other partners, including workshops, data collection and guidance on WDM improvement opportunities. Other WDM consulting companies may become involved in the future.

Potential Audiences and Significance: Many stakeholders call for more explicit evidence for WDM but good economic and health evaluations of workplace interventions are rare, primarily because of the lack of access to data required to perform them. Hence, potential audiences for this initiative would include workplaces that express interest in benchmarking their disability experience against others. Partners such as The Employers' Advocacy Council (EAC), other safety groups and health and safety associations, researchers and WDM consultants are potential audiences for this work.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

Presentation:

Dolinschi R, Lever B, Amick BC, Gnam W, Busse JW. Poster: The Workplace Disability Benchmarking project. 20-21 Apr 2009; Toronto, ON: 2009 Industrial Accident Prevention Association Conference.

Population-based Mental Disability: Characterizing the Course and Consequences of Mental Disorders Among Workers (2100)

Project Status: New

Introduction: Considerable evidence has demonstrated a general association between mental health disorders and a variety of adverse labour market outcomes, but little is known on a population level about the effects of these disorders over time on educational attainment, labour market participation, and income.

Objectives:

- Measure the impact of childhood and adolescent major depression on later educational attainment.
- To ascertain whether adverse labour market outcomes are more pronounced for those persons with early onset bipolar disorder, compared to those with less severe later onset bipolar disorder.
- To model the impact of major depressive disorder and co-occurring health conditions on work absence and short-term disability among workers still at work, and to estimate at the population level total lost disability days attributable to depression.

Results: The 2009 targets for this project has been deferred until the first quarter 2010. Finish manuscript for paper related to educational attainment; submit manuscript. Complete analyses for bipolar disorder paper, draft manuscript. Submit bipolar disorder manuscript; complete analyses for total disability days paper. Submit total disability days paper; revise and resubmit other manuscripts as needed.

Researchers: William Gnam (Principal Investigator) (Centre for Addiction and Mental Health), Amber Bielecky, Curtis Breslin, Cameron Mustard

Potential Audiences and Significance: The results of this research can be used for priority-setting purposes by large insurers, employers, by disability managers, and by mental health advocacy organizations.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness; Health Services: Effectiveness & Efficiency of Clinical Care.

Clinical Treatment

Injured workers, health care providers, payers, such as the WSIB and the public, are increasingly asking for system-wide processes to improve the quality of care provided and to measure the success of care delivery. High quality care implies practices that are consistent with the best evidence of efficacy and effectiveness (from randomized trials or observational studies) as well as systematic assessment of actual health outcomes. The Institute 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.

Much of the current work of our researchers in EBP is related to the Institute's role as an international Cochrane Collaboration Review site.

2009 Quick Statistics

Completed projects (1)

Ongoing projects (4)

Papers published or in press (8)

Peer review papers submitted (1)

Reports to WSIB or other Prevention System Partners (0)

Presentations of results and stakeholder consultations (7)

External grants awarded (3)

Outcomes Used for LBP in the Literature: Is Recurrent/Episodic Nature Accounted (0308)

Project Status: Completed

Introduction: Evidence from the literature demonstrates that many musculoskeletal conditions such as low back pain (LBP) and neck pain frequently follow an episodic course. Some commentators have criticized the use of outcomes such as “time to first return to work” because they do not acknowledge or account for recurrences or subsequent episodes.

Objectives:

Using articles previously identified for an existing systematic review of the literature on the prognosis of low back pain, our main objectives were:

- To establish which outcomes accommodate the recurrent nature of LBP, and how they make that accommodation and whether the recurrent nature has been explicitly measured and modeled.
- To use simulation models of different hypothetical courses of low back pain to investigate the relationships between different outcome measures of recurrence.
- To recommend a set of core measures which characterize the episodic nature of musculoskeletal conditions such as LBP with corresponding analytic approaches.

Additionally, we aimed to achieve the following:

- To integrate findings from the literature with the Outputs from a workshop conducted at the Forum on Low Back Pain, 2007, led by co-researcher Radoslaw Wasiak.
- To foster collaborative relationships between CREIDO, IWH and Liberty Mutual Research Institute for Safety.

Methods: Study Design: Systematic review of the literature on prognosis of LBP and simulation studies. Although other areas, such as intervention research could have been used for this investigation, the literature on prognosis in LBP was selected to take advantage of a previously conducted systematic review (Hayden, 2007).

Population / Sample / Inclusion / Exclusion: A comprehensive literature search was conducted based on the combined search strategies of the Cochrane Back Review Group and the comprehensive prognosis search recommended by Altman (2001) in the following databases: Medline (1966-November 2003); Healthstar (1975- 2003); Embase (1980-2003); CINAHL (1982- 2003). Electronic searches were supplemented with searches of the Institute for Work & Health library database, which is continually updated through hand-searching of several journals, and author personal files.” Screening was done in steps and included the classification of study attributes to allow future investigations. Screening was conducted by two independent reviewers with consensus. Electronic systematic review software was used to screen, track responses and record consensus (SRS Software, Clinical Analytics, Ottawa, Canada). There are plans underway to update this search to the present, using similar methodology.

Framework: Researchers examined several conceptual models and frameworks as potentially useful to classify outcomes used in low back pain prognosis research. Such frameworks were evaluated to examine if they allowed inclusion of status or process measures. For example, in recent workshop on recurrence of LBP led by one of the co-researchers, the International Classification of Functioning, Disability and Health (ICF) (World Health Organization, 2000) was used to classify alternative indicators of recurrence. As we indicated above, integrating workshop findings was one of our secondary objectives

Data Extraction: A research associate trained to the framework of the study and was primarily responsible for extracting data from the relevant articles. Data extraction for a subset of 40 articles was replicated by one or the other of the co-researchers on the project and results were compared between the research associate and the investigators to establish reliability of the data extraction process. Data extracted included: first author, year, country of origin, journal, outcomes used and which category of ICF they fit into, which column they fit into in above table, and the method of analysis.

Analysis: Each study of prognosis was screened to identify the outcomes used and how they were analyzed, and information was extracted from each study to describe the established framework. This extraction was done by a research associate familiar with this literature, measurement and analytic techniques. We examined trends over time by considering year of publication. Several hypothetical patterns of the course of LBP were defined by the investigators based on experience and the literature. Simulation methods were used to generate the course of LBP based on these hypothetical patterns. From these data, different approaches to measuring recurrences/episodes as identified in the literature were applied and compared.

Outcomes: Comprehensive description and classification of outcomes used in the low back pain literature, including whether and how they accommodate the episodic nature of the condition. These definitions were compared and contrasted using simulation methods. We recommend a core set of outcome measures which characterize episodic conditions for future LBP investigations and provide recommendations on how each should be analyzed.

Results: Sent report materials to CREIDO.

Researchers: Sheilah Hogg-Johnson (Principal Investigator), Michael Swift, David Tolusso, Jill Hayden (Dalhousie University), Radoslaw Wasiak (Liberty Mutual Research Institute for Safety)

Potential Audiences and Significance: Potential audiences include the WSIB and other compensation boards, clinicians and researchers interested in episodic conditions. This work will attempt to provide a better understanding of different approaches to measuring recurrent/episodic conditions and appropriate analytic techniques.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Funding:

Hogg-Johnson S, Hayden J. Characterizing outcomes used for low back pain in the literature: Is the recurrent/episodic nature accounted for? CREIDO: \$9,990 (2008-2009)

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

Project Status: Ongoing

Introduction: The Cochrane Collaboration is an international network of individuals and institutions committed to preparing, maintaining, and disseminating systematic reviews of the scientific literature on the effects of health care. The Institute hosts the Cochrane Back Review Group (CBRG), one of 52 review groups in the Cochrane Collaboration. The editorial and central coordinating activities associated with the CBRG are described here. The activities associated with Institute researchers who are conducting Cochrane reviews are described in project 670. The work of the Cochrane BRG remains closely aligned with the systematic review program at IWH.

Objectives:

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

Methods: Varies according to product, but generally involves a literature search, synthesis of the evidence and publication of a paper.

Results:

(Co-)publications: Staal JB, de Bie RA, de Vet HC, Hildebrandt J, and Nelemans P. Injection therapy for subacute and chronic low back pain: an updated Cochrane review. *Spine* 2009; 34(1):49-59.

Sahar T, Cohen MJ, Uval-Ne'eman V, Kandel L, Odebiyi DO, Lev I, Brezis M, Lahad A. Insoles for prevention and treatment of back pain: a systematic review within the framework of the Cochrane Collaboration Back Review Group. *Spine* 2009; 34(9):924-933.

van Tulder MW, Suttorp M, Morton S, Bouter LM, Shekelle P. Empirical evidence of an association between internal validity and effect size in randomized controlled trials of low-back pain. *Spine* 2009; 34(16):1685-1692.

Protocols: Dahm KT, Jamtvedt G, Hagen KB, Brurberg KG. Advice to rest in bed versus advice to stay active for acute low-back pain and sciatica. *Cochrane Database of Systematic Reviews* 2009, Issue 1. Art. No.: CD007612. DOI: 10.1002/14651858.CD007612.

Romano M, Minozzi S, Bettany-Saltikov J, Zaina F, Chockalingam N, Weiss H-R, Maier-Hennes A, Negrini S. Exercises for adolescent idiopathic scoliosis. *Cochrane Database of Systematic Reviews* 2009, Issue 2. Art. No.: CD007837. DOI: 10.1002/14651858.CD007837.

Rubinstein SM, van Middelkoop M, Assendelft WJJ, de Boer M, van Tulder MW. Spinal manipulative therapy for chronic low-back pain. *Cochrane Database of Systematic Reviews*, Issue 4 . Art. No.: CD008051. DOI: 10.1002/14651858.CD008051.

Aas RW, Holte KA, Labriola M, Lund T, Tuntland H, Rwe C, Merkus S, Moller A, Marklund S. Workplace interventions for low-back pain in workers. *Cochrane Database of Systematic Reviews* , Issue 4 . Art. No.: CD008113. DOI: 10.1002/14651858.CD008113.

Aas RW, Holte KA, Tuntland H, Rwe C, Labriola M, Lund T, Moller A, Skaugen BH, Marklund S. Workplace interventions for neck pain in workers. *Cochrane Database of Systematic Reviews*, Issue 4. Art. No.: CD008114. DOI: 10.1002/14651858.CD008114.

Jacobs W, Tuschel A, de Kleuver M, Oner C, Peul W, Verbout A. Total disc replacement for chronic low-back pain. Cochrane Database of Systematic Reviews, Issue 1 (in press)

Waseem Z, Boulias C, Gordon A, Ismail F, Sheean G, Furlan AD. Botulinum toxin for low-back pain. Cochrane Database of Systematic Reviews 2010, Issue 1 (in press)

Heymans MW, van Tulder MW, Esmail R, Bombardier C, Koes BW. Back schools for acute and subacute non-specific low-back pain. Cochrane Database of Systematic Reviews 2010, Issue 1 (in press)

Reviews: Urquhart DM, Hoving JL, Assendelft WJJ, Roland M, van Tulder MW. Antidepressants for non-specific low back pain. Cochrane Database of Systematic Reviews 2008, Issue 1. Art. No.: CD001703. DOI: 10.1002/14651858.CD001703.pub3. (updated)

Kroeling P, Gross A, Goldsmith CH, Burnie SJ, Haines T, Graham N, Brant A. Electrotherapy for neck pain. Cochrane Database of Systematic Reviews 2009, Issue 4. Art. No.: CD004251. DOI: 10.1002/14651858.CD004251.pub4. (updated)

Urrutia G, Burton AK, Morral Fernández A, Bonfill Cosp X, Zanolli G. Neuroreflexotherapy for non-specific low-back pain. Cochrane Database of Systematic Reviews 2004, Issue 2 . Art. No.: CD003009. DOI: 10.1002/14651858.CD003009.pub2. (updated)

Dagenais S, Yelland MJ, Del Mar C, Schoene ML. Prolotherapy injections for chronic low-back pain. Cochrane Database of Systematic Reviews 2007, Issue 2. Art. No.: CD004059. DOI: 10.1002/14651858.CD004059.pub3. (updated)

Cui X, Trinh K, Wang Y-J. Chinese herbal medicine for chronic neck pain due to cervical degenerative disc disease . Cochrane Database of Systematic Reviews 2010, Issue 1 (submitted)

Negrini S, Minozzi S, Bettany-Saltikov J, Zaina F, Chockalingam N, Grivas TB, Kotwicki T, Maruyama T, Romano M, Vasilidis ES. Braces for idiopathic scoliosis in adolescents. Cochrane Database of Systematic Reviews 2010, Issue 1 (in press)

Choi BKL, Verbeek JH, Tam Wwai-San, Jiang JY. Exercises for prevention of recurrences of low-back pain. Cochrane Database of Systematic Reviews 2010, Issue 1 (in press)

Schaafsma F, Schonstein E, Whelan KM, Ulvestad E, Kenny DT, Verbeek JH. Physical conditioning programs for improving work outcomes in workers with back pain. Cochrane Database of Systematic Reviews 2010, Issue 1 (submitted; in press)

Gross A, Miller J, D'Sylva J, Burnie SJ, Goldsmith CH, Graham N, Haines T, Brunfort G, Hoving JL. Manipulation or Mobilisation for Neck Pain. Cochrane Database of Systematic Reviews 2010, Issue 1 (submitted; in press)

Nikolaidis I, Fouyas IP, Sandercock PAG, Statham PF. Surgery for cervical radiculopathy or myelopathy. Cochrane Database of Systematic Reviews 2010, Issue 1 (submitted; updated)

Researchers: Vicki Pennick (Institute Coordinator), Kelly An, Claire Bombardier, Rachel Couban, Andrea Furlan, Emma Irvin, Allison Kelly, Philip Kiff, Irina Schelkanova, Jill Hayden (Dalhousie University), Maurits Van Tulder (Vrije Universiteit, Amsterdam)

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

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

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness; Return to Work: Prevention & Management of Work Disability; Health Services: Effectiveness & Efficiency of Clinical Care

Publications:

Fregni F, Imamura M, Lew HL, Boggio P, Kaptchuk TJ, Chien HF, Riberto M, Hsing WT, Battistella LR, Furlan A. Challenges and recommendations for placebo controls in randomized trials in Physical and Rehabilitation Medicine: a report of the international placebo symposium working group. Forthcoming: Am J Phys Med Rehab [2009-102]

Furlan AD, Pennick V. Limitations of guidelines for low-back pain therapies. Nat Rev Rheumatol 2009; 5(9):473-474 [2009-100]

Furlan AD, Imamura M, Dryden T, Irvin E. Massage for Low Back Pain: An Updated Systematic Review Within the Framework of the Cochrane Back Review Group. Spine 2009; 34(16):1669–1684.

Furlan AD, Pennick V, Van Tulder MW, Bombardier C. and the Editorial Board of the Cochrane Back Review Group. 2009 updated method guidelines for systematic reviews in the Cochrane Back Review Group. Spine 2009; 34(18): 1929-1941 [2007-063]

Furlan AD, Schelkanova I, Pennick V, Conservative interventions for neck and back pain: A summary of the reviews published by the Cochrane Back Review Group. Submitted: Physiotherapy Canada [2009-066]

Presentations:

Bombardier C, Irvin E, Furlan A, Tomlinson G, van Tulder M. Systematic reviews workshop. 18-19 June 2009; Toronto, ON

Couban R. Cochrane Train-the-Trainer Workshop. 4 Nov 2009; Toronto: Ontario Public Health Librarians Association Annual Meeting.

Furlan AD. A systematic review of acupuncture for chronic low back pain. 12 Jun 2009; Saitama, Japan

Kuijpers T, Rubenstein S, Van Middlekoop M, Ostelo R, Verhagen A, Koes B, Van Tulder M. Pharmacological interventions for chronic non-specific low back pain: an overview of reviews. Oct 2009.

Pennick V, van Tulder M, Bombardier C. The Cochrane Back Review Group's role in translating research to practice. 11 Mar 2009; Halifax, NS: Wave to the Future: 7th Annual Canadian Cochrane Symposium.

Pennick V. Evidence-based management of back and neck pain: what works, what doesn't. Systematic reviews and the Cochrane Back Review Group. 22 May 2009; Partners in Workplace Health: OOHNA Annual Conference. Niagara-On-The-Lake, ON

Prictor M, Cracknell J, Pennick V, Thomas J. Results of the pilot mentoring programme for Managing Editors. Poster Presentation. October 2009.

Funding:

Grimshaw J, Bombardier C, Klassen T, McDonald J, Moher D, Pennick V. Knowledge synthesis and translation by the Cochrane Collaboration in Canada. CIHR: \$1,873,355 (\$840,000 administered at IWH) (2005-2010)

Evidence-Based Practice (0670)

Project Status: Ongoing

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

Objectives:

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

Methods: Systematic reviews – see Cochrane Back Group #440 for editorial process.

Results: Waseem Z, Boulias C, Gordon A, Ismail F, Sheean G, Furlan AD. Botulinum toxin for low-back pain. Cochrane Database of Systematic Reviews 2010, Issue 1 (in press).

Researchers: Andrea Furlan (Principal Investigator), Claire Bombardier, Emma Irvin, Vicki Pennick, Rhoda Reardon (College of Physicians and Surgeons)

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

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

Furlan and Irvin have been actively involved with the College of Physicians and Surgeons of Ontario in developing clinical practice guidelines of opioid use for chronic non-cancer pain. These guidelines will be disseminated by all Colleges in Canada to all primary care physicians and specialists dealing with pain. Based on the recommendations of this guideline, the WSIB will develop a Narcotic Initiative to be implemented in 2009.

Furlan has been involved with the Chalmers Institute in Ottawa to do a comprehensive review of CAM therapies (acupuncture, massage and spinal manipulation) for neck and low-back pain, looking at efficacy, adverse events and cost-effectiveness. These reviews will inform funding decisions at the NIH-NCCAM (National Centre for Complementary and Alternative Medicine).

Pennick is principal investigator of a systematic review of prevention and treatment of pelvic back pain during pregnancy.

Publications:

Furlan AD, Imamura M, Dryden T, Irvin E. Massage for Low Back Pain: An Updated Systematic Review Within the Framework of the Cochrane Back Review Group. *Spine* 2009; 34(16):1669–1684.

Funding:

Moher D, Furlan AD, Santaguida L, Gagnier J, Gross A, Ammendolia C, Cherkin D, Dryden T. Complementary and Alternative Therapies for Back Pain II. Agency for Healthcare Research and Quality (AHRQ) US\$249,905 at Chalmers Institute, Ottawa (Aug 2008–Aug 2009)

Back Guide/Ontario Occupational Health Nurses' Association Journal (0830)

Project Status: Ongoing

Introduction: The Institute has developed a number of evidence-based products in response to clinical stakeholders' requests for critiques of the research literature. *From the Research Frontier* is a regular feature of the Journal of the Ontario Occupational Health Nurses' Association (OOHNA), the official publication of the Association. Published three times a year, the column highlights the work of Institute researchers and colleagues that may be important to our occupational health stakeholders. The BackGuide™ is an educational web site for health-care providers who are involved with the management of low-back pain. Based on research conducted by the U.S. Agency for Health Care Policy and Research (AHCPR) and developed by the Institute in collaboration with the University of Calgary, it is designed to improve patient care and foster better use of valuable health-care resources. (this includes projects 830 and 345)

Objectives:

- Make the knowledge gained through high quality research both accessible and useful to our stakeholders.

Methods: Varies according to product, but generally involves a literature search, synthesis of the evidence and publication of a paper. BackGuide updates will involve updating the literature supporting the management of the clinical cases and possibly the development of another clinical case.

Results: Workshop:

Pennick V. Evidence-based management of back and neck pain: what works, what doesn't. Systematic reviews and the Cochrane Back Review Group. 22 May 2009; Partners in Workplace Health: OOHNA Annual Conference. Niagara-On-The-Lake, Canada.

Researchers: Vicki Pennick (Institute Coordinator), Claire Bombardier, Anita Dubey, Allison Kelly, Philip Kiff

Stakeholder Involvement: Clinical network members, clinical stakeholders and the general public: Stakeholder feedback, obtained through needs assessment and contacts made by our KTE associate and scientific personnel, will guide product development.

Potential Audiences and Significance: By developing and distributing evidence-based clinical products, we support professional excellence and improved quality of health care for workers.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability; Health Services: Effectiveness & Efficiency of Clinical Care.

Publications:

Pennick V. Evidence to inform practice: a synopsis of the evidence developed by the Cochrane Back Review Group on the management of neck pain. OOHNA Journal 2009; 28(2):13-18.

Pennick V. Evidence to inform practice: a synopsis of the evidence developed by the Cochrane Back Review Group on the management of back pain; OOHNA Journal 2009; 28(3).

An RCT of Bone Stimulators for Fracture Healing (2110)

Project Status: Ongoing

Introduction: Tibial fractures, the most common long bone fractures, are usually treated operatively. These injuries are associated with a substantial amount of time off work and delay in return to full function. Some surgeons prescribe low-intensity, pulsed ultrasound to speed healing. The results of animal trials and uncontrolled human trials have suggested that low intensity pulsed ultrasound (30 mW/cm²) may accelerate fracture healing. Putative mechanisms of action include a positive impact on signal transduction, gene expression, blood flow, tissue modeling and remodeling, and the mechanical attributes of the callus. Of the two small RCTs that directly addressed the effect of low-intensity, pulsed ultrasound on healing in operatively managed tibial fractures one suggested a benefit for the procedure, the other a trend in favor of control. Neither trial explored the effect of low-intensity, pulsed ultrasound on functional recovery from tibial fractures. The impact of ultrasound treatment on fracture healing thus remains uncertain.

Objectives:

- Our initial pilot project has confirmed our ability to recruit patients with tibial shaft fractures, established that our site investigators can adhere to trial protocol, and confirmed our ability to achieve close to 100% follow-up. We now propose to conduct a prospective, multi-centre, randomized, blinded, placebo-controlled trial to determine the effect of low-intensity pulsed ultrasound on the functional recovery from closed or open tibial shaft fractures, treated operatively, in skeletally mature adults of at least 18 years of age.
- To evaluate the impact of low-intensity, pulsed ultrasound, applied to operatively treated tibial shaft fractures, on functional status and time to return to normal activities.
- To assess time to radiographic healing of tibial fractures, rates of malunion and non-union of tibial fractures, and rates of secondary procedures (operative and non-operative).

Results: Worked on the trial protocol and compared the relative gains from joint administration of the SF-36 and SMFA to tibial fracture patients. Developed and validated the somatic pre-occupation and coping questionnaire among tibial fracture patients.

Researchers: Jason Busse (Principal Investigator), Mohit Bhandari, Gordon Guyatt (McMaster University), James Heckman, Kwok Leung, David Saunder, Emil Schmitsch, Paul Tornetta III

Stakeholder Involvement: The trial is co-funded by the Canadian Institutes of Health Research and Smith & Nephew, and supported by the CLARITY Methods Centre at McMaster University.

Potential Audiences and Significance: Tibial fractures are a common and costly injury - both in terms of direct and indirect (time lost at work) costs. If low-intensity pulsed ultrasound did produce clinically important reductions in time to recovery from tibial fractures, insurers and other payers, employers, clinicians and patients would be interested in these results. If this modality was not effective, the same parties would benefit from this knowledge in that low-intensity pulsed ultrasound is now commonly used to augment fracture healing.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness; Return to Work: Prevention & Management of Work Disability

Publication:

Busse JW, Bhandari M, Guyatt GH, Heels-Ansdell D, Mandel S, Sanders D, Schemitsch E, Swiontkowski M, Tornetta P, Wai E, Walter SD. Use of both short musculoskeletal function assessment questionnaire and short form-36 among tibial-fracture patients was redundant. *Journal of Clinical Epidemiology*. 2009;62(11):1210-17. [2009-030]

Return to Work Practices

The WSIB has identified improved RTW outcomes as a priority in reducing costs to the system. They articulate the need to fully support workplace parties in achieving more successful return to work outcomes and to reduce the costs of claims while respecting injured workers. Approximately 20% of disability episodes compensated by the WSIB involve duration disability longer than twelve weeks. There is some emerging evidence that the persistency of long duration disability episodes is increasing. Understanding the factors which may lead to or which may predict this long duration disability and poor return to work outcomes is a significant part of the IWH portfolio both in our observational and qualitative research studies described below. In this portfolio of work we are actively engaged with colleagues at CREIDO and with researchers across Canada and internationally.

2009 Quick Statistics

Completed projects (4)
Ongoing projects (3)
Papers published or in press (4)
Peer review papers submitted (0)
Reports to WSIB or other Prevention System Partners (0)
Presentations of results and stakeholder consultations (2)
External grants awarded (4)

Recurrence and Persistence of Work Absence: Understanding their Risk Factors and Long-term Impact on Workers' Health, Work Limitations, and Non-work Role Participation (0341)

Project Status: Completed

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

Objectives:

- Identify modifiable workplace, insurer, healthcare provider (HCP), and worker risk factors for recurrent and persistent work absence over 24 months post-injury.
- Describe the differences in, and identify the determinants of, the health status, work limitations, and role participation in parenting and care giving of injured workers over 24 months post-injury, associated with four RTW trajectories:
 - 1) Sustainable first RTW: No recurrence(s) of work absence with sustainable first RTW;
 - 2) Recurrence(s) with sustained RTW;
 - 3) Recurrence(s) without sustained RTW;
 - 4) Persistent work absence.
- Determine the impact of variations in definitions of recurrence of work absence (e.g., using administrative data vs. self-report) on rates of recurrences.
- Provide a comprehensive and long-term assessment of RTW trajectories by extending our cohort follow-up period up to 24 months.

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

The four RTW trajectories have been operationalized using both self-report of working status and duration of WSIB wage replacement benefits at 12 and 24 month post-injury. We have examined the following modifiable risk factors for recurrent and persistent work absence, using logistic regressions: Workplace-based disability management practices, organizational culture, job characteristics, healthcare provider communication with worker/workplace, insurer factors, worker psychological/physical factors. In addition, quality of life was compared across the four RTW trajectory groups using MANOVAs, as indexed by physical and mental health (SF-12), work limitations (WL-16), depressive symptoms (CES-D), and pain medication consumption.

Results: Main results are reported in the following papers listed below:

Franche R-L, Severin C, Hogg-Johnson S, Côté P, Vidmar M, Lee H. The impact of early workplace-based return-to-work strategies on work absence duration: A 6-month longitudinal study following an occupational musculoskeletal injury. *Journal of Occupational and Environmental Medicine* 2007; 49(9): 960-974.

Franche R-L, Corbière, M, Lee, H, Breslin, FC, Hepburn, CG. The Readiness for Return-To-Work (RRTW) scale: Development and validation of a self-report staging scale in lost-time claimants with musculoskeletal disorders. *Journal of Occupational Rehabilitation* 2007;17(3):450-472.

Bültmann U, Franche R-L, Hogg-Johnson S, Côté P, Lee H, Severin C, Vidmar M, Carnide N. Health status, work limitations, and return-to-work trajectories in injured workers with musculoskeletal disorders. *Quality of Life Research*. 2007; 16: 1167-1178.

Researchers: Renée-Louise Franche (Principal Investigator) (Occupational Health & Safety Agency for Healthcare, BC), Colette Severin (Institute Coordinator), Jane Brenneman Gibson, Curtis Breslin, Nancy Carnide, John Frank, Sheilah Hogg-Johnson, Hyunmi Lee, Cameron Mustard, Ivan Steenstra, Marjan Vidmar, Pierre Côté (CREIDO), C. Gail Hepburn (University of Lethbridge)

Stakeholder Involvement: WSIB staff have been involved in determining the main areas of research focus from the beginning of the project. They were also involved in the recruitment process of the study. WSIB has been involved from the beginning of this project in identifying objectives, participating in recruitment, and in knowledge exchange and transfer.

Potential Audiences and Significance: Current RTW interventions do not focus on preventing recurrence and persistent work absence. Our study will provide evidence to guide future RTW interventions, whether they are provided by WSIB or by other insurers/companies.

The outcomes of this study will be relevant to current and planned activities in return-to-work at WSIB. Specifically, the findings will strengthen WSIB case assessment ability, and assist in the design and selection of appropriate interventions. Furthermore, the study findings can be incorporated into WSIB's external education initiatives.

An important focus of our study is the assessment of work accommodation not merely as an "offer" but also a "process" and the consideration of its role in RTW trajectories. Our assessment incorporates both organizational and interpersonal aspects of the process, as well as type, timing, and process of the work.

Returning an injured worker to work following an occupational injury is the shared responsibility of the worker, employer, health-care provider, and the WSIB. This study will provide compelling evidence to support effective workplace-based disability management, integrated with insurer and health-care provider activities, to prevent recurrent and persistent work absence and facilitate sustainable RTW. We anticipate that the importance of involving all RTW parties will be supported, with the main locus of action being the workplace.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

Publications:

Steenstra I, Ibrahim S, Franche R-L, Hogg-Johnson S, Shaw WS, Pransky GS. Validation of a risk factor-based intervention study model using data from the Readiness for Return to Work Cohort Study. In press: *Journal of Occupational Rehabilitation* [2009-085]

Franche R-L, Lee H, Severin CN, Lee H, Hogg-Johnson S, Hepburn CG, Vidmar M, MacEachen E. Perceived justice of compensation process for return-to-work: development and validation of a scale. In press: *Journal Psychological Injury and the Law* [2008-032]

Franche R-L, Carnide N, Hogg-Johnson S, Côté P, Breslin FC, Bültmann U, Severin C. Course, diagnosis, and treatment of depressive symptomatology in workers following a workplace injury: A prospective cohort study. *Canadian Journal of Psychiatry* 2009; 54(8): 534-546 [2007-053]

Franche R-L, Severin CN, Hogg-Johnson S, Lee H, Côté P, Krause N. A multivariate analysis of factors associated with early offer and acceptance of a work accommodation following an occupational musculoskeletal injury. *Journal of Occupational and Environmental Medicine* 2009; 51(8): 969-983. [2008-038]

Early Intervention: Managing the Mental Health and Mental Disorders of Workers (1100)

Project Status: New

Introduction: Abundant international and national research now demonstrates that mental health conditions are prevalent among workers, and cause substantial work disability. However, there is little evidence on how to effectively manage this disability.

Objectives:

- To conduct an observational study that evaluates the impact of an existing innovative disability case management program for workers with a disabling mental health condition.
- To describe the program claimants to generate normative, benchmarking data on work disability due to mental health conditions.

Methods: Analyses will be based upon administrative LTD claims data provided by the NSPS LTD Trust for the years 1985 to 2008. Based upon the available data fields, the LTD file contains variables regarding the length of claim, claimant characteristics (gender, age in years, job tenure, pre-disability income), work characteristics (job description, employer type) clinical diagnosis (primary and secondary), and several variables describing the timing, level, and sources of disability payments. The dataset also contains variables describing date of work absence, date of the claim outcome, and type of outcome. All claims will be used for descriptive analyses and for those contrasting mental and behavioural claims with physical disorder claims.

For prediction analyses, the study population comprises all compensated LTD claimants with a primary diagnosis indicating a mental disorder. The primary outcome for these analyses will be duration of work absence, defined as interval between the date of claim termination (or censoring if the claim remains active) and the start date of work absence. In the descriptive part of the analysis, the survival curves of various subgroups of claimants with compensated LTD claims will be estimated using non-parametric (Kaplan-Meier) methods, and compared by gender, age group, and diagnostic grouping.

The entire sample will be randomly divided into training and testing samples. Covariate values are of primary interest, and not the shape of the hazard itself. For this reason a model that has a flexible underlying hazard function (a semi-parametric Cox proportional hazards model) will be estimated. The objective of the time series analysis will be to determine whether there is plausible evidence that the rates of new LTD cases decreased following implementation of the Short-term Illness (STI) program in August 2006. We will also employ an alternate approach -- developed by Hawkins and generalized by Andrews -- that explicitly searches for a structural break point in a time series, while remaining agnostic about the precise location of the breakpoint, if it exists.

If a structural break is found in proximity to the date the STI program was launched, this increases confidence in the conclusion that the STI led to a decrease in LTD claims. In this application we hypothesize that the functional form of the structural break is straightforward: the null hypothesis is that the STI did not change the probability of progression to LTD claim, and the alternate hypothesis holds that the probability of progression to LTD claim changed because of the STI.

Results: Liaised with data provider and defined data specifications for the project. Received a sample dataset and refined the data request based upon this. Received actual dataset, began data dictionary and defined derived variables. Conducted preliminary analyses, interpreted results. Completed all relevant analyses. Preliminary results were presented at a National Conference and the presentation of results to co-investigators and LTD Trust is deferred to Q2 of 2010.

Researchers: William Gnam (Principal Investigator) (Centre for Addiction and Mental Health), Ben Amick, Jason Busse, Donald Cole, Sheilah Hogg-Johnson

Stakeholder Involvement: Prime stakeholder is the Nova Scotia Public Service LTD Trust.

Potential Audiences and Significance: Information on successful intervention programs for workers disabled by mental health conditions has direct relevance to public and private LTD insurers, disability management companies, health care providers, large employers, and Workers Compensation Boards across Canada.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability; Health Services: Effectiveness & Efficiency of Clinical Care.

An Ethnographic Study of Process and Experience with Labour Market Re-entry (0247)

Project Status: Completed

Introduction: Although much research has been conducted on early and safe return to work, very little is known about situations when the return is not early or to the pre-injury employer. When workers cannot return to their original employment because of the nature of their injury or because their employers cannot (or will not) offer them continued work they become clients of the WSIB's Labour Market Re-Entry (LMR) Program. The LMR is program is described by WSIB as aiming to provide the worker with the skills, knowledge, and abilities needed to successfully gain employment.

Objectives:

- Gain an understanding of how LMR is carried out and of the particular challenges and opportunities in the LMR process.
- Study direct injured worker and provider experience of LMR.
- Examine patterns of practice and behaviour.
- Locate experiences within broader contexts of regional differences (access to education, employment and healthcare) as well as contractual and practical aspects of LMR provider integration within the WSIB system.
- Identify areas of possibility (and concern) for the re-integration of injured workers to the workforce.

Methods: Using a sociological approach which examines patterns of practice and behaviour, we will study direct injured worker and provider experience of LMR. We will locate these experiences within their broader contexts of regional differences (access to education, employment and healthcare) as well as contractual and practical aspects of LMR provider integration within the WSIB system. In doing so, we will identify areas of possibility (and concern) for the re-integration of injured workers to the workforce.

Results: The LMR study found a program in distress. In all, in-depth interviews and focus groups were held with 72 injured workers, employers, LMR providers, education providers, WSIB adjudicators, WSIB LMR specialists, and worker representatives. Document analysis was also conducted with publicly available WSIB policy and process documents as well as LMR and education provider documents. Data were analysed according to procedures of grounded theory and discourse analysis. This involved identifying key and repeated concepts and conceptualizing them into broad themes. Data were also analysed according to the participant's context and role in LMR, including critical analysis of rationales for how things work as they do.

All participants described the LMR program as not working well, relating to four themes: health, choice, cost and quality. Workers, LMR providers and educators referred often to the problems of pain, surgeries, mental health, and medication use that impeded workers' ability to succeed. WSIB staff made decisions about LMR plans and worker compliance but were several times removed from the workers' situations, relying on reports from LMR providers to whom this program is subcontracted. Providers wished that workers would 'buy in' to LMR more often, while workers described situations of having no meaningful choice about their work life direction. Employers were concerned about high costs of LMR and wished for more accountability from WSIB about how funds are spent on LMR and the effectiveness of this spending. The poor quality of programs at private upgrading schools was raised repeatedly by workers and also mentioned by WSIB staff, raising questions about how they prepare workers for the labour market. Some of these problems are linked to LMR policy and others to subcontracting arrangements and what indicators are measured and not measured by WSIB. The study results in recommendations for management of worker health during LMR, worker choice during retraining, cost monitoring, and quality of education programs.

Researchers: Ellen MacEachen (Principal Investigator), Agnieszka Kosny, Cynthia Neilson, Sue Ferrier (Contract), Renée-Louise Franche (Occupational Health & Safety Agency for Healthcare, BC), Katherine Lippel (Université du Quebec a Montreal (UQAM))

Potential Audiences and Significance: Our findings will provide direct evidence and knowledge about how the LMR system works at the level of day-to-day practice. This study is expected to help WSIB policy makers with decision-making about LMR process, and identify best (and worst) practices in the re-integration of workers to the labour force. The study will have implications for injured workers, unions, employers (who are financially affected when former employees are on LMR), compensation system parties and private providers who are interested in the provision of efficient and effective service, and researchers interested in the broad RTW process.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

Presentation:

MacEachen E, Kosny A, Ferrier S, Neilson C, Lippel K, Franche R-L. Understanding challenges in the labour market re-entry. 5-8 Nov 2009; Puerto Rico: Work, Stress and Health: Global Concerns and Approaches.

Funding:

MacEachen E, Kosny A, Lippel K, Franche R-L. An ethnographic study of process and experience with labour market re-entry. WSIB-RAC: \$140,605 (Nov 2007-Oct 2009)

What Workplace Characteristics have an Impact on an Injured Workers Return to Work (0174)

Project Status: Completed

Introduction: The roots of epidemiology involve studying a disease with regards to time, person and place. Krieger (2003) stated "concept of place has been lost in modern epidemiological studies". The work "place" has an impact on the individual's behavior. In the literature, there have been few studies which have examined workplace factors which are associated with return to work. A systematic review by Steenstra et al. (2006) found that previous studies examined the workplace factors from the perspective of the injured worker. The organizational factors of the workplace are generally ignored in prognostic modeling. We have not found a questionnaire in the literature which adequately measures these factors. We propose to conduct focus groups with supervisors, union representatives, injured workers, return-to-work coordinators, WSIB ergonomists and mediators to collect their opinions on important workplace factors. From the grounded theory analysis of the focus group data, we propose to derive a listing of workplace facilitators and barriers which will be used to develop a workplace questionnaire. The workplace questionnaire could be administered to the injured worker and to his/her supervisor in order to aid in the return-to-work process through effective communications of their concerns. It seems furthermore that the importance of certain factors change over time. We will ask workers with experience in the disability process what factors are important and if and or how the importance changes over time. Until now the focus on prognosis of return to work has been on barriers for return to work, in this study we will explicitly ask about facilitators for return to work, since they might give a better direction for intervention.

Objectives:

- This study will try to identify the barriers and facilitators for return to work in a group of hospital workers that have experienced sick leave in the last year or are currently experiencing sick leave.

Methods: The study will use focus groups to obtain the necessary information.

Results: Focus group sessions were held with hospital workers. Findings were summarized into a final report.

Researchers: Eleanor Boyle (Principal Investigator) (CREIDO), Ivan Steenstra (Institute Coordinator), Dorcas Beaton, Sheilah Hogg-Johnson

Stakeholder Involvement: University Health Network, Occupational Health and Safety Department, previously injured workers at UHN have taken part in focus groups

Potential Audiences and Significance: WSIB, employees and workers can learn about the factors that delay and improve return to work.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

Funding:

Boyle E, Steenstra I, Beaton DE. Workplace characteristics impact on RTW. CREIDO: \$29,866 at CREIDO (2008-2009)

Exploring Multimorbidity: Identifying the Most Prevalent Persistent Health Conditions, their Co-occurrence, and their Relationship with Work Absence and Work Limitations in Healthcare Workers (0134)

Project Status: Ongoing

Introduction: Research in work disability prevention has primarily focused on musculoskeletal (MSK) disorders, and has seldom considered other health conditions. In the context of MSK disorders, the impact of co-morbid conditions is also seldom considered, and most often only to control for them statistically. Given that more than half of North Americans have a persistent (“chronic”) health condition, and that persistent health conditions are closely associated with both work absence and work limitations (“presenteeism”), it is important to know the prevalence and co-occurrence of these conditions, and to understand the factors which determine their work limiting effects.

There is currently some information on prevalence and work limiting impact of health conditions in workers, but very little on multimorbidity and its work limiting effects. We will examine the co-occurrence, and relationship with both work absence and work limitations, of the most prevalent persistent health conditions, using two databases – Statistics Canada’s 2005 National Survey of the Work and Health of Nurses (NSWHN) and the British Columbia Linked Health Database (BCLHD).

Objectives:

- Assess the prevalence and co-occurrence of persistent health conditions in B.C. healthcare workers (from administrative 10-year retrospective cohort data) and Canadian nurses (from cross-sectional survey data).
- Assess how the most prevalent health conditions and types of co-occurring conditions are associated with a) work absence in B.C. healthcare workers; and b) work absence and work limitations in Canadian nurses.
- Compare the findings obtained using administrative data from the British Columbia Linked Health Database (BCLHD) with self-report survey data and the feasibility of the two different methods.

Methods: Self-reported data will be obtained from Statistics Canada’s 2005 National Survey of the Work and Health of Nurses (NSWHN). Analyses are focused on four persistent and common health conditions: low back pain (LBP), migraine, arthritis, and depression. We will examine their co-occurrence to meet Objective 1. To meet Objective 2, we will examine how individual conditions, as well as different types of multimorbidity may be associated with health-related work limitations and health-related work absences due to physical health, mental health, or accident/injury (work-related and non work-related). In addition, a research database will be constructed that links, at the individual-level, an external registry of workers in the acute care sector in B.C. with health data in the B.C. Linked Health Database (BCLHD), including workers’ compensation claims data. Additional linkages will be made with long-term disability and extended health benefits via the Health Benefit Trust (HBT), the provincial provider of health benefits for the BC health care industry and a research partner organization. Data is currently available for the period 1991 to 2001 for a population of approximately 100,000 workers. As with the NSWHN, prevalence and multimorbidity of the health conditions will be estimated to meet Objective 1. Work limiting impact of the most prevalent persistent health conditions will be estimated using the long term disability (LTD) claims data and workers’ compensation data only, as data on short-term disability (STD) is unavailable. The research database includes demographic, work characteristics, and organizational factors for inclusion in multivariate analyses to meet Objective 2. Objective 3 will be met by comparing findings from the two methodologies (self-report and administrative data) for the four health conditions.

Results: Results of this study have provided preliminary information regarding the presence and coding of comorbidities in two important databases.

Researchers: Renée-Louise Franche (Principal Investigator) (Occupational Health & Safety Agency for Healthcare, BC), Selahadin Ibrahim, Peter Smith, Nancy Carnide, Mieke Koehoorn (University of British Columbia)

Potential Audiences and Significance: The proposed project has brought together researchers from three institutions, representing the beginning of an important network of researchers and stakeholders. This network, along with other researchers from CREIDO and IWH, received WSIB-RAC funding in 2008 to further build upon the CREIDO-funded study, whereby the NSWHN data will be further analyzed to better understand the role of multimorbidity, pain, and depression, in conjunction with workplace factors, in work disability.

Presentation:

Franché R-L, Smith PM, Ibrahim S, Corbett B, Murray E, Carnide N, Guzmán J, Mustard C, Koehoorn M, Côté P, Gibson J. Multi-morbidity, depression, pain, organizational and job-level factors: potential risk factors for prolonged work absence in Canadian nurses. 14-15 Sep 2009; Kelowna, British Columbia: Workplace Health, Safety & Wellness Conference, B.C. Healthcare Collaborative Group. (Project 134)

Funding:

Franché R-L, Guzmán J, Koehoorn M. Exploring multi-morbidity: Identifying the most prevalent persistent health conditions, their co-occurrence, and their relationship with work absence and work limitations in healthcare workers. CREIDO: \$10,000 (2008-2009)

Franché R-L, Mustard CA, Koehoorn M, Smith P, Côté P, Ibrahim S, Guzmán J, Carnide N. Multi-morbidity, depression and pain as risk factors for prolonged work absence and significant work limitations in Canadian nurses. WSIB RAC: \$120,638 at University of B.C. (2008-2010)

Environmental Scan - Labour Market Reentry (0266)

Project Status: Completed

Introduction: Many work disability schemes around the world provide specialized services for disabled workers who are unable to return to their pre-injury employer or their pre-injury occupation. In this project, Institute staff prepared an inventory of policies and practices in 8-12 work disability insurance schemes related to the provision of vocational rehabilitation services for workers who are unable to return to their pre-injury employer or their pre-injury occupation. This environmental scan incorporated information obtained from a review of program and policy documents in each jurisdiction, supplemented by one to three interviews with key informants who have detailed knowledge of policies and practices in their jurisdiction. Jurisdictions invited to participate in the review included New Zealand (Accident Compensation Corporation), Australia (WorkCover, New South Wales, WorkCover Victoria), USA (Washington State, Ohio State), Germany (DGUV), Sweden (AFA Work Injury Insurance), Finland, Switzerland (SUVA), Netherlands and Canada (Worksafe, CSST)

Objectives:

- To summarize practices in 8-12 work disability insurance schemes related to vocational rehabilitation programs and services provided to injured workers who cannot return to their pre-injury employer or their pre-injury occupation.

Results: Complete specifications for the environmental scan, specifying specific information for each jurisdiction. Initiated collection and verification of case study information. Report completed.

Researchers: Cameron Mustard (Principal Investigator), Ben Amick, Jason Busse, Ellen MacEachen, Ron Saunders, Louise Logan (Consultant)

Stakeholder Involvement: Staff members of the Prevention Division of the WSIB (Canada) and the Accident Compensation Corporation (New Zealand) contributed to the refinement of the questions to be addressed in the environmental scan.

Potential Audiences and Significance: Many work disability insurance schemes around the world will be interested in the results of this environmental scan. The results of the environmental scan will contribute to improved understanding of vocational rehabilitation practices in the developed economies and will be important to workplace parties, government regulatory agencies and disability insurance schemes.

Links to WSIB Policy & Program Priorities: The environmental scan was requested by the Program Division, WSIB.

Compensation and Benefits

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

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

A third area of study follows the Institute's long standing commitment to conduct research that informs compensation policy and practice that responds to the needs of seriously injured workers and other particular groups of workers. One of the key objectives in this area is to provide evidence based research that responds to the knowledge gaps in understanding the consequences of work injury and to understand the impact of legislation, policies and programs on these consequences within different groups of workers.

2009 Quick Statistics

Completed projects (4)
Ongoing projects (8)
Papers published or in press (1)
Peer review papers submitted (0)
Reports to WSIB or other Prevention System Partners (0)
Presentations of results and stakeholder consultations (7)
External grants awarded (10)

WSIB Lost-time Injuries and Income Sources Post-injury (0406)

Project Status: Completed

Introduction: Better understanding of the adequacy and equity of income-loss compensation for individuals sustaining permanent impairment due to a workplace accident is needed. This project focused on two key concerns. First, how successful are injured workers in re-entering the labour force and recouping at least a fraction of their earnings, and what characteristics determine success? Second, does workers' compensation adequately and equitably replace lost earnings? The first phase of the project focused on addressing these two issues in Ontario. In the second phase we investigated cross-jurisdictional differences in program adequacy and equity for a similar population using data from British Columbia and several U.S. jurisdictions. In the third phase, we investigated the post-accident earnings experiences of individuals sustaining a temporary work disability arising from a work-related accident. The Institute collaborated with the WSIB and workers' compensation insurers and Statistics Canada to secure the necessary data for these studies.

Objectives:

- Phase One: Permanent Impairment in Ontario
- To determine the degree of and factors influencing labour-market success and the adequacy and equity of workers' compensation income benefits under two Ontario programs.
- To describe the changes in individual and family income sources before and after permanent impairment and family formation/dissolution patterns after permanent impairment.
- Phase Two: Permanent Impairment Benefits in Additional Jurisdictions
- To compare adequacy and equity of workers' compensation program across-jurisdictions.
- Phase Three: Temporary Work Disability in Ontario
- To describe the long-term labour-market earnings of these individuals.

Methods: There are two parts to this project and the principal data source for both Part 1 and 2 is the Longitudinal Administrative Databank (LAD). Part 1 is focused on long-term disability beneficiaries, and Part 2 on short-term disability beneficiaries. For the descriptive analyses, a control group for each event observation was identified through a matching based on characteristics such as age, gender, labour-market earnings over the four years prior to accident, and region of residence at the time of accident. The descriptive analysis consisted of an evaluation of the adequacy and equity of wage replacement rates offered by the two long-term disability programs under analysis. For the analytical component, post-accident labour-market earnings were modeled using a fixed-effects, difference-in-differences regression analysis framework. Other related analyses were also undertaken to investigate the social and economic costs of work injury based on the matched event-control and regression frameworks.

Results: The key findings from Part 1 are as follows: 1) labour-market earnings post accident are very polarized even within age, gender, impairment, region and FEL strata-- few claimants recover earnings in the mid-range (25-75% of control counterpart earnings); 2) a comparison of three long-term disability programs suggests that a bifurcated program offers the most adequate and equitable benefits; and 3) a dual award program consisting of a future economic loss benefit and an impairment based award for pain suffering and loss of enjoyment of life is marginally more adequate and equitable than a single award program based on the degree of permanent impairment.

The findings from Part 2—that short-term disability from a work accident can have long-term implications for labour-market earnings—brings to the forefront, the need to better understand what factors might be driving this phenomenon. Two factors that might explain it are the erosion of skills and stigma associated with being a workers' compensation claimant.

Our finding from Part 3 of this report—that workers with a permanent impairment have an elevated risk of marital break up—has implications for future investigations into the broader social consequences of work accidents. In particular, it is evident that the influences of a work accident can extend into diverse settings including homes and communities.

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

Stakeholder Involvement: Key stakeholder involvement was with WSIB policy-makers and some of the researchers from the WCRG in the U.S. (e.g., Les Boden); Linda Jolley (WSIB) and Steve Mantis (Canadian Injured Workers Alliance) since inception. A working group of senior WSIB members was formed in 2002: Judy Geary, John Slinger, Richard Allingham, Joe Sgro, and Robert Dean. Dr. Robert Reville (RAND) has also provided helpful comments at several points during the project.

Potential Audiences and Significance: This project is of interest to both workers and workers' compensation insurance providers. Ontario WSIB policy-makers are interested in the comparison of the two benefit programs. The cross-jurisdictional comparisons will be of interest to insurance providers and workers across North America. The U.S. National Institute of Occupational Safety & Health is partially funding this research.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

Presentations:

Tompa E, Scott-Marshall H, de Oliveira C, Fang M. Does permanent impairment from a workplace injury increase the risk of marital break-up? 5-8 Nov 2009; San Juan, Puerto Rico: American Psychological Association (APA) Work, Stress, and Health Conference.

Tompa E, Scott-Marshall H, de Oliveira C, Fang M. Marital dissolution and economic wellbeing: a closer look at the role of workplace injuries. 13 Jan 2009; Toronto, ON: RAACWI Team Meeting [2006-061]

Tompa E, Scott-Marshall H, Fang M, de Oliveira C. Does permanent impairment from a workplace accident increase the risk of marital break-up? 22 May 2009; Toronto, ON: RAACWI Symposium on the Consequences of Work Injury 2009

Adequacy and Equity of B.C. Workers' Compensation Benefits (0418)

Project Status: Ongoing

Introduction: Prior to June 30, 2002, WorkSafe BC had a bifurcated award system for compensating long-term work disability arising from work-related accidents. Two methods of benefits calculation were considered with each claim—a loss-of-function/permanent-impairment benefit and a loss-of-earning-capacity benefit. A worker was eligible for whichever benefit was higher. Bill 49, effective June 30, 2002, introduced a single award system for long-term work disability benefits based on loss-of-function.

There are concerns that the change in benefits policy will have an adverse impact on some beneficiaries, particularly those who would have received a loss-of-earning-capacity benefit under the old system. Other changes to the short- and long-term disability benefit programs may also have an adverse impact on the adequacy and equity of wage-replacement benefits received by injured workers. These include a change of the benefit formula from 75% pre-tax to 90% after tax of pre-injury earnings, changes to cost-of-living adjustment, integration of CPP disability benefit into the benefits formula, and changes to benefits received after age 65.

Objectives:

- The purpose of the proposed study is to investigate the impact of changes in benefits calculation on the financial circumstances of workers' compensation beneficiaries. It will investigate the adequacy and equity of wage-replacement benefits provided by the pre- and post-Bill 49 benefit programs.
- Following is a list of research issues to be investigated: 1) earnings and earnings losses; 2) lost earnings replacement; 3) differences or earnings losses between women and men; 4) regional differences in earnings losses; 5) principal income sources post accident; 6) marital formation/dissolution post accident.

Methods: We plan to use a sample of long-term disability claimants from the pre-June 2002 claimant cohort to undertake a counterfactual analysis, i.e., the benefits the cohort would have received if they were to receive benefits under Bill 49. The sample frame will be claimants who had a work accident between 1990 and 1994. This frame will be linked to the Longitudinal Administrative Databank (LAD), which is a 20% random sample of Canadian tax filers.

Actual benefits received by claimants will be linked along with an identifier indicating the type of benefits received (i.e., loss-of-function or loss-of-earning-capacity benefit). We would expect to identify approximately 18-19% of this frame in the LAD, based on previous work. For each claimant identified in the LAD we will estimate on a yearly basis: 1) the after-tax labour-market earnings before and after the accident year, 2) the pre- and post-Bill 49 benefits, 3) the earnings recovery rate post-accident, and 4) the lost wage-replacement rate with pre- and post-Bill 49 benefits.

Earnings recovery and wage-replacement rates will be calculated in two ways: 1) a comparison with pre-injury, after-tax earnings, and 2) a comparison with a sample of uninjured counterparts that have similar socio-demographic characteristics and earnings profiles prior to the accident year. Linkage and analyses for short-term disability claimants will be based on frames from calendar years 1996, 1998, 2000, and 2002.

Results: Overall, the move to Bill 49 has resulted in reduced replacement rates for long-term disability claimants. The pre-Bill 49 policy had adequate and equitable individual-level earnings replacement rates. Most strata had rates above 100%, suggesting that benefits were more than adequate. Only the two oldest age brackets (35-49 and 50-59) had rates less than 100%, with the rate notably lower for the 50-59 age bracket (83%). With the introduction of Bill 49, this stratum appeared to be a particularly vulnerable group. Its rate dropped to 78% with the three key changes introduced with Bill 49.

Researchers: Emile Tompa (Principal Investigator), Cynthia Chen, Jacob Etches, Miao Fang

Stakeholder Involvement: A key knowledge transfer and exchange activity for this study will be frequent consultations with WorkSafeBC policymakers and worker representatives over the course of the project.

Ongoing consultation over the duration of the research will ensure that the analyses undertaken and results obtained are framed appropriately and address all the relevant issues. Two meetings with BC stakeholders have been planned for during the two-years of funding.

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

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

Examining Explanations for the Increasing Frequency of Long Duration Compensation Claims (0327)

Project Status: Ongoing

Introduction: There has been growing concern among the Ontario prevention partners about the dramatic increase in days on benefits among Ontario WSIB claimants, including the increasing numbers of claims being locked in at the six year time point.

Objectives:

- To identify markers of claims persistence under two different sets of legislation - Bill 162 and Bill 99.

Methods: A core data file of cohorts of claimants from 1990 to 2001 inclusive will be created to be used by all members of the working group for exploration. These cohorts will be identified using an agreed upon set of inclusion/exclusion criteria for these cohorts. All working groups will use the core data file when extracting different measures.

Denominators to be considered for the first hypothesis include all claimants and the entire labour force. For case mix, we will consider age, sex, occupation, industry, injury descriptors, pre-injury wage, etc. Other markers related to the change from Bill 162 to Bill 99 will be extracted and may include: 12 consecutive months on TT/LOE benefits, changing status from NLT to LT, claim re-opens, health care utilization, VR/LMR activity, locked-in status, FEL and NEL awards. Time trends for various markers will be explored in population of all claimants in cohort and in population of those locking in.

Results: Locked in status shows a u-shaped pattern with time, with highest lock-in rates in the early 1990s, a decrease to 1997, and then an increase up to 2001 where rates are similar to early nineties. Cumulative duration of benefit receipt shows similar pattern to lock-in in the tail of it's distribution, but in the other parts of the distribution, the durations have shown decreases over time controlling for baseline attributes of the worker, the injury and the workplace do not account for the year to year variability we see in these two outcomes.

Researchers: Sheilah Hogg-Johnson (Principal Investigator), Ben Amick, Cynthia Chen, Arold Davilmar, Andrea Furlan, Hyunmi Lee, David Tolusso, Emile Tompa, Marjan Vidmar

Stakeholder Involvement: We hope to continue to work with the WSIB working group on claims persistence under the guidance of Judy Geary.

Potential Audiences and Significance: The WSIB is very interested in understanding the reasons for the recent increase in claims persistence.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

Funding:

Hogg-Johnson S, Tompa E, Amick B. The problem of claims persistency – What is driving increases in persistent and locked-in claims? WSIB-RAC: \$182,583 (2008-2010)

Immigrant Workers' Experience after Work-related Injury and Illness (0273)

Project Status: Ongoing

Introduction: Immigrants are very important to the Canadian labour force. Between 1991 and 1996 immigrant workers accounted for 70% of all labour force growth and are expected to account for almost all net labour force growth by 2011. Immigrants make up 27% of Ontario's and 44% of Toronto's population. Immigrants, particularly visible minorities, tend to be concentrated in precarious, low waged jobs (processing, services, manufacturing) and many hold jobs incommensurate with their education and experience. Immigrant workers may have problems getting their qualifications recognized and although most new immigrants have competency in English, they may not be fully fluent. In order to support dependents, sponsor family members or send financial aid to their country of origin, new immigrants may keep jobs even when faced with poor working conditions or injury.

Those workers with high job insecurity, poor language skills, and a lack of familiarity with Canadian social programs may face particular challenges when injured at work. They may fear reporting an injury if they think doing so will jeopardize their job; they may not know their rights; and they may have trouble accessing, understanding and navigating the compensation system. While other research has investigated risks faced by immigrant workers, little is known about their experiences post-injury, including how they manage, cope and access workplace support, workers' compensation and health care systems.

Objectives:

- The purpose of this study is to examine the experiences of injured immigrant workers in Toronto – a city with the highest level of immigration in Canada. The study will examine workers' experiences as they navigate the workers' compensation system, as well as, their knowledge of and willingness to invoke workplace rights after injury. This study will provide important information about the experiences of a group of workers that represent an important and growing segment of our labour force. We hope that the study can speak to the ways in which workplace practices, health care services, and compensation policies can best serve these workers.

Methods: This study will involve in-depth interviews with 30 injured immigrant workers and 10 service providers. We will first interview service providers (worker advocates, health care providers, settlement counselors, etc.) who can speak to key issues facing immigrant workers, challenges encountered after injury and potential systemic problems and barriers. Next, working closely with worker groups, multicultural organizations, and health care providers, we will recruit two groups of injured immigrant workers – those who have not filed a claim and those who have experience with the compensation system.

In our analysis we will pay special attention to how education, ethnicity, gender, age and language-knowledge shape workers' experiences and trajectories.

Researchers: Agnieszka Kosny (Principal Investigator), Ellen MacEachen, Peter Smith

Stakeholder Involvement: Basil Boolis, Injured Worker Representative, Bright Lights Group Injured Workers Consultants; Brian Gibson, LAMP Community Health Centre; Carl Kaufman, Toronto Workers' Health and Safety Legal Clinic; Constanza Duran, Community Legal Worker, Injured Worker Consultants; Gail Lush, Communications Coordinator, National Network on the Environments and Women's Health, Institute for Health Research, York University; Luise Mitschele, WSIB; Marion Endicott, Injured Worker Consultants; Orlando Buonastella, Injured Worker Consultants; Rebecca Lok, Community Legal Worker, Injured Worker Consultants.

Potential Audiences and Significance: The study research team is well-connected to a diverse range of research groups and stakeholders. Drs. Kosny and MacEachen are part of a Research Action Alliance on the Consequences of Work Injury which brings together academic and community researchers studying compensation systems and the effects of injury on workers. Results will be shared with this group and their KTE activities will include information about this study. Dr. Shields is the Co-Director of the Centre of Excellence on the Study of Immigrant and Settlement, one of five such centres across Canada. Through

him, our study results will be disseminated to a network of researchers and policy makers working in the area of immigration and settlement services. Results will be presented at conferences.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability; Health Services: Effectiveness & Efficiency of Clinical Care

Funding:

Kosny A, MacEachen E, Smith P, Shields J. Immigrant workers' experiences after work-related injury and illness. WSIB RAC: \$164,971 (Dec 2007-Nov 2009)

RAACWI - Compensation and Consequences of Work Injury (0428)

Project Status: Ongoing

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

Objectives:

- Undertake the five-year program supported by a Social Sciences and Humanities Research Council of Canada (SSHRC) grant.
- To conduct innovative, community-based research that responds to knowledge gaps in understanding the consequences of work injury and the impact of legislation, policies, programs and practices on these consequences.
- To increase research capacity in the social and health sciences on occupational health and safety and workers' compensation through training and mentoring of new researchers.
- To build strong community-researcher links in the course of undertaking the research.
- To encourage evidence-based policy decision making in the workers' compensation arena through ongoing linkage and exchange with key stakeholders.
- To equip injured workers and their representatives with the skills to continue the involvement in research and the dissemination of evidence building sustainable representation of workers' needs in the development of legislation, policies and programs.

Methods: The Alliance research project has been divided into four themes. The first theme examines the broader disability compensation system and its ability to provide a social safety net. The research will examine the current system's policies and regulations, and will analyse the gap between the ideals put forward in this documentation and the real experience of injured and ill workers. This theme will also be concerned with future needs in legislation and policy.

Results: The Stakeholder Symposium was successfully executed in June 2009. Several Blue Sky meetings on stigma and RTW were held with the WSIB. The health and economic well-being survey data collection was completed and analysis begun. A number of other research project were completed or are near completion. Several other KTE activities were executed, including two e-newsletters and two History Bulletins. Several capacity building activities completed, including speakers school and community forums.

Researchers: Emile Tompa (Principal Investigator), Ellen MacEachen, Sara Morassaei, Cindy Moser, Cynthia Neilson, Peri Ballantyne (Trent University), Claire De Oliveira, Alice De Wolf (Independent Consultant), Marion Endicott (Injured Workers' Consultant), Renné-Louise Franche (Occupational Health & Safety Agency for Healthcare, BC), Alina Gildiner (McMaster University), Jaime Guzmán (Occupational Health & Safety Agency for Healthcare, BC), Bonnie Kirsh (University of Toronto), Katherine Lippel (Université du Québec a Montréal (UQAM)), Steve Mantis (Ontario Network for Injured Workers Groups), Fergal O'Hagen, Sabrina Puccini (Injured Workers' Consultants/Bright Lights), Sharon Dale Stone (Lakehead University), Robert Storey (McMaster University), Pat Vinneau (Injured Workers' Consultants/Bright Lights)

Stakeholder Involvement: We began a dialogue with policy-makers at the WSIB in 2006, and this has continued. The research program was developed in conjunction with the community of injured workers and their representatives. The lead partner organizations are McMaster University, IWH and the Bancroft Institute. There are several other university and community partners and supporters.

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

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

Presentation:

Tompa E, Mantis S. Academic Leads. RAACWI Symposium on the Consequences of Work Injury 2009, Toronto, Ontario. May 22, 2009.

Funding:

Tompa E, Endicott M, de Wolff A, Franche R-L, Guzmán J, MacEachen E, Stone SD, Gildiner A, Storey R, Lippel K, Ballentyne P, Eakin J, Kirsh B, Tucker E. CURA: Workers' compensation and the consequences of work injury. SSHRC: \$997,322 at McMaster University (2006-2010)

Groundwork for an Injured Worker and Mental Health Intervention Study (0207)

Project Status: Completed

Introduction: We will conduct a qualitative study of systemic pathways to mental health problems among injured workers. Our earlier analyses identified complex causal connections between injured worker mental health problems and three interrelated issues: chronic pain, medication use and coverage, and early return to work policy. We will conduct in-depth interviews with expert informants in order to solidify our understanding of particular mechanisms linking work injury and health and to plan an intervention study.

Objectives:

- The objectives of this project are to:
- Produce a detailed model of systemic pathways to mental illness among injured workers.
- Explore particular complex causal connections between systemic determinants and individual outcomes that were identified in an earlier analysis.
- Identify the components of these pathways to mental health problems that are amenable to intervention.

Methods: In-depth interviews were conducted with a focused group of 11 health care providers who have direct experience with injured workers and expertise in managing mental health and medication problems. These included psychologists, a psychiatrist, occupational health physicians, a family physician, a physiatrist, an occupational therapist and a physiotherapist. Interviews were audio-recorded and transcribed verbatim. Codes were applied to text according to set themes (e.g. mental health problems, medication problems) and also analytic themes emerging during data collection (e.g. timing, sequence).

Results: The findings of this study are of value to health practitioners because they point to the way that professionals' location in the RTW process shapes their understanding of the complex causal connections between work injury and mental health or medication use problems. Results are compared and contrasted with those in the Complex Claims study (Project 244). The results indicate that health care providers were sensitive to the range of problems faced by injured workers from the vantage point of a biopsychosocial model that considers a broad range of personal, social, psychological and environmental factors. However, they have a limited experience of the pathways of injured workers before they enter the health provider's care--such as RTW, employment and compensation processes as well as who decided to send the worker to them for care and how that decision was made. Prevention initiatives aimed at reducing worker disability and time away from work might be assisted by HCPs who are provided with education about process-related determinants of disability problems.

Researchers: Ellen MacEachen (Principal Investigator), Julie Hamer, Cynthia Neilson, Diana Pugliese, Renée-Louise Franche (Occupational Health & Safety Agency for Healthcare, BC)

Stakeholder Involvement: The IW&MH study has already received confirmation of support from the Partners listed below.

Dr. Leslie Kiraly, Psychiatrist, University of Toronto Dept. of Psychiatry, and East Toronto Health Centre.
Andrea Duncan, WSIB (on parental leave, replacement not yet identified)

Pat Vinneau, Injured worker and community member, Research Action Alliance on Work Injury (CURA study)

Art Bourre, Injured Worker Peer Helper, Leader, Dryden & District Injured Worker's Support Group
Toronto Resource Centre

Linda Wood, Injured Worker Peer Helper, Leader, Injured Worker Support Network of Kingston & Area
Phil Biggins, Leader, Greater Toronto Area Injured Worker Resource Centre

Potential Audiences and Significance: WSIB prevention; injured worker communities; health care providers

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

Presentations:

MacEachen E, Chambers L, Kosny A, Ferrier S. "If you don't pick up, you're cut off": Pain and medication use during return to work. 17 Jun 2009; Toronto, ON: Centre for Addiction and Mental Health/University of Toronto Seminar Series.

MacEachen E, Chambers L, Kosny A. Can early return to work produce medication overuse problems? 28-30 Oct 2009; Toronto, ON: 4th Annual Canadian Congress for Research on Mental Health and Addiction in the Workplace.

Funding:

MacEachen E, Franche R-L. Groundwork for an injured worker and mental health intervention study. CREIDO: \$9,573 (2008-2009)

An Ethnographic Study of Injured Workers' Complex Claims (0244)

Project Status: Completed

Introduction: Preliminary findings from a study of Ontario's Injured Workers Outreach Services (IWOS) indicate that workers who join these injured worker support groups have very complex and unresolved compensation situations. As such, they represent the segment of WSIB clients who pose the greatest proportional costs to the system. These workers have experienced difficulties with compensation procedures and requirements which have led to an impasse with their claims. For example they may be "cut off" from compensation payments or they may be engaged in unsuccessful labour market re-entry training. Further research on the experiences and situations of this group of workers is expected to identify problematic processes and procedures that workers encounter as they pass through the compensation system. By identifying these areas, it is expected that the results of this study can aid policy-makers and injured worker groups by pointing out ways to improve the claims experience of workers who spend a disproportionate period of time on benefits.

Objectives:

- Complete data analysis.
- Develop a model of injured workers' experiences with the health-care and compensation systems.
- Disseminate findings at academic conferences, to injured worker groups, and to WSIB.
- Submit paper for publication.

Methods: This study used qualitative research methods in order to gain an in-depth understanding of the experiences workers have of a complicated and prolonged claims process. Injured workers, injured worker peer helpers, and knowledgeable service providers were approached. These groups represented varied injured worker situations according to different industries or to remoteness or closeness to services which may affect health and job re-entry. In addition, secondary analysis was performed on in-depth interviews recently conducted with peer helpers and injured workers at three IWOS locations. An advisory group consisting of occupational health physicians, an employer consultant, injured workers, and WSIB policy and service experts provided ongoing feedback on analyses and findings.

Results: This study found that injured workers become caught in webs of relationships and procedures over which they may have little control, and that idealist return-to-work policies help to set the stage for these problems. We found that communication breakdowns and misunderstandings underlie many of the return-to-work process problems described in this report. The multiple parties involved in the workers' compensation process—the worker, employer, co-workers, supervisors, family doctors, specialists, specialty care clinics, WSIB physicians, adjudicators, husbands, wives—mean that multiple and varied interpretations, terminologies and versions of an event are possible. These multiple actors, combined with adjudication requirements of comprehensiveness and cohesiveness in order to determine claim eligibility, create an environment where miscommunications and contestations can occur. We invoke the metaphor of "broken telephone" to describe this situation. The stage for these miscommunications is, in turn, set by idealist return to work policies that rest uneasily with the realities of less-than-harmonious workplaces, health care realities, and communication processes.

Researchers: Ellen MacEachen (Principal Investigator), Agnieszka Kosny, Lori Chambers, Sue Ferrier (Contract)

Stakeholder Involvement:

Linda Wood - President, Injured Workers Support Network of Kingston & Area
Judy Geary - Vice President Program Development, WSIB
Arthur Bourre - Injured Worker Peer Helper, Dryden & District
Injured Workers Support Group; Advisory Committee consists of:
Dr. Brian Gibson - Physician, Lakeshore Area Multiservice Project
Carmine Tiano -Director, WSIB Training and Advocacy Services, Ontario Building Trades
Dr. Allen Hall - Occupational health physician, Dofasco, retired

Linda Wood - Leader, Injured Worker Support Network of Kingston & Area
Phil Biggin - Leader, Greater Toronto Area Injured Worker Resource Centre
Art Bourre - Leader, Dryden & District Injured Worker's Support Group
Judy Geary - Vice President, Program Development Liaison - Office of Fair Practices & WSIB

Also regular consultations with Laura Bradbury, Director, Fair Practices Commission; Carmine Tiano, Director Advocacy Services, Ontario Building Trades

Potential Audiences and Significance: This research will interest WSIB Board of Directors and program areas as well as organizations funded by the WSIB committed to helping injured workers with complex situations. It will interest the Fair Practices Commission as it will shed light on service delivery and the experience of injured workers with complex claims situations. University researchers who are interested in issues relating to injured workers, return to work, labour market re-entry, and mental health will also find this relevant.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

Publication:

MacEachen E, Kosny A, Ferrier S, Chambers L. The 'toxic dose' of system problems: why some injured workers don't return to work as expected, *Journal of Occupational Rehabilitation* (accepted pending revisions). (Project 244) [2009-050]

Presentation:

MacEachen E, Kosny A, Ferrier S, Chambers L. A critical consideration of the "Hurt versus Harm" approach in early return to work. 31 Mar 2009; Toronto, ON: Pension Plan and Workers' Compensation Training, Law Society of Upper Canada Learning Centre.

Funding:

MacEachen E, Franche R-L. Groundwork for an injured worker and mental health intervention study. CREIDO: \$9,573 (2008-2009)

Immigrant Workers Experiences After Work-related Injury in British Columbia: Identifying Key Questions and Building Research Capacity (0258)

Project Status: Ongoing

Introduction: Immigrant workers represent the majority of labour force growth in Canada, yet there is indication that their experiences can be problematic. Immigrant workers are more likely to work in poor-quality, low wage jobs, and to face employment insecurity, language barriers and difficulty navigating Canadian social programs. Immigrant workers may face particular challenges when injured on the job, including poor knowledge of their rights, fear of losing their job or reporting their injury, and difficulty accessing compensation.

Objectives:

- Identify key research gaps around injured immigrant workers in the British Columbia context through literature review.
- Conduct community consultations and service provider interviews in British Columbia.
- Link and connect with researchers, policy makers and community stakeholders in British Columbia, creating a network of potential research partners.
- Produce a report detailing research themes and policy/service gaps.
- Develop a feasible, methodologically sound research proposal to examine immigrant workers' experiences after a work-related injury in British Columbia.

Methods: Research and policy forum, interviews/consultations with stakeholders

Researchers: Agnieszka Kosny (Principal Investigator), Ellen MacEachen, Peter Smith, John Shields (Ryerson University)

Stakeholder Involvement: Unions, community organizations, settlement agencies, academics, policy makers (Ministry of Labour, WorkSafe BC)

Links to WSIB Policy & Program Priorities: No WSIB Links Reported

Funding:

Kosny A, MacEachen E, Smith P, Shields J. Immigrant workers' experiences after work-related injury in BC: Identifying key questions and building research capacity. WorkSafe BC: \$30,042 (2008-2009)

Kosny A, MacEachen E, Smith P, Shields J. Knowledge exchange forum on immigration, work and health in British Columbia. CIHR: \$24,870 (2008-2009)

Accident Compensation Commission (ACC) Trend Identification and Analysis (0447)

Project Status: Completed

Introduction: The Accident Compensation Commission (ACC) provides comprehensive 24 hour, no fault personal accident insurance to the 4 million citizens of New Zealand. ACC coverage includes treatment benefits, income replacement, rehabilitation, lump-sum and death-related benefits for survivors. The right to sue for personal injury for covered injuries is excluded, other than for exemplary damages. Senior management of ACC invited the Institute for Work & Health to provide expert advice in two areas of strategic management of the performance of the scheme: 1) assistance in the identification of the key factors underlying the deterioration in the rate of rehabilitation of disabled working age adults and 2) the development of an international network of social insurance institutions interested in jointly identifying, monitoring and analyzing critical issues that will impact the long term sustainability and viability social security agencies.

Objectives:

- The objectives of this project will have three main elements: 1) conduct a case study of the deterioration in rehabilitation rates in New Zealand over the period 1996-2007, 2) establish an international network of peer social security institutions and facilitate discussions concerning shared challenges and 3) identify a common set of financial and statistical indicators that can be used to make comparisons across jurisdictions.

Methods: The component of this project focused on a case study of the deterioration in rehabilitation rates in New Zealand will proceed through four phases: an initial start-up phase, a design phase, an analysis phase and the completion of the project report. The design phase will commence with the distribution of a discussion document prepared by the IWH team, identifying potential explanations for the trend in declining rehabilitation rates and specifying administrative data available to describe and analyze trends in rehabilitation. The analysis phase will consist of three phases: 1) preparation of the analysis dataset and the completion of a documentation dictionary describing the individual elements in the dataset, 2) descriptive analyses to examine the relationship between characteristics of beneficiaries, employers, health care services and claim benefit and the trend in declining rehabilitation rates, and 3) a series of analyses to formally test the hypotheses defined in the specification phase of the project.

Researchers: Cameron Mustard (Principal Investigator), Jacob Etches, Richard Allingham (WSIB), Louise Logan

Potential Audiences and Significance: A number of work disability insurance schemes have noted an emerging trend in an increasing proportion of long-duration disability claims. Insights gained from the examination of factors associated with the deterioration in rehabilitation rates in New Zealand will be of interest to Canadian work disability insurance agencies.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

Funding:

Mustard CA. Identification and analysis of critical trends in the New Zealand accident compensation scheme. Accident Compensation Corporation: \$99,700 (Jul 2008–Feb 2009)

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

Project Status: Ongoing

Introduction: The ability to distinguish between injured workers at high and low risk of chronicity and recurrence is very appealing and could lead to improved outcomes and cost savings. Some prediction rules have been developed for low back pain although they have not been validated in different jurisdictions.

Objectives: Our overall objective is to build prediction rules and a computer-based prediction tool for key disability outcomes among injured workers in Ontario with low back pain lost time claims. To accomplish this objective, we propose to answer five research questions:

1. What combination of factors measured early in the life of the claim predicts whether a worker will remain on benefits beyond six months post-accident?
2. What combination of factors best predicts the length of the first episode of wage-replacement benefits?
3. Given a first episode has ended, what combination of factors best predicts who will have a recurrence of benefit receipt?
4. Given a first episode has ended, what combination of factors best predicts how long it will be until a recurrence?
5. Do the same combinations of factors predict the length of first episodes and of subsequent episodes of wage replacement (and of the gaps between them)?

Methods: To answer the five research questions we will take advantage of IWH's unique access to WSIB administrative data and to the IWH Readiness for Return to Work Cohort (R-RTW). Each question will be answered by developing a statistical predictive model for the specific outcome. Different predictors may be important for different outcomes. To be most useful, a prediction rule should use variables that are easily collected. Here, each prediction rule will be built in blocks. The first block will consist of variables routinely collected and entered in the WSIB claims database for administrative purposes. A second block will consist of additional variables from the IWH's R-RTW prospective cohort study, in which workers in the first four weeks of work disability were included and were administered more elaborate, scientifically established, questionnaires over a two year period. The second block is added to investigate the potential importance of collecting this information in a routine way at the WSIB. We will use state-of-the-art statistical approaches to prevent building of statistical models that are not generalizable to other populations and we will consider different injured worker outcomes of interest including the episodic nature of low back pain disability and return to work.

Researchers: Ivan Steenstra (Principal Investigator), Ben Amick, Jason Busse, Andrea Furlan, Sheilah Hogg-Johnson, David Tulusso, Renée-Louise Franche (Occupational Health & Safety Agency for Healthcare, BC)

Stakeholder Involvement: WorkSafeBC, Metropolis, settlement organizations, other researchers.

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

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness; Return to Work: Prevention & Management of Work Disability; Health Services: Effectiveness & Efficiency of Clinical Care.

Funding:

Steenstra I, Busse J, Hogg-Johnson S, Amick B, Tulusso D, Furlan A. A prediction rule for duration of disability benefits in workers with non-specific low back pain. WSIB RAC: \$79,692 (2009-2011)

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

Project Status: Ongoing

Introduction: Since the early 1990s, the time on benefits has been increasing for Ontario workers' compensation claims. Over the last decade, there has been a dramatic increase in the number of total compensated days per lost time claim and an increase in the rate of claims remaining active and open for extended periods of time. This trend is in contrast to the trend of declining claim rates experienced over much of the 1990s.

This study will provide information that will help better understand how changes in labour-market opportunities have contributed to the increase over a period of approximately 20 years. Specifically, it will use information from a linked database to investigate the labour-market earnings patterns of short- and long-term disability claimants from three different time periods and receiving benefits under three different programs (the pre-1990 Bill 101 program, the 1990-1997 Bill 162 program, and the post-1998 Bill 99 program). Based on the analysis of three successive claimant cohorts, the study will provide invaluable information to better understand the individual and contextual factors that contribute to labour-market engagement and earnings recovery, and how these have changed over time.

Objectives:

- The analyses will address the following research questions:
 1. How has the composition of short-term (temporary disability) and long-term (permanent impairment) disability claimants changed over three time periods in terms of gender, age bracket, region of residence, and pre-accident earnings?
 2. How have labour-market earnings recovery changed over the three time periods for short-term and long-term disability claimants?
 3. Is there a significant difference in time on benefits across the three time periods after accounting for demographic characteristics?
 4. What are the predictors of the degree of earnings recovery? Specifically what role does cohort/accident year, degree of permanent impairment (for long-term disability claimants), and benefits receipt have on earnings recovery after controlling for age, gender, region of residence and other contextual factors?

Methods: This study draws on the linkage of a 20% sample of short- and long-term WSIB claimants from 1986, 1992 and 1998 to a Revenue Canada tax file that was undertaken in 2007. The tax file is called the Longitudinal Administrative Databank (LAD) and contains a simple random sample of 20% of Canadian tax filers. Analyses will draw on two methodological approaches. The first is a claimant-control matching process in which claimants will be matched with uninjured controls in the LAD, based on age, gender, pre-accident earnings trajectories and region of residence. Claimants from the three time periods will also be matched, based on the same characteristics.

Descriptive analysis will consist of a difference-in-differences approach in which within and across time period differences in earnings recovery will be compared, i.e., claimants will be compared to their matched controls (the first level of differences) and these differences will be compared to similar claimants from the two other time periods (the second level of differences). Regression modeling techniques will be used to estimate the significance and magnitude of factors that bear on labour-market engagement and earnings recovery.

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

Stakeholder Involvement: An advisory committee has been set up consisting of three senior policy makers, two from the WSIB (Judy Geary and Joe Sgro) and one from the Ministry of Labour (Nicholas Robins)

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

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

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

Project Status: New

Introduction: The labour force in Canada is aging. There are currently over 315,000 people aged 55 years or older working in BC. This number is likely to increase as the percentage of people aged over 50 who are working or looking for work is increasing. In addition, older workers are pushing back plans to retire, or are unsure when they will retire. We know from other jurisdictions that although older workers don't get injured as much as younger workers, when they do get injured these injuries are more severe, more likely to be fatal, require more health care and longer time off work. Unfortunately, we don't know the extent to which different individual or work-related factors contribute to these findings. For example older workers have different physical abilities, but also work in different occupations. Given the increasing importance of older workers in BC this project seeks to examine if there are differences in the types of injuries sustained by older workers, even when they are in similar occupations to younger workers; if these trends in injury have changed over time; and the factors that might help prevent injuries among this age group, or reduce the amount of health care or wage replacement required when they get injured

Objectives: This project seeks to answer the question: what are the trends in the incidence and patterns of work-injuries among older workers between 1993 and 2007, and what are the consequences of these injuries relative to workers of younger ages in British Columbia? Within this research question are the following three objectives:

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

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

Potential Audiences and Significance: The results of this research program will provide a comprehensive knowledge base on the current work injury burden and associated outcomes for older workers in British Columbia. This knowledge base will serve as a foundation for future decisions concerning the directions of additional primary research on older workers (including their working conditions and work-injury consequences in British Columbia). The results of this project will also provide preliminary evidence for policy development related to the working conditions and the prevention and consequences of work-injuries among older workers in British Columbia. This knowledge base will lead to the generation of understandable and actionable key messages; and the ongoing commitment among key stakeholders into future research projects examining – and importantly intervening in – the labour market conditions, the prevention of work injuries and the consequences of these injuries among older workers in British Columbia.

Funding:

Smith P, Beaton DE, Hogg-Johnson S, Ibrahim S, Koehoorn M, McLeod C, Mustard CA, Saunders R, Scott-Marshall H, Toluoso D. Examining determinants and consequences of work-injuries among older workers. WorkSafe BC: \$225,000 (2009-2011)

Evidence Guides and Tools

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

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

2009 Quick Statistics

Completed projects (1)

Ongoing projects (1)

Papers published or in press (0)

Peer review papers submitted (0)

Reports to WSIB or other Prevention System Partners (0)

Presentations of results and stakeholder consultations (1)

External grants awarded (1)

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Development of a Green Light and Red Flags Toolkit for Persistent Claims (0253)

Project Status: Completed

Introduction: A problem facing WSIB and system partners is the growing number of “persistent,” or long-term, workers’ compensation claims (Geary, 2006). Although claim rates have declined in recent years, the duration of existing claims is growing. This problem could be reduced if key players who represent or make decisions about claims were able to identify situations when procedures are working particularly well and conversely, when workers may be at particular risk of not being able to complete their expected return-to-work trajectory. Using our unique database, we developed a Green Light and Red Flag Toolkit for Persistent Claims. This database of richly detailed, qualitative interviews focuses directly on processes, situations, and problems of injured workers with persistent claims. The Toolkit was work-shopped with a range of system users. Our final product furthers the development and targeted application of system resources, assist with more efficient use of existing system resources, and ultimately improves the claims experience of injured workers.

Objectives:

- Conduct data analysis.
- Develop toolkit based on findings and input from key stakeholders and system users.
- Disseminate toolkit to potential users.
- Disseminate findings at academic conferences, to injured worker groups, to stakeholder groups, and to WSIB.
- Submit paper for publication.

Methods: A team of researchers, knowledge transfer and communication experts transformed findings from a the richly detailed, qualitative “complex claims” study into a set of “red flags”, or warning signs of RTW problems, and “green lights”, or suggestions for optimal RTW management. Workshops were then conducted with RTW experts across Ontario in order to generate “green lights” for RTW problems, review the structure of the guide, consider dissemination strategies, and target audiences. An Advisory Committee provided overall guidance on the goals and design of this project and the final content of this guide.

Results: A guide was developed entitled “Red Flags/Green Lights: A guide to identifying and solving return-to-work problems”. This guide supports optimal quality in the disability management process. The guide translates findings from a research study into a product that can provide advice about how to manage challenging return-to-work (RTW) situations.

Researchers: Ellen MacEachen (Principal Investigator), Anita Dubey, Kiera Keown, Philip Kiff, Agnieszka Kosny, Cindy Moser, Diana Pugliese

Stakeholder Involvement: The following project partners have agreed to assist with the tool kit validation and evaluation and/or provide feedback and suggestions regarding study progress, analysis, and findings: WSIB, Program Development Division; Injured Worker Consultants; Office of the Employer Adviser; Ontario Network of Injured Worker Groups; Gage Occupational and Environmental Health Unit and Centre for Research in Occupational Disease, St. Michael’s Hospital; Office of the Worker Adviser; The Fair Practices Commission

Potential Audiences and Significance: This research will interest WSIB Board of Directors and program areas as well as organizations funded by the WSIB who are committed to helping injured workers with complex situations. It will be of interest to service providers working with injured workers since the toolkit will help identify and interpret problematic situations that can occur with complex claims. It will interest the Fair Practices Commission as it will identify system-level dimensions and characteristics that contribute to claims complexity. University researchers who are interested in issues relating to injured workers, return to work, and claim complexity will also find this study relevant.

Links to WSIB Policy & Program Priorities: RTW: Prevention & Management of Work Disability

Presentation:

MacEachen E, Kosny A, Chambers L, Keown K. Research to practice: developing the red flags/green lights guide for challenging return-to-work situations. 5-8 Nov 2009; Puerto Rico: Work, Stress and Health 2009: Global Concerns and Approaches.

Funding:

MacEachen E, Kosny A, Chambers L. Development of a green light and red flag toolkit for persistent claims. WSIB RAC: \$39,916 (Feb 2008-Mar 2009)

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

Project Status: Ongoing

Introduction: This multi-year project involves the development and ongoing testing of the DASH, a 30-item self-completed questionnaire of upper-limb disability and symptoms, designed at IWH in collaboration with the American Academy of Orthopaedic Surgeons (AAOS) to be used as an outcome measure for people with any disorder of the upper limb. It is now in world-wide use. In 2003 the 11-item QuickDASH was released. Summary documents were placed on the Web and published in *At Work*. In 2004 there was a specific testing of the QuickDASH in clinical and research settings and in 2005 the QuickDASH was published in the *Journal of Bone and Joint Surgery*.

There are now two editions of the DASH Outcome Measure User's Manual, first published in 1999, and a detailed website that allows public access to the instruments, their translations, frequently asked questions, scoring instructions and bibliographies. The DASH website remains the most often accessed part of the IWH web. This year will see the ongoing testing of the DASH, integration with the normative data now available, and further testing of the QuickDASH.

Objectives:

- To analyze the general population (normative) data gathered on the DASH and test the QuickDASH.
- To bring our knowledge of the measurement properties of the DASH to the clinicians treating persons with upper-limb disorders.

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

Results: Rasch analysis was conducted. We decided to continue with two parameter IRT. Factor analysis was conducted on MSK. A literature review was completed and summarized in large tables. A manual revision is underway following which we will write the paper. New skill development in two parameter IRT is underway.

Researchers: Dorcas Beaton (Institute Coordinator), Claire Bombardier, Kim Cullen, Anita Dubey, Sheilah Hogg-Johnson, Carol Kennedy-Yee, Philip Kiff, Anjali Mazumder, Peter Smith, Peter Subrata, Sherra Solway (Toronto Rehabilitation Institute)

Stakeholder Involvement: 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: The DASH is now available in 14 languages. Professional organizations such as the Canadian Physiotherapy Association (CPA), AAOS and regulatory colleges also have demonstrated their support through use of the DASH, as has the WSIB. Orthopaedic implant manufacturers have contacted the Institute regarding the use of the DASH in trials of new products. Anyone who is interested in outcome measurement to reflect the client's perspective could be a potential user. The manual has enjoyed equal popularity and utility.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability; Health Services: Effectiveness & Efficiency of Clinical Care.

Training Initiatives in Work Disability Prevention (0144)

Project Status: Ongoing

Introduction: The Institute is internationally recognized for its expertise in evidence-based practice, measurement research and work disability prevention (WDP). It has received an increasing number of requests to share its expertise and to contribute to the education and training of educators, clinicians and future researchers.

Objectives:

- To influence the next generation of health-care professionals and research trainees by participating in the development and execution of various training initiatives.

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

Results: Scientists at IWH involved with WDP are Ellen MacEachen (on Program Executive Committee 2005 to 2012, Mentor, Chair mentor during summer session, co-led E-Course), Sheilah Hogg-Johnson (Mentor, on Admissions Committee, Chair-mentor during summer session, co-led e-course), Emile Tompa (Mentor, Chair mentor during summer session), Curtis Breslin (mentor).

Funding for the initiative was renewed in 2009, and several aspects were initiated and reconfirmed: the international nature of the program with mentor sites in different countries, the two week summer residence, the yearly e-course, the optional courses involving individual work with mentors, the development of a community of practice, the goal to make the program financially self-sustaining.

Researchers: Ellen MacEachen (Principal Investigator), Curtis Breslin, Donald Cole, Sheilah Hogg-Johnson, Allison Kelly, Vicki Pennick, Emile Tompa, Pierre Côté (CREIDO), Renée-Louise Franche (Occupational Health & Safety Agency for Healthcare, BC), Jaime Guzmán (Occupational Health & Safety Agency for Healthcare, BC)

Stakeholder Involvement: Students, educators, health care providers, policy-makers, researchers and trainees may be consulted during the development of the various training initiatives. Systematic review workshops will be conducted in collaboration with the Toronto Cochrane Coordinator (R. Wong).

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

KTE Focus on Prevention and Management of Work Disability

Introduction: Clinical provider groups who treat patients with MSDs are potential audiences for the research evidence that IWH generates. Some providers practice outside the more traditional clinical settings and focus on the work/health interface. We have targeted these groups as potential audiences for IWH research messages specifically: family physicians, and providers who work within or in close association with workplaces (in primary/secondary prevention roles and/or return to work, delivering treatment and/or disability management) including physiotherapists (PT), kinesiologists (Kin), occupational health nurses (OHN), occupational therapists (OT) and chiropractors (DC) and ergonomists.

There are a number of research messages from IWH and the Cochrane Back Review Group that are relevant and useful to these groups (management of back pain, disability management and RTW). Equally, there is a practice expertise and knowledge that these groups possess that is useful and relevant to IWH as research and knowledge transfer activities are planned and implemented. We have created a number of “informal opinion leader” or “educational influential” (EIs) networks with these clinical groups. Professional colleges who regulate these clinical disciplines are partners in these networks. We have identified and met with EIs in OHN, kinesiology, PT, OT and family medicine.

Audience: Family physicians, physiotherapists, occupational health nurses, kinesiologists, occupational therapists, chiropractors, ergonomists.

Focus and Messages: Evidence-based management of back pain and evidence on effective RTW.

Deliverables:

Discipline-specific, in-person knowledge transfer and exchange sessions.

Specific project-based participation of members of the EI networks.

Routine information dissemination to EI networks.

Maintain current database of all EIs with practice profile and contact information.

Annual update and feedback sessions with EI organizational partners.

Share EI networks with CRE partners via KTE Hub

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Foundation Programs

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

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

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

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

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

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

2009 Quick Statistics

Completed projects (0)

Ongoing projects (9)

Papers published or in press (3)

Peer review papers submitted (3)

Reports to WSIB or other Prevention System Partners (0)

Presentations of results and stakeholder consultations (5)

External grants awarded (0)

Workplace Safety & Insurance Board Data Routine Statistics (0845)

Project Status: Ongoing

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

Objectives:

- Continually develop and maintain expertise in the data holdings of the WSIB.
- Aid Institute researchers by providing information on the data holdings and their potential use for research projects.
- Respond to ad hoc requests for data extractions required for project planning purposes, etc.
- Develop internal capacity to use WSIB data and introduce three new staff to list of those who can extract data.
- Provide training.
- Develop set of core competencies re: WSIB data.
- Position IWH to provide assistance to external researchers (work with IWH, WSIB RAC, WSIB Privacy Office).

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

Researchers: Sheilah Hogg-Johnson (Institute Coordinator), Arold Davilmar, Selahadin Ibrahim, Christina Kalcevich, Hyunmi Lee, Peter Smith, Peter Subrata, Michael Swift, Marjan Vidmar

Stakeholder Involvement: WSIB through our research and master agreements; Possible external researchers from universities, CREs etc.

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.

Links to WSIB Policy & Program Priorities: No WSIB Links Reported

Development of an Instrument Database and Questionnaire Design Tools (0835)

Project Status: Ongoing

Introduction: Several questionnaire instruments appear in Institute studies time and time again (e.g., SF-36, DASH, Chronic Pain Grade, Job Content Questionnaire, Effort-Reward Instrument). The purpose of this project is to create Microsoft Access modules for the most commonly used questionnaires which can be used for a variety of purposes such as data entry (when the data are collected via pencil and paper), Computer Assisted Telephone Interviewing (CATI), direct data collection in clinical settings etc. To date 45 instruments have been created for the questionnaire modules.

Objectives:

- Develop multi-purpose data entry modules for the most commonly used questionnaire instruments at IWH.
- Develop tools for use in designing data entry by allowing research staff to copy the instruments to another database.
- Develop a review section for the instruments, including: the conceptual basis in developing the instrument, an operational description of the instrument (format and scoring), its' psychometric properties (responsiveness, reliability and validity), IWH staffs' experience with using the instrument in their research, and the original and related bibliographic references.

Methods: Used Access 2000 Database with Visual Basic programming language.

Results: Access to the database was added to IID database to allow users easy access to the tools and instruments

Researchers: Michael Swift (Institute Coordinator), Sheilah Hogg-Johnson

Stakeholder Involvement: Researchers

Potential Audiences and Significance: The data entry aspects of the proposed system will largely be of interest to other researchers at IWH.

Links to WSIB Policy & Program Priorities: Not applicable

Data Dictionary (0301)

Project Status: Ongoing

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

Objectives:

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

Methods:

To identify areas and subjects where specific researchers at the Institute may contribute information.

To create a template for the presentation of information within the Data Dictionary.

To display this information and together with IWH staff, work towards agreement on the structure of the Data Dictionary (i.e., how best to categorize the information within it).

Cross reference information where appropriate.

Maintain the dictionary.

Results: We are accumulating content relevant to understanding WSIB data resources.

Researchers: Sheilah Hogg-Johnson (Institute Coordinator), Arold Davilmar, Jacob Etches, Selahadin Ibrahim, Hyunmi Lee, Paolo Maselli, Peter Smith, Peter Subrata, Michael Swift, Grant Yao

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

Potential Audiences and Significance: Largely of internal interest, but may be some specialized interest with data users within MoL and WSIB.

Links to WSIB Policy & Program Priorities: No WSIB Links Reported

Keyword Project (0311)

Project Status: Ongoing

Introduction: The keyword project is an attempt to create a common nomenclature for describing content of IWH research projects. This nomenclature would be used for a variety of projects including: the web, Refman, working papers. It would be generated using MeSH vocabulary and tailored to suit our own needs.

Objectives:

- To identify a frequency of terms that are representative of our work at the IWH.
- The next step in the refinement of this initiative is to get a consensus agreement on the structure of the tree.
- To flush out the tree and develop layers which would be dependent on the various uses.
- Cross reference the tree structure.

Methods: Develop set of terms for IWH web search engine. Tag all material on Website. Tag all other material within IWH e.g., Refman, Projects. Edit and maintain.

Results: IWH Journal Articles is a database of references of journal articles, reports, books and book chapters with an IWH author that is posted on the IWH website. All of these articles were keyword coded and a system was created to continue to code newly published articles.

Researchers: Emma Irvin (Institute Coordinator), Anita Dubey, Jacob Etches, Philip Kiff, Quenby Mahood, Katherine Russo, Michael Swift

Stakeholder Involvement: Not applicable

Potential Audiences and Significance: This project is primarily focused on facilitating access to information within the IWH based on a common structured language. The product should be of interest to internal staff only, but would greatly assist us in responding to external requests for information from stakeholders.

Links to WSIB Policy & Program Priorities: Not applicable

Integrated Information Database (0307)

Project Status: Ongoing

Introduction: The genesis of this project was the need to streamline the accountability reporting of project accomplishments and activity plans for internal and external audiences. An initial review of the requirements indicated that many of the same data elements and information were used across different reports. A comprehensive database that contained all of these information items and could easily be manipulated to allow for customization was proposed. The integrated information database was conceived as a tool that could reduce repetition in data gathering, increase efficiency and accuracy in reporting and improve overall project tracking and management. This project was initiated in 2001 and now comprises three phases. The first phase was the tracking of time spent on individual projects and included linking the 'hours' part of the database with the Institute's secure budget and accounting system. The second phase encompassed all elements of detailed project descriptions. The third phase contained CV type information on Institute staff and affiliates.

Objectives:

- To develop an efficient computer-based tool for collecting information on project and staff activity.
- To create a central electronic repository of all project related information.
- To improve the efficiency of project reporting.
- To improve the overall tracking and management of project activities and milestones.

Methods: Building and testing of multi-user databases using MS-Access 2007 Database in consultation with users.

Results: Database was modified to new IID Release 2.06 which allowed database to run on the recent update of MS Office Products including MS Access Database 2007. Programming of the Ad-Hoc query program was modified and toolbars were changed into command buttons to allow it to run using Access 2007.

Researchers: Emma Irvin (Institute Coordinator), Linda Harlowe, Michael Swift

Potential Audiences and Significance: The development of the database itself will primarily be of interest to other research organizations who face similar reporting challenges as IWH.

Methodological Developments in Systematic Reviews (0951)

Project Status: Ongoing

Introduction: As part of the IWH's commitment to continuously improve the field of Systematic Review methodology, we propose in 2007 to undertake the following methods projects:

- A - Meta-Analyses of Prevalence
- B - Prevention Review Methodology: Evaluation of Non-clinical Interventions
- C - Methods Workshops: a) Quality Appraisal tools
- D - Stakeholder Development in Prevention Reviews
- E - Literature Search Strategies for Grey Literature

Objectives:

- A. To do a systematic review of meta-analysis of prevalence studies published in the last five years for any health condition.
- B. To publish a paper intended to underline the challenges and solutions of adapting the established systematic review methodology to a non-clinical literature.
- C. To run a series of workshops to discuss aspects of the systematic review methods; the first workshop will be to discuss Quality Appraisal tools.
- D. To discuss the various models of stakeholder engagement throughout the process of writing a systematic review and their associated benefits.
- E. To systematically search and review relevant grey literature on the process and implementation of participatory ergonomics interventions in workplaces.
To explore and document various methods of searching and obtaining grey literature on the topic of participatory ergonomics (PE) interventions.
To provide recommendations about the use of grey literature in systematic review methods.

Results:

- B. A series of papers were written, submitted and accepted for a special issue of the Journal of Occupational Rehabilitation.
- D. A stakeholder development paper focussing on our experiences in BC and Manitoba was submitted to a peer reviewed journal.
- E. A paper on literature search strategies for Grey lit was completed and will be submitted in 2010.

Researchers: Andrea Furlan, Emma Irvin, Kiera Keown, Quenby Mahood (Institute Coordinators), Ben Amick, Rachel Couban, Kim Cullen, Natasha Kyle, Dwayne Van Eerd, Amber Bielecky, Jill Hayden (Dalhousie University), Fatima Lakha (Toronto Western Hospital), George Tomlinson (University of Toronto & University Health Network)

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

Publications:

Cullen K, Van Eerd D, Irvin E. Conducting systematic reviews on workplace prevention topics: lessons learned. Submitted: Journal of Occupational Rehabilitation – Special Edition 2009. [2007-093].

Keown K, Van Eerd D, Irvin E. National stakeholder engagement in a systematic review: a knowledge transfer case study. Submitted: Journal of Continuing Education in the Health Professions [2009-110]

Amick BC, Brewer S, Tullar J, Van Eerd D, Cole DC, Tompa E. Musculoskeletal disorders: examining best practices for prevention. Professional Safety 2009; 54(3):24-28. [2008-086]

Tompa E, Dolinschi R, de Oliveira C, Amick BC, Irvin E. A systematic review of workplace ergonomic interventions with economic analyses. In press: Journal of Occupational Rehabilitation. [2009-149]

Van Eerd D, Keown K, Irvin E. Translating knowledge to practice: Making systematic reviews useful to stakeholders. Submitted: Journal of Occupational Rehabilitation – Special Edition 2009. [2009-048]

Presentations:

Irvin E, Hayden J. Developing a sensitive and specific prognosis search strategy. 11-12 Mar 2009; Halifax, NS: 7th Annual Canadian Cochrane Symposium.

Keown K, Van Eerd D, Irvin E. Engaging national stakeholders in a systematic review program. 11-12 Mar 2009; Halifax, NS: 7th Annual Canadian Cochrane Symposium.

Van Eerd D, Keown K. Participatory ergonomics: What does the research tell us about how to implement PE. 22 May 2009; Niagara Falls, ON: The Central Canadian Ergonomics Conference.

Van Eerd D. What works in MSD prevention: messages for kinesiologists. 16-18 Oct 2009; London, ON: Ontario Kinesiology Association Annual Conference.

Systematic Review Workshop (0114)

Project Status: Ongoing

Introduction: The Institute for Work & Health 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 workshops that range from two hours to two-day called the Systematic Review Workshop since March 2001 with plans to continue through 2010. The series of workshops and other educational activities are part of the new Systematic Review Program initiated in 2005.

Objectives:

- Provide workshops that teach participants to plan, conduct and communicate the results of systematic reviews.

Methods:

Program Day 1:

Introduction to the Workshop.

Evidence-based medicine, systematic reviews and the Cochrane Collaboration.

Literature searches and study selection.

Methodological quality of randomized controlled trials.

Exercise in small groups (quality assessment of a randomized controlled trial).

Combining studies with and without meta-analysis. Reporting of systematic reviews.

Program Day 2:

Systematic Reviews of Observational Studies.

Methodological quality of observational study.

Exercise in small groups (quality assessment of a cohort study)

Clinical and statistical homogeneity. Statistical methods to combine studies. Bayesian meta-analysis.

Software for conducting meta-analysis.

Using systematic reviews: finding them, critically appraising, standard reporting and interpreting conflicting conclusions.

Exercise in small groups (quality assessment of a systematic review).

Dissemination, implementation and clinical practice guidelines.

Results: A workshop was presented in October 2009 at the Institute.

Researchers: Emma Irvin (Institute Coordinator), Claire Bombardier, Kiera Keown, Joseph Bayene (The Hospital for Sick Children), Vicki Kristman (CREIDO), Jill Hayden (Dalhousie University), George Tomlinson (University of Toronto & University Health Network), Maurits van Tulder (Vrije Universiteit, Amsterdam)

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

Potential Audiences and Significance: The Systematic Review Workshop will be of particular interest to healthcare professional students, educators, clinicians, researchers, insurers and policy makers. This workshop was an accredited group learning activity under Section 1 of the Framework of the Continuous Professional Development options for the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada (11 hours). In addition, members of the WSIB have and continue to show interest in attending as part of our Prevention Systematic Review initiative.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness;
Return to Work: Prevention & Management of Work Disability

Participatory Ergonomic Tool Development (3100)

Project Status: Ongoing

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

A recent systematic review, examining the process and implementation of participatory ergonomics (PE), engaged stakeholders from Ontario, British Columbia and Manitoba. The review of peer-reviewed and grey literatures provided practitioners with a synthesis of best practices for implementing PE interventions including key barriers and facilitators of the PE process. Upon review completion, traditional KTE dissemination activities occurred and stakeholders across Canada requested a PE tool that supports PE program initiation and sustainability, for use by practicing health and safety professionals and workplace parties. Institute for Work & Health researchers and knowledge transfer and exchange associates have been working with stakeholders on the tool design.

Objectives:

- We propose to work with our educationally influential (EI) networks in healthcare and ergonomics and other stakeholders to: (1) develop and evaluate the development process for a PE tool that could be used by health & safety practitioners to initiate PE programs for workplaces; and (2) disseminate and evaluate the uptake of the PE tool.

Methods: We submitted grant proposals to WCB Manitoba and WSIB BTG competitions but were not funded from either. We plan to submit to WorkSafeBC in 2010.

Results: PE tool was developed, however, funding for dissemination is not yet obtained.

Researchers: Dwayne Van Eerd (Principal Investigator), Donald Cole, Emma Irvin, Kiera Keown, Shane Dixon (University of Waterloo), Judy Village (University of British Columbia)

Stakeholder Involvement: In Ontario, kinesiology educationally influential group (EIs), ergonomists, occupational therapists plus additional stakeholders from the PE process and implementation systematic review will be consulted for various tool development and implementation steps. In addition stakeholders identified during the systematic review from British Columbia and Manitoba (representing similar groups as those in Ontario) will be consulted during various stages.

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

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness; Return to Work: Prevention & Management of Work Disability

Presentation: Keown K, Van Eerd D, Antle D. New tools for the ergonomist's toolbox. 14-17 Sep 2009; Quebec City, QC: XLth Annual Conference of the Association of Canadian Ergonomists (ACE).

Clinical Systematic Reviews (3105)

Project Status: New

Introduction: While some disability can be explained by objective medical findings, many claims cannot and are defined by symptoms such as chronic pain or chronic fatigue. These latter disorders are sometimes grouped under labels such as functional somatic syndromes or medically unexplained syndromes, and the lack of clear targets for intervention presents a substantial challenge for assigning clinical intervention.

Objectives:

- To complete a series of narrative and systematic reviews and, when possible, meta-analyses of therapy for various medically unexplained syndromes.

Results: Optimized use of patient data to improve outcomes: the example of narcotics for chronic non-cancer pain. Focused on the effect of narcotics on chronic non-cancer pain: A systematic review. Focused on management of fibromyalgia: A systematic review and did an initial scoping review used for a CIHR grant submitted in the fall. We are awaiting funding results to begin full review.

Researchers: Jason Busse (Principal Investigator), Andrea Furlan

Stakeholder Involvement: The Institute for Work & Health will support these reviews with library services to conduct literature searches and retrieve articles, and through KTE to assist in the dissemination of research findings.

Potential Audiences and Significance: The impact of medically unexplained syndromes on disability management is substantial, and the results of the intended reviews will be relevant to the WSIB, private disability insurers, clinicians, and patients.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability; Health Services: Effectiveness & Efficiency of Clinical Care.

Knowledge Transfer & Exchange

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

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

The work of KTE falls into three goals:

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

Return to Work\Disability Management\Labour Market Re-entry (0638)

Project Status: Ongoing

Introduction: The “Seven Principles for Successful RTW” are messages for the 'players' (workplace parties, insurers, clinical care providers and disability managers) in the RTW continuum. It continues as an effective evidence tool as the health and safety associations (HSAs) consultants now take on a new role in disability prevention (DP) / return to work (RTW) at the organizational level (not the case level). KTE will continue to provide support to the HSAs as this new role develops. In 2009 KTE supported the Multi-morbidity, Depression and Pain in the Workplace study of Canadian Nurses led by Renee Louise Franche. We coordinated focus groups in Ontario and assist in developing summaries and other products (as appropriate from the research. We provided KTE guidance to the research coordinator located in British Columbia.

Other maturing research projects may be of interest to the RTW audience and KTE activities will follow as appropriate. RTW for WSIB continues as strategic priority and KTE will work to engage them as new research emerges. KTE will continue to support strategic collaborations with WSIB in RTW (e.g. LMR). In addition KTE will support the Workplace Disability Benchmarking (WDB) project as it moves to next phase.

Objectives:

- Continue to develop processes to transfer the 'Seven Principles' messages to key parties in the RTW process.
- Continue to evaluate the OT EI network and other OTs in the use of Working Together tool.
- Support WSIB RTW strategic collaboration.
- Support HSA consultants in their new role in DP/RTW.
- Provide KTE support for research projects with messages for RTW audiences (Complex Claims, WDB)

Methods: A member of OHSCO MHSA DP/RTW committee. Work with IWH research teams to support research projects. Work with KTE Hub on safety groups project.

Results: We acted as a member of OHSCO MHSA DP/RTW committee. We contributed to workshop program and evaluation and train the trainer materials. We lead the WSIB RTW/LMR secondment opportunity. We provided venue and support for OT EI research subgroup to prepare and implement evaluation plan on Working Together tool. We supported research teams for Complex Claims Study and WDMB project. We completed safety group discussions and presentations with four groups.

Team: Jane Brenneman Gibson (Project Leader), Kristina Buccat, Kiera Keown, Bev Lever, Ellen MacEachen, Renée-Louise Franche (Occupational Health & Safety Agency for Healthcare, BC), Susan Rappolt (Toronto Rehabilitation Institute)

Stakeholder Involvement: WSIB RTW Branch; EI Networks; HSA consultants, workplace parties, disability managers, health care and nursing organizations

Potential Audiences and Significance: Players in the RTW continuum (workplace parties, insurers, clinical care providers and disability managers, health care providers and nursing organizations) will receive RTW messages and be linked to discuss successful RTW.

Links to WSIB Policy & Program Priorities: Return to Work: Prevention & Management of Work Disability

Messages: Seven Principles of RTW provides good research evidence of effective RTW practices.

Relationship Building with Policy-Makers (0603)

Project Status: Ongoing

Introduction: Policy-makers are a key target audience for the Institute. Policy-makers include WSIB and Ministry of Labour. In our Five Year Strategic Plan, one of our principles is to align our research to ensure relevancy to the needs of our partners with an emphasis on the mandate of the WSIB. Improving our linkages with WSIB will continue to be a priority for 2010.

Objectives:

- Working with the Office of the President and the Scientific Director, and senior scientist Ron Saunders, KTE will continue to support development of relationships with WSIB, e.g., bi-monthly research evidence meetings, strategic collaborations, RTW.
- Provide mentoring to next WSIB staff person if opportunity is pursued by WSIB.
- Support the development and dissemination of policy briefs (Ron Saunders is lead).

Methods: Consultation with OH&S stakeholders; workshops and seminars; secondment/mentoring opportunity; co-ordination with KTE Hub.

Results: Issue briefings were released as planned; positive comments from targeted audiences were received.

Team: Jane Brenneman Gibson (Project Leader), Ben Amick, Anita Dubey, Kiera Keown, Cameron Mustard, Ron Saunders

Stakeholder Involvement: WSIB, MOL, WorkSafe BC, Other WCBs

Potential Audiences and Significance: WSIB, MOL, other WCBs in Canada

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness; Return to Work: Prevention & Management of Work Disability; Health Services: Effectiveness & Efficiency of Clinical Care

KTE HUB (0601)

Project Status: Ongoing

Introduction: KTE Hub consists of IWH and the three Centres of Research Expertise (CREs). We have agreed to work together on a number of KTE projects which impact our joint target audiences. The key strategies are: 1) strengthen awareness of the "value added" of research; 2) build enhanced research supports for KTE; 3) improve transfer and dissemination of research evidence.

KTE Hub expects to pursue links with safety group sponsors to reach employers and their safety professionals participating in safety groups. The KTE Hub will also serve as a mechanism to link to existing networks e.g. EI networks, to engage stakeholders in the research process. If the Canadian Institutes for Health Research (CIHR) Knowledge Synthesis grant is funded the KTE Hub working group members will participate in its implementation. Research Alerts are to be made available to additional external audiences. An evaluation of KTE Hub accomplishments will be completed.

Objectives:

- Build and share audiences/networks interested in work and health research.
- Build capacity in target audiences to use research.
- Sustain and develop joint communication tools.
- Continue to develop KTE Hub mandate and infrastructure.
- Look at accomplishments over three years of MOU. Determine if MOU will be renewed/extended.

Methods: Interviewed employers about developing an employers network, employers did not want a new stand alone network but encouraged us to build on an existing network. Safety groups were a suggested vehicle. Project outlined to link with safety group sponsors and offered to present and /or provide research evidence to assist with their work. We continued joint participation in HSALC and research alerts projects. We continued raising profile of research organizations through CHSI research workshops.

Results: Two CRE inserts in At Work. Four HSALC meetings IWH and CREs research presentations. Monthly research alert prepared and sent to HSALC members. Three presentations by IWH & CREIOD focused on RTW to safety groups sponsored by OSSA, OSACH. Three presentations by CREMSD focused on adapting innovation in construction to prevent MSDs to construction safety groups coordinated by CSOA. Options for future collaboration reviewed by the steering committee and confirmation to proceed with new TOR and MOUs for 2010 and 2011. Asked to participate in OHSCO/MHSAO training of HSA consultants in role in the WSIB service delivery model. IWH and CREIDO participated by presenting evidence on effective RTW. Participated in four workshops and one webinar.

Team: Jane Brenneman Gibson (Project Leader), Carlo Ammendolia (CREIDO - Toronto Western Hospital), Kristina Buccat, Anita Dubey, Cameron Mustard, Janet Brown (CRE-OD St Michael's Hospital), David Cassidy (The Toronto Western Hospital), Linn Holness (St. Michael's Hospital), Dee Kramer (University of Waterloo), Richard Wells (University of Waterloo)

Potential Audiences and Significance: The audiences include all the target audiences for work and health messages. The main focus has been on the HSA audience. We will look at broader sharing of existing networks, e.g. clinicians. We plan to create a stronger link with employers using existing networks.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness;
Return to Work: Prevention & Management of Work Disability

Messages: IWH and CREs are producing new research knowledge and making it accessible and applicable to Ontario's workplace research users

Clinical Networks (0617)

Project Status: Ongoing

Introduction: Many clinical provider groups deliver care to populations of interest to IWH (e.g. workers with musculoskeletal disorders). Some practice outside the more traditional clinical settings and focus on the work/health interface. We have targeted these groups as potential audiences for Institute research messages, as providers who work within, or in close association with, workplaces (in primary/secondary prevention roles and/or return to work, delivering treatment and/or disability management) including family physicians (MDs), physiotherapists (PT), kinesiologists (Kin), occupational health nurses (OHN), occupational therapists (OT), chiropractors (Chiro) and ergonomists (Ergo).

Many IWH research messages that are relevant and useful to these groups (management of back pain, disability management and RTW). Equally, these groups possess a practice expertise and knowledge that is useful and relevant to IWH. This project builds knowledge transfer & exchange infrastructure that can be used over time with multiple messages. 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 - as defined in the Hiss methodology). We have identified EIs across the province in the disciplines describe in the previous paragraph. Each of these groups has been convened to seek their cooperation in an ongoing role as “knowledge broker”. Specifically, we are establishing a two-way exchange: stakeholder information and opinion into IWH (to improve our research and knowledge transfer efforts); and research knowledge out to EIs and, via EIs, to their peers to ultimately assist evidence-based practice. OHN has moved to a community of practice model and it is time to renew the PT network. Through the KTE Hub, members of the CREs will be using some of the networks in their research projects. The OT EI evaluation will be completed and this will give us a better sense of the utility of the networks.

Objectives:

- Engage partners who helped create EI Networks.
- Plan and implement annual face-to-face contact with each discipline group.
- Plan and implement projects to bring EIs into IWH's work (e.g., Ergo input into PE tool; tool development).
- Determine where EI 'renewal' is necessary and undertake necessary new surveys or alternate organizational structures; disseminate information to EI groups as appropriate
- Remain active contributors to association trade publications.

Methods: One face to face and one other meeting annually with EIs. Increase number of articles in their professional journals and newsletters. Evaluation of EI interaction via the OT EI network.

Results: Active EI groups are receiving Research Alerts on a monthly basis. Face to face meetings occurred with three EI groups. The OSOT conference was cancelled this year. Data was analyzed from the OT EI Working Together Tool. We are awaiting information from project partners. Throughout the year communications published materials in the various association newsletters. We also determined that we need to consider re-surveying networks in 2010.

Team: Jane Brenneman Gibson, Kristina Buccat, Kiera Keown

Stakeholder Involvement: Clinicians/practitioners; professional bodies (Associations/Regulatory Colleges); Guidelines Advisory Committee.

Potential Audiences and Significance: Family physicians, PTs, OHNs, OTs, Kins, Ergonomists, and Chiropractors. 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, website etc.

Prevention Partners Networks (0640)

Project Status: Ongoing

Introduction: KTE will continue to build relationships with the prevention partner community through vehicles like the Health and Safety Association Liaison Committee (HSALC). Members of the KTE Hub (project 601) continue as full partners in the HSALC. The "Research Alerts" product which is branded from the "Research Partners" will now be distributed beyond the HSALC to other networks such as the Educational Influential clinicians. Capacity building in the use of evidence in programming and planning will continue through the review of evidence from the final prevention reviews. This regular committee work will be supplemented with workshops open to the broader HSA community. We will also look at the experience of the HSAs who have become research participants in a series of pilot projects. We will continue to use webinars to be sure that HSALC members from outside Toronto can participate. We will seek feedback from the HSA consultants on their experiences in using the tools that are being created from the systematic reviews.

Objectives:

- Continue to build relationships with prevention partners to take research evidence to Ontario workplaces.
- With pending re-organization of HSA structure, potentially rethink membership of the committee.
- Continue to develop opportunities for our prevention partners to participate in the research process and review their experience with this participation.
- Coordinate IWH input into the IAPA conference and assist IAPA in the review of the abstracts for research posters.
- Assist IWH researchers to develop and deliver a Research 101 and Measurement workshop geared to this audience.
- Work jointly with KTE Hub members on this agenda.

Methods: Continue to utilize HSA network for dissemination of IWH research and guides. Collected feedback on research alerts product. Participate in CHSI Research Exchange Series.

Results: HSALC continues to be well attended. Northern consultants attend by phone or webinar. CREs participate in research portion of the meetings. HSAs confirm that Research Alerts is a valued product and make suggested changes to make it more user friendly. HSAs invited to take on new role in assisting employers in developing effective RTW programs at the organizational level.

Team: Jane Brenneman Gibson (Project Leader), Kristina Buccat, Anita Dubey, Kiera Keown, Greer Palloo

Stakeholder Involvement: HSA Community, MOL, WSIB RTW/LMR, Prevention, WSIB RAC secretariate, CRE MSD, CRE OD, CREIDO via KTE Hub, IWH researchers

Potential Audiences and Significance: HSA consultants, OSHCO Membership, Ministry of Labour, Centres for Research Expertise and the WSIB are audiences than can utilize research evidence in their programs with Ontario employers.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness; Return to Work: Prevention & Management of Work Disability

Workplace Parties Networks (0612)

Project Status: Ongoing

Introduction: As workplace parties are priority audiences for IWH research, this project will build relationships with these audiences. Our focus is on reaching employers through existing channels using safety groups. We will also try to develop some stronger links with organized labour again building on their needs and existing networks.

Objectives:

- Through KTE Hub prepare plan using safety groups to link with employers.
- Review possible ways to strengthen our links to organized labour.
- Assist IWH researchers in linking with workplace parties for specific IWH research projects.
- Continue to utilize HSA networks for research to workplaces.

Methods: Relationship building via in person meetings; determine process for building employer network.

Results: Three safety group sectors were engaged with 165 employers at meetings. We had an IWH booth at OFL for first time with good traffic and questions and 30 new labour members signed up for e-alerts. OFL health and safety committee was pleased with presentation and asked that IWH return.

Team: Jane Brenneman Gibson (Project Leader), Kristina Buccat, Kiera Keown, Greer Palloo, Ron Saunders

Stakeholder Involvement: Workplace parties (employers, organized labour)

Potential Audiences and Significance: Employers, groups representing employers and organized labour.

KTE Young Workers (0619)

Project Status: Ongoing

Introduction: Young workers and other vulnerable populations, including immigrants, older workers and new workers, have higher than average workplace injury rates. Research done to date shows that young workers, and all workers who are new to a job, are more likely to be injured in the first month. In addition, workplace factors such as what the worker is doing and where they are working appears to be a more significant risk factor than individual characteristics, such as age, gender.

Objectives:

- Develop and implement a formal strategy for transfer of messages to youth employment centres from upcoming young workers research examining early school leavers and youth employment centres.
- Develop and implement a formal strategy for transfer of messages to immigrant, new and older workers.

Results: Findings from young worker study were disseminated. KTE input has not yet been needed for the Immigrant study to date.

Team: Kiera Keown (Project Leader), Cynthia Neilson

Stakeholder Involvement: Organizations and individuals specifically working with early school leavers, including the Ontario Association of Youth Employment Centres.

Potential Audiences and Significance: Policy makers including MOL, MOHLTC, WSIB, HSAs, HRDC, other WCBs as well as those involved in program development/marketing and awareness campaigns for new and young workers. Staff from Ontario's youth employment centres. Immigrant worker organizations and advocates.

Links to WSIB Policy & Program Priorities: Health & Safety: Effective Prevention of Injury & Illness

Issue Briefing (0611)

Project Status: Ongoing

Introduction: Research findings of the Institute for Work & Health often have implications for decision-makers in government, the WSIB, and other OSHCO partners, and for employers, labour groups, and clinicians. In this project, Institute staff identify findings that ought to be of particular interest to policy-makers in government and at the WSIB and prepare brief documents (3-5 pages) that outline the research findings and their implications, in plain language. The Five Year Strategic Plan of the IWH indicates that “We will provide our audiences with opportunities to increase their knowledge about research evidence, using methods tailored to meet the specific needs of stakeholder groups.” This project is an example of the development of a tailored form of knowledge translation.

Objectives:

- To summarize recent research findings that ought to be of interest to policy-makers in government and at the WSIB.
- To identify policy implications of these findings.
- To strengthen relationships with the WSIB and MOL.

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

Results: Four Issue Briefings were completed and published in 2009. They have been among the most downloaded IWH documents. Between March (when the first one was released) and the end of September, total downloads of the first three Issue Briefings totalled about 1000. Favourable comments about Issue Briefings have been received from the WSIB, MOL and other organizations. Issue Briefings (link or summary) have been picked up by several websites/blogs/publications. Examples include: WorkCoverWA [Government of Western Australia]; Office of the Employer Advisor “In the News”; Pulp and Paper Health and Safety Association; Canadian Centre for Occupational Health and Safety; Young Workers Zone; Centre for Research on Occupational and Environmental Toxicology; Institute de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST); and Perry Work Report, University of Toronto, Centre for Industrial Relations and Human Resources.

Team: Ron Saunders (Project Leader), Jane Brenneman Gibson, Anita Dubey, Cindy Moser, Cameron Mustard

Stakeholder Involvement: Senior policy and operations officials at MOL; senior policy and prevention officials at WSIB.

Potential Audiences and Significance: Issue Briefings are sent by email to heads of workers’ compensation boards and senior officials of ministries of labour across Canada. After posting on the IWH website, a link to the Issue Briefings is sent to: senior officials of workers’ compensation boards, public health academics, members of the HSA Liaison Committee, the CCOHS, the Industrial Relations Centre at the University of Toronto, and several key Ontario stakeholders. The individuals are invited to post the link to Issue Briefings on their organizations’ websites and/or bulletins.

Issue Briefings:

No.1 – Workers’ compensation and the business cycle, Mar 2009

No.2 – “Newness” and the risk of occupational injury, May 2009

No.3 – Unemployment and mental health, Aug 2009

No.4 – Declining trends in young worker injury rates, 2000 to 2007, Oct 2009

KTE Advisory Committee (0646)

Project Status: Ongoing

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

Objectives:

- Provide expert advice to KTE at IWH to enhance the quality and effectiveness of the programs.
- Continue committee member renewal.
- Prepare a paper on how KTE became integrated into the research culture at IWH.

Methods: Expert committee member input to KTE projects

Results: David Clements CIHR confirmed as KTEAC Chair with new members: Jill Ramsayer, Tim Hortons and Maureen Dobbins of McMaster University

Team: Jane Brenneman Gibson (Project Leader), Kristina Buccat, Anita Dubey, Kiera Keown, Philip Kiff, Cindy Moser, Greer Palloo

Stakeholder Involvement: KTEAC Chair, Internal Committee

Potential Audiences and Significance: KTE, IWH researchers, Executive, Board of Directors.

Tool Development and Dissemination (0636)

Project Status: Ongoing

Introduction: Stakeholders have told us that they need “tools” to help them apply research findings in the workplace. Research in knowledge transfer has also shown the advantage of having evidence-based tools (e.g., Ergonomics Blueprint, BackGuide, Physician Toolkit, Seven Principles of RTW). As research continues to develop and mature at the Institute, there will be a need for additional tools to meet the needs of the Institute’s stakeholders and other interested audiences.

Objectives:

- Continue to look for new opportunities for tool development. e.g., from the systematic reviews.
- Update, repackage and market current tools within IWH toolkit as needed.
- Administer and coordinate all procedures related to translations of the DASH, QuickDASH and maintain related database.
- Monitor and maintain database of requests for commercial and non-commercial use of the DASH.

Results: Began development of dissemination plans for the Economic Evaluation workbook and the PE tool. We completed the dissemination of the Red Flags tool. Revision of the DASH manual is in progress – work has progressed well with the majority of the chapters completed and ready for production. It is expected that the few remaining chapters will be completed and production of the revised 3rd edition manual will be completed by early Spring 2010.

Team: Greer Palloo (Project Leader), Jane Brenneman Gibson, Kristina Buccat, Carol Kennedy-Yee, Kiera Keown, Philip Kiff

Stakeholder Involvement: HSA community, workplace parties, clinicians, other stakeholders as appropriate.

Potential Audiences and Significance: Workplace parties, clinicians.

Tracking KTE/Evaluation (0629)

Project Status: Ongoing

Introduction: Consistent with our Five Year Strategic Plan KTE has identified activities and indicators. In 2009 KTE set in place tracking systems to track these specific indicators. KTE will continue to gather information from key stakeholders and get their feedback about the accessibility, applicability and usability of research/KTE products.

Objectives:

- Set up mechanisms to track KTE indicators that are part of Five Year Strategic Review
- Continue to track stakeholder engagement in systematic reviews and other research activities
- Continue to track dissemination activities, publications and trade media related to systematic prevention reviews.
- Determine if these tracking tools provide a good basis for broader application to KTE activities with stakeholders.
- Follow KTE literature to watch for developments on KTE metrics that may apply to IWH.

Methods: Tracking systems was developed; responsibilities were assigned; tracking was monitored.

Results: Tracking system capturing main data for reporting. KTE SR may provide evidence for better measurement tools for future consideration.

Team: Jane Brenneman Gibson (Project Leader), Kiera Keown, Kristina Buccat, Emma Irvin

Potential Audiences and Significance: This project will be significant to IWH staff as needed information about stakeholders will be more readily available. It will provide a basis from which to determine what other information we should be collecting about our KTE activities.

KTE Partnerships (0652)

Project Status: Ongoing

Introduction: This project focuses on establishing partnerships with other KTE practitioners as part of our capacity building as a unit and team. The Ontario KTE Community of Practice (KTE C of P) continued in 2009. Jane Gibson continues on the planning committee and KTA staff participate in meetings. We will engage colleagues from the KTE Community of Practice on the topic of use of web 2.0 technologies in KTE. We will continue to profile the IWH KTE work at appropriate conferences and workshops. The KTE Research Alerts project, which was postponed due to staff shortages proceeded in 2009. IWH will connect with KT Canada as it starts to engage KTE audiences.

Objectives:

- Attend planning and member meetings of the Ontario KTE Community of Practice Practitioners (KTE C of P).
- Use the Community of Practice venue to share research evidence and best practices on what works in KTE.
- Assist with workshop on Web 2.0 technologies and KTE.
- Re-start KTE Research Alerts project to assist keeping current in KTE literature.
- Present IWH KTE work at appropriate conferences in 2010.

Team: Jane Brenneman Gibson (Project Leader), Anita Dubey, Kiera Keown

Stakeholder Involvement: KTE Community in GTA

Potential Audiences and Significance: KTE practitioners, researchers in KTE,.

Internal Communications (0622)

Project Status: Ongoing

Introduction: The Institute continues to grow and expand its activities provincially, nationally and internationally. As a result, there is a need to keep its staff informed of such activities in a timely manner through insightful, explicit and rapid internal communications processes. In addition inter- and intra-departmental communications must be encouraged and enhanced to improve working relationships and comradery, and assist in meeting our corporate goal of “be a model of a healthy workplace”.

Objectives:

- To implement strategies for the ongoing renewal of the Intranet including creating new pages and reorganizing of sections as appropriate.
- To inform staff of internal and external activities through the Institute’s e-newsletter, thisweek@IWH.
- To evaluate internal communications and vehicles used to communicate with staff.

Results: E-newsletter - thisweek@IWH, produced and distributed to staff every Monday morning. Monthly innie stats were collected and analyzed - report produced; Innie pages were monitored, reviewed and updated, as required on an ongoing basis. Monthly, quarterly and bi-annual reports were produced.

Team: Greer Palloo (Project Leader), Jane Brenneman Gibson, Kristina Buccat, Anita Dubey, Philip Kiff, Cindy Moser

Corporate Communications (0690)

Project Status: Ongoing

Introduction: The communications group provides overall support to KTE and corporate activities of the Institute. Support for the latter includes production of various corporate documents and responses to external queries for information on a variety of topics.

Objectives:

- Production of corporate documents as required.
- Continued implementation of visual identity.
- Monitor and respond to ongoing requests for information and Institute products.
- Maintenance of the corporate contact and mailing database.
- Review of presentation format of the quarterly communications statistics for internal and Board use.

Results: Several updates/refinements were made to new visual identity templates. The database was updated and reviewed. All routine reports and product or information requests were completed.

Team: Anita Dubey (Project Leader), Jane Brenneman Gibson, Kristina Buccat, Philip Kiff, Cindy Moser, Greer Palloo

Potential Audiences and Significance: All external stakeholders.

IWH Annual Report (0665)

Project Status: Ongoing

Introduction: The annual report provides an overview of the Institute's research and KTE activities as well as financial statements for the previous year.

Objectives:

- Produce and distribute the annual report.

Results: The 2009 Annual Report was completed and made available to the public.

Team: Anita Dubey (Project Leader), Jane Brenneman Gibson, Kristina Buccat, Philip Kiff, Cindy Moser, Cameron Mustard

Potential Audiences and Significance: External stakeholders. Dissemination occurs using direct mailing to selected IWH stakeholders. The report is also posted on the IWH website and promoted in the At Work newsletter.

At Work (0660)

Project Status: Ongoing

Introduction: The At Work newsletter provides ongoing communication with stakeholders on IWH research and knowledge transfer and exchange activities. Research Highlights showcases published research of interest to stakeholders.

Objectives:

- Produce four editions of At Work.
- Meet with researchers, KTAs and communications committee to generate potential story ideas.
- Assess impact of visual identity changes to At Work and Research Highlights.
- Produce Research Highlights as scientific papers are published.

Results: Four issues of At Work were produced. IWH also coordinated and produced two issues of News from the CREs. At Work articles were made available as individual pages on the website in addition to the full PDF of each issue. This enabled readers to read the issue online, and articles now also appear in the relevant research area(s). Research Highlights continued to be written and posted approximately every two months.

Team: Anita Dubey, Jane Brenneman Gibson, Kristina Buccat, Philip Kiff

Potential Audiences and Significance: External stakeholders

Media Relations (0655)

Project Status: Ongoing

Introduction: Increasing the profile and visibility of the Institute with the consumer, business and professional media is an ongoing objective of the Institute and the KTE group. Regular contact with OHS, clinical and business reporters and editors should lead to increased dissemination of Institute research.

Objectives:

- Maintain targets for published articles about IWH in trade and consumer media.
- Explore new outlets to promote IWH research. Update media room on website.
- Maintain and update media database.

Results: Continued to produce regular articles in target publications, including Accident Prevention, Ontario Occupational Health Nurses Journal, Communique (Assoc. of Canadian Ergonomists' newsletter), Canadian Journal of Kinesiology. Also had articles about IWH research published in Back to Work, OHS Canada, Professional Safety and the WHO's Global Occupational Health Network Newsletter. In consumer media, had an IWH presence on CBC Sunday Report, Global TV News and the Canadian Press among others. Maintained increase established from previous year in trade media but greatly increased number of stories about IWH through online magazines and social media.

Team: Anita Dubey (Project Leader), Jane Brenneman Gibson, Kristina Buccat, Cindy Moser

Potential Audiences and Significance: Media, general public, external stakeholders. Dissemination will occur through personal contact (email, telephone), media releases, the IWH website, a targeted media mailing of the At Work newsletter and other opportunities as they arise.

Outreach (0650)

Project Status: Ongoing

Introduction: The Institute continues to engage in opportunities and activities to increase its visibility provincially, nationally and internationally. Throughout the year there are key events and conferences in which the Institute participates. During these, targeted information can be made available to stakeholder groups to raise IWH's awareness and profile. In addition, the Institute uses these opportunities to market its products to increase awareness. Also, IWH will undertake a series of workshops (2 per year) which will focus on increasing knowledge about research.

Objectives:

- Continue to develop themed displays to meet targeted audiences, profiling key research initiatives where appropriate. Use these opportunities to demonstrate use of research evidence in improving health of worker. Increase the visibility of the Institute.
- Coordinate and lend support to a calendar of key events.
- Take advantage of opportunities to increase awareness of the Institute's research and knowledge transfer and exchange activities.
- Profile the Institute as a credible resource of evidenced-based information and tools.
- Plan and implement two workshops annually which will be revenue generating for IWH.

Results: Quarterly reports were produced for communications and update reports calendar of events.

Team: Ben Amick, Jane Brenneman Gibson, Kristina Buccat, Anita Dubey, Emma Irvin, Philip Kiff, Greer Palloo, Katherine Russo

Potential Audiences and Significance: Institute's external and internal stakeholders; others listed in the Institute's database; other individuals/organizations doing similar work or interested in the work of the Institute.

Alf Nachemson Memorial Lectureship (0645)

Project Status: Ongoing

Introduction: Established by the Institute in 2002 to honour Dr. Alf Nachemson's significant contribution to research evidence in clinical decision-making, the Alf Nachemson Lectureship is awarded annually to a prominent national or international individual who has made a significant and unique contribution to a number of work and health-related themes, including the interface between work and health, the role of evidence in decision-making or evidence-based practice in the prevention of work-relevant injury, illness or disability. The lecture is delivered at a networking event to which many of the Institute's stakeholders are invited. Dr. Nachemson died in 2006 and thus the title of the lecture series has been revised to note his passing.

Objectives:

- To increase the visibility of the Institute provincially, nationally and internationally.
- To identify and acknowledge individuals who have made significant and unique contributions to work-health research. To provide an opportunity for Institute staff and stakeholders to network.

Results: The 2009 Alf Nachemson Memorial Lecture was held on November 25 at the Design Exchange, Bay Street, Toronto. The seventh recipient of this memorial award, Dr. Joan Eakin, Professor in the Dalla Lana, School of Public Health, Director of the Centre for Critical, Qualitative Health Research at University of Toronto. Presented: No Small Matter - Unpacking the Problem of Health and Safety in Small Workplaces. Approximately 130 stakeholders from WSIB, UHN, MOHLTC, HSAs, universities, research organizations, media, IWH Board of Directors and staff attended this successful event. The Institute's table top unit was used to display corporate materials.

Team: Greer Palloo (Project Leader), Jane Brenneman Gibson, Kristina Buccat, Anita Dubey, Philip Kiff, Katherine Russo

Potential Audiences and Significance: Members of IWH's Board of Directors, stakeholders, other interested individuals and IWH staff members.

Web Development (0630)

Project Status: Ongoing

Introduction: The Institute's website is the key communications tool to keep our external stakeholders up to date on current IWH activities and projects. The website content reflects the growing research and KTE agendas. The objectives for this year are to complete the second stage of the new site redesign, to revise the new design based on user feedback, and then to begin taking advantage of the new platform, either by expanding content or adding new features. In addition to the main corporate site, the Institute also manages the Cochrane Back Review Group site, the DASH (Disabilities of the Arm Shoulder and Hand) website and the CLUG (Cochrane Library Users' Group) sites.

Objectives:

- Maintain current content.
- Continue to refine new site design.
- Launch second stage of new site (this will add a full listing of publications by IWH researchers).
- Survey users about the new site and compare results to 2007 survey.
- Revise site and content based on user feedback.
- Determine next appropriate stage of web development based on IWH priorities.
- Add new features or content to the site as required by IWH priorities.

Team: Jane Brenneman Gibson, Anita Dubey, Philip Kiff, Cindy Moser, Greer Palloo

2009 Accomplishments

Publications

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Books/Chapters

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Gimeno, Amick BC. Health and the organization of work. In: American College of Sports Medicine; Pronk NP, editors. *ACSM's worksite health handbook: a guide to building healthy and productive companies*. Campaign (IL): Human Kinetics; 2009 p. 109-116. [2009-034]

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Other Papers, Unpublished Reports and Reviews

Brisbois R, Pollack N, Saunders R, Lessons from other countries regarding incentives for employer-sponsored training. Ottawa: Canadian Policy Research Networks. March 2009.

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Saunders R. Fostering employer investment in workplace learning: Report on a series of regional roundtables. Ottawa: Canadian Policy Research Networks and the Canadian Council on Learning. April 2009.

External Scientific/Academic Presentations/Conferences 2009

International

Amick BC. Self-reported computer use duration biased the exposure-response relationship of musculoskeletal symptoms. 9-14 Aug 2009; Beijing, China: 17th Congress of the International Ergonomics Association.

Beaton DE. Clinical pathways for secondary fracture prevention – An international perspective. International Osteoporosis Foundation, London, UK. June 2009

Beaton DE, Jiang D, Bogoch E, Sujic R, Sale JEM. and the OSC Evaluation team. Risk and knowledge profiles are associated with treatment uptake: results from the Ontario Osteoporosis Strategy's Fracture Clinic Screening Program. 11-15 Sep 2009; Denver, Colorado; American Society for Bone and Mineral Research Annual Meeting.

Beaton DE, Jiang D, Sujic R, Sale JEM, Bogoch E, and the OSC Evaluation team. Factors influencing the pharmacological management of OP after a fragility fracture: results from the Ontario Osteoporosis Strategy's Fracture Clinic Screening Program. 11-15 Sep 2009; Denver, Colorado; American Society for Bone and Mineral Research Annual Meeting.

Beaton DE, Sujic R, Elliot-Gibson V, Bogoch ER. Pathway to osteoporosis treatment patient perspectives. 18-21 Mar 2009; Athens, Greece: European Society for Clinical and Economic Aspects of Osteoporosis and Osteoarthritis.

Beaton DE, Sujic R, Jiang D, Sale J, Bogoch E. Outcomes of the province-wide post fracture osteoporosis screening program. 11-15 Sep 2009; Denver, Colorado American Society for Bone and Mineral Research Annual Meeting.

Busse JW. Evidence-based surgery and the hierarchy of research design and three workshops co-presented with Brad Petrisor (Challenges in designing and conducting surgical trials: debate and practical examples; Advanced concepts of multicentre trials; Critical appraisal session (surgery trial). 26-28 Oct 2009; Barcelona, Spain: Evidence-based surgery: clinical trials in surgery. Centro Cochrane Iberoamericano.

Busse JW. Ultrasound and fracture repair. 5 Dec 2009; Monte Carlo: International Society for Fracture Repair.

Busse JW, Hoang-Kim A. Co-Moderators for the Workgroup: Hip fracture Outcome. 4 Dec 2009; Monte Carlo: International Society for Fracture Repair..

Davis A, Perruccio A, Beaton DE, Streiner D, Badley E, Flannery J, Gignac M, Côté P, Wong R, Hogg-Johnson S, Ibrahim S. Understanding early recovery following primary total hip and knee replacement. 18-21 Oct 2009; Philadelphia, PA: American College of Rheumatology Annual Scientific Meeting.

Elliot-Gibson VIM, Jain R, Jiwa F, Beaton DE, Bogoch ER, Richie S, Samji F. Population based post-fracture osteoporosis program. 18-21 Mar 2009; Athens, Greece: European Society for Clinical and Economic Aspects of Osteoporosis and Osteoarthritis.

Furlan AD. Non-pharmacological therapies for chronic low back pain. Current evidence and future research directions. 27 May 2009; Bethesda, USA: NIH – NCCAM (National Center for Complementary and Alternative Medicine)

Gignac M, Xingshan C, Beaton DE, Lacaille D, Bombardier C, Anis A, Badley E. Is working with arthritis bad for your health? 18-21 Oct 2009; Philadelphia, Pennsylvania: Association of Rheumatology Health Professionals (ARHP) 2009 Annual Scientific Meeting.

Ibrahim SA, Breslin FC, Hogg-Johnson S, Mahood Q. Work stressors and psychotropic drug use: Longitudinal analysis using a national sample. 5-8 Nov 2009 San Juan, Puerto Rico; American Psychological Association (APA) Work, Stress, and Health Conference. (Generic)

Ibrahim SA, Smith P, Hogg-Johnson S. Trajectories of work stressors in a Canadian national sample: 1994-2006. 5-8 Nov 2009 San Juan, Puerto Rico; American Psychological Association (APA) Work, Stress, and Health Conference. (Generic)

Mansfield E. Injury commemoratives and the politics of prevention in OHS: Professional and vernacular voices in a young worker memorial campaign. 3-5 Sep 2009; Manchester, UK: BSA Medical Sociology Group 41st Annual Conference.

Mustard CA. Does regulation help to tackle future challenges? Future challenges for workers' compensation. Invited presentation. 18-20 Mar 2009; Munich, Germany: 4th International Workers' Compensation Symposium

Robson LS, Macdonald S, Van Eerd D, Gray G, Bigelow P. OHS management audits: the importance of their measurement properties. 15-16 Oct 2009; Dresden, Germany. Colloquium of the International Social Security Association International Section for Research on Prevention: Research on the Effectiveness of Prevention Measures at the Workplace. (Project 267: OHS Management Audit Tools)

Robson LS, Speers J, Mustard CA. Development of a performance measurement report for the prevention system in a Canadian province. 15-16 Oct 2009; Dresden, Germany: Colloquium of the International Social Security Association International Section for Research on Prevention: Research on the Effectiveness of Prevention Measures at the Workplace.

Smith PM. Examining changes in the determinants of job satisfaction in Canada between 1994 and 2005. 27-30 Sep 2009; Cracow, Poland: 5th International Conference on Work Environment and Cardiovascular Diseases.

Smith PM. Estimating the risk of work injury among employees of small workplaces in Ontario, Canada. 20-23 Oct 2009; Elsinore, Denmark: Understanding Small Enterprises (USE) International Conference.

Steenstra IA, Ibrahim SA, Pransky GS, Franche R-L, Hogg-Johnson S, Shaw WS. Poster: Validation of a risk factor-based intervention strategy model using data from the readiness for return to work cohort study. 14-17 Jun 2009; Boston, USA: 2009 Primary Care Research International Low Back Pain Forum X. (Project 340)

Sun X, Briel M, Akl E, Busse JW, Diaz-Granado N, Majza F, Bala M, You J, Srinathan S, Alshurafa M, Walter SD, Guyatt GH. Differential reporting of subgroup analyses in trials between high impact and lower impact journals. 11-14 Oct 2009; Singapore: Abstracts of the 17th Cochrane Colloquium. Cochrane Database of Systematic Reviews, Supplement 2009:18.

Tang K, Beaton DE, Gignac MAM, Lacaille D, Badley E, Anis AH, Bombardier C. Predicting arthritis-related work transitions within one year: Which at-work disability measure is best? 18-21 Oct 2009; Philadelphia, PA: American College of Rheumatology (ACR) 2009 Annual Scientific Meeting.

Tang K, Beaton DE, Gignac M, Lacaille D, Badley E, Anis A, Bombardier C. The work instability scale for rheumatoid arthritis – Does it work in osteoarthritis? 10-13 Jun 2009; Copenhagen, Denmark: European League Against Rheumatism (EULAR) Annual Congress.

Tang K, Beaton DE, Lacaille D, Gignac M, Badley E, Anis A, Bombardier C. The work instability scale for rheumatoid arthritis predicts work transitions in persons with osteoarthritis or rheumatoid arthritis. 10-13 Jun 2009; Copenhagen, Denmark: European League Against Rheumatism (EULAR) Annual Congress.

Tompa E. Ergonomics and economics: evidence and methods issues from a systematic review. 16-18 Jan 2009; San Francisco, California: Marconi Conference, sponsored by the Office Ergonomics Research Committee (OERC).

Tompa E. Ergonomics and economics: evidence and methods issues from a systematic review. 23 Jan 2009; Helsinki, Finland: Finnish Institute for Occupational Health.

Tompa E. Current state of the art in economic evaluations of OSH interventions. 17-18 Sep 2009; Amsterdam, The Netherlands; Economic Consequences of Occupational Safety and Health (EOSH) Workshop.

Smith PM, Mustard CA, Chen C, Kosny A, Chan S. An examination of the working conditions and risk factors for work-related injuries among immigrant workers in Canada. 15 Dec 2009; Victoria, Australia: Centre for Occupational and Environmental Health. (Project 413: Immigrants; RDC)

National

Bhandari M, Busse JW, Kulkarni AV, Devereaux PJ, Pamela L, Bajammal S, Guyatt GH. Influence of authorship order and corresponding author on perceptions of authors' contributions. 10-12 Sep 2009; Vancouver, BC: 6th International Congress on Peer Review and Biomedical Publication.

Busse JW. Advancing research in the clinical stream. 1-2 Oct 2009, Montreal, PQ: Workshop to Advance the Canadian Chiropractic Research Agenda.

Busse JW, on behalf of the SPRINT Investigators. Poster: A comparison of the discriminative ability and responsiveness of the short musculoskeletal function assessment questionnaire function index and the short Form-36 physical summary score among tibial fracture patients. 3-6 Jul 2009; Whistler, BC: Canadian Orthopaedic Association Annual Meeting.

Busse JW. Complex disability. 30 Apr-2 May 2009; Montreal, QC: World Federation of Chiropractic (WFC) 10th Biennial Congress.

Daniels TR, Pinsker E, Inrig T, Warmington K, Beaton DE. Do lower extremity outcome questionnaires used to assess ankle replacements and fusions really capture what patients want us to hear? 15-18 Jul 2009; Vancouver, BC: American Orthopaedic Foot & Ankle Society.

Daniels TR, Pinsker E, Inrig T, Warmington K, Beaton DE. Do lower extremity outcome questionnaires used to assess ankle replacements and fusions really capture what patients want us to hear? 3-6 Jul 2009; Whistler, BC: The Canadian Orthopaedic Association.

Elliot-Gibson VIM, Jain R, Beaton DE, Sujic R, Jiwa F, Bogoch ER, Richie S, Samji F. Osteoporosis post fracture screening program. 26-29 Apr 2009; Kelowna, BC: Canadian Orthopaedic Nurses Association Conference.

Mustard CA. Who returns to work and why? Evidence from a six-country study of disability and work integration. 12 Jun 2009; Ottawa, ON: Roundtable, Barriers to Labour Market Participation of People with Disabilities, Human Resources and Social Development Canada.

Saunders R. Pathways for youth to the labour market. 13 Nov 2009; Ottawa, ON: , Human Resources and Social Development Canada Roundtable on Youth and the Canadian Labour Market.

Tompa E, de Oliveira C, Dolinschi D, Irvin E. A systematic review of disability management interventions with economic evaluations. 11-12 Mar 2009; Halifax, NS: 7th Annual Canadian Cochrane Symposium. (Project 960: SR – Economic Evaluation of Workplace Interventions)

Tompa E, Dolinschi R, de Oliveira C, Irvin E. A systematic review of occupational health and safety interventions with economic analyses. 11-12 Mar 2009; Halifax, NS: 7th Annual Canadian Cochrane Symposium. (Project 960: SR – Economic Evaluation of Workplace Interventions)

Local and Provincial

Busse JW. Composite endpoints and clinically important outcomes. 2 Nov 2009; Hamilton, ON: North American Travelling Fellowship.

Busse JW. The use of data abstraction forms for systematic reviews of randomized controlled trials. 28 Sep 2009; Hamilton, ON: Webinar for Health Research Methodology (HRM) 743.
Download at: http://www.ltrc.mcmaster.ca/articulate/HRM/773/unit06_data_collection_forms/player.html

Busse JW. Chronic pain and other medically unexplained syndromes. 23-24 Sep 2009; Mississauga, ON: Ontario Teachers Insurance Plan (OTIP) Benefits Workshop 2009.

Busse JW. What is a systematic review [meta analysis]? and; Trial organization: Research coordinators and committees; and coordinator of a small group session (Bias Detective 101). 16-18 Sep 2009; Mississauga, ON: AOID Clinical Research Group at the 3rd Annual Principles and Practice of Clinical Research.

Frank JW, Smith PM. Building a research agenda for working conditions and mental health: what do we know, what do we need to know and how should we get there? 28-30 Oct 2009; Toronto, ON: 4th Annual Canadian Congress for Research on Mental Health and Addiction in the Workplace.

Furlan A. Interview to CityTV - CityNews, August 4, 2009. Mortality after fractures in elderly people with osteoporosis.

Furlan A. Interview to CMAJ News. Regulatory colleges to set painkiller guidelines. August 31, 2009
http://www.cmaj.ca/earlyreleases/31aug09_painkiller.shtml

Hogg-Johnson S. Long duration claims in Ontario. 11-12 May 2009; Toronto, ON: Scientific Advisory Committee Meeting.

Hogg-Johnson S, Saunders R. Long-duration claims. 18 Nov 2009; Toronto, ON: Canadian Manufacturers and Exporters, Ontario Division.

MacEachen E, Eakin J, Mansfield L, Clarke J. An ethnographic study of frontline service work at WSIB. 27 May 2009; Oakham House, Ryerson University, Toronto: 2009 Office of the Worker Adviser Learning Conference (Project 227)

Robson LS, Keown K, Macdonald S, Van Eerd D. Auditing and measurement workshop. 29 May 2009; Mississauga, ON: Centre for Health & Safety Innovation.

Saunders R. Trends in no-lost-time and lost-time claims by age group in Ontario: 1991 to 2007. 12 Mar 2009; Toronto, ON: Occupational Health and Safety Council of Ontario.

Saunders R, Smith P. Claims trends. 18 Jun 2009; Toronto, ON: Canadian Manufacturers and Exporters, Ontario Division, OHS Committee.

Tompa E, Culyer AJ, Dolinschi R (eds). Launch of “Economic Evaluation of Interventions for Occupational Health and Safety: Developing Good Practice.” (Oxford: Oxford University Press). WSIB RAC Meeting, Toronto, Ontario. March 6, 2009.

Van Eerd D, Keown K. Participatory ergonomics: Key aspects for a successful program. 26-28 May 2009; Toronto, ON: ESAO Conference. (Project 985: SR-Participatory Ergonomics Effectiveness Phase 2)

Educational, Professional, Policy & Other Presentations

Amick B, Gibson J, Irvin E, Keown K, Lambert L, Mahood Q, Van Eerd D. Stakeholder meeting with CHSRF, Li Ka Shing Knowledge Institute, University of Waterloo, York University, CPSO. 17 Dec 2009: KTE Systematic Review.

Beaton DE. Bringing guidelines to reality: the role for models of behaviour change in care of osteoporosis after fracture. Nov 2009; Toronto, ON: CIHR-IMHA Consensus workshop on bone health.

Beaton DE. Measurement methods. Nov 2009: Clinical Epidemiology Institute.

Bombardier C, Irvin E, Furlan A, Tomlinson G, van Tulder M. Systematic reviews workshop. 18-19 Jun 2009; Toronto, ON.

Busse JW. The assessment and management of complex claims. 26 Nov 2009; Toronto, ON: LOMA Canada Educational Section Fall 2009 Meeting entitled: “Claims: Power of Analysis”.

Irvin E, Mustard CA. Evidence Based Practice Group. 5 Feb 2009; WorkSafeBC Cochrane Satellite.

Hogg-Johnson S. The problem of long duration claims – what is driving increases in duration and locked-in claims. 5 Nov 2009; Hopkinton, MA: Workers Compensation Research Group

Kennedy CA, Beaton DE, Shupak R, Warmington K. Prescription for Education: A pilot study of the effectiveness of an education program for adults with inflammatory arthritis. GTA Best Practices Day: Rehabilitation Transforming Healthcare, Toronto, ON. March 2009.

Keown K, Macdonald S. Economic Evaluation Workbook promotional presentations at three Ontario Service Safety Alliance advisory committees meetings, Toronto, Ontario. Feb 5-9, 2009.

Mustard CA, Conference Chair. Workplace mental health: A platform for change. Ontario Hospital Association. Toronto, Ontario. May 29, 2009.

Robson LS, MacDonald S, Keown K, Van Eerd D. Auditing and measurement workshop for health & safety associations. 29 May 2009; Toronto, ON: Centre for Health & Safety Innovation – Health & Safety Association. (Project 267: OHS Management Audit Tools)

Van Eerd D. Factors associated with problematic pain in workers. 25 Feb 2009; University of Toronto, Health Sciences Building, Epidemiology Seminar Series.

IWH Plenaries

January

Mustard Fellowship 2006-2008: Subgroups in low back pain disability cases

Presenter: Ivan Steenstra, IWH (Jan 13)

The case for specific targeted enforcement where regulatory oversight by professionals is inadequate

Presenter: Michael Chappell, Ontario Ministry of Labour (Jan 27)

February

An examination of the working conditions and risk factors for work-related injuries among immigrant workers in Canada

Presenter: Peter Smith et al, IWH (Feb 3)

IWH Strategic Research Plan 2008 - 2012

Presenter: Ben Amick, IWH (Feb 17)

A systematic review of health and safety in small enterprises: Findings from quantitative and qualitative literature

Presenters: Ellen MacEachen and Curtis Breslin, IWH (Feb 24)

March

Language translation in research: What is missed? What is gained?

Presenters: Agnieszka Kosny, Emma Irvin and Dorcas Beaton, IWH (Mar 17)

Examining trends in no-lost-time claims in Ontario: 1991 - 2006

Presenter: Peter Smith et al, IWH (Mar 31)

April

Preventing Construction Accidents at Design Concept and Research

Presenter: Carmine Tiano, Director, WSIB Training and Advocacy, Ontario Building Trades (Apr 21)

May

Commitment, Motivation, and Employee Well-Being

Presenter: Elyse Maltin, Syme Fellow, IWH (May 5)

Systematic Review of the Effectiveness of Training & Education for the Protection of Workers

Presenter: Lynda Robson et al, IWH (May 19)

Enacting the service role: Implications of "backstage" behaviour by service agents in response to customer aggression

Presenter: Aaron Schat, DeGroot School of Business, McMaster University (May 26)

June

Health trajectories and health care utilization among permanently impaired injured workers: initiation of a longitudinal survey

Presenter: Peri Ballantyne, Trent University (June 2)

Finding common ground: The use of commemoratives in young worker injury prevention

Presenter: Liz Mansfield, Mustard Fellow, IWH (Jun 9)

Using cross-national survey data for research into work and health: a comparative study of unemployment and health in Canada, Germany, and the United States

Presenter: Christopher McLeod, University of British Columbia (Jun 23)

September

Bridging the safety gap for youth using employment centres

Presenter: Curtis Breslin, IWH (Sep 15)

Life Course Socioeconomic Position and Type 2 Diabetes: The Framingham Offspring Study

Presenter: Brendan Smith, IWH (Sep 22)

October

Making a difference in MSD prevention

Presenter: Richard Wells, University of Waterloo (Oct 6)

What does it mean to be 'On Disability' in Canada?

Presenter: John Stapleton, Metcalfe Foundation Fellow (Oct 20)

November

Occupational Cancer: Knowledge and Needs

Presenter: Aaron Blair, Occupational Cancer Research Centre, Toronto, ON and the Occupational and Environmental Epidemiology Branch, National Cancer Institute, Bethesda, MD (Nov 4)

Coordination of return-to-work stakeholders in a changing welfare system

Presenter: Christian Stahl, National Centre for Work and Rehabilitation, Linköping University, Sweden (Nov 10)

Job Quality: What is it, why does it matter, and how can it be improved?

Presenter: Graham Lowe, The Graham Lowe Group (Nov 17)

The problem of long duration claims

Presenter: Sheilah Hogg-Johnson, IWH (Nov 24)

December

Asking what matters: A first step towards improving return to work (RTW) outcome measurement

Presenter: Rhysa Leyshon, PhD (Cand.), Rehabilitation Sciences, University of Western Ontario (Dec 1)

Economic inequality in adult mortality in Canada

Presenter: Jacob Etches, IWH (Dec 8)

Trends in the incidence and cost of workers' compensation claims in the Ontario and British Columbia long-term Care sectors, 1998-2007

Presenter: Cam Mustard et al (Dec 15)

Research Project Funding - Awarded

Amick B, Hogg-Johnson S, Mustard C, Smith P, Tompa E, Robson L, Steenstra I. Benchmarking leading organizational indicators for the prevention and management of injuries and illnesses. WSIB RAC: \$363,072 (2009-2012) Project 1160

Ammendolia C. Healthy and productive workers – designing a multidisciplinary health promotion and wellness program to improve presenteesim at the workplace. Canadian Chiropractic College: \$149,500 (2009-2010) Project 1140

Ammendolia C, Franche R-L, Steenstra I. RETORK – Ontario trial of Sherbrooke model. CREIDO: \$60,000 (2008-2009) Project 251

Bigelow P, Iverson R, Skarlicki D. British Columbia workplace safety leadership development. WorkSafe BC: \$22,481 (2008-2009) Project 256

Furlan A, Dissemination and implementation of the NOUGG Guidelines of Opioids for Chronic Non-Cancer Pain. CIHR: \$25,000 (2008-2009)

Smith P, Glazier R, Mustard C. A longitudinal examination of the relationship between immigrant labour market experiences, health behaviours and the incidence of diabetes and hypertension. CIHR: \$64,995 (2009-2011) Project 1165

Administered Externally

Bigelow P, Hogg-Johnson S, Amick B, Sieber K. Development of an Ontario-wide survey to study factors impacting the health and safety of truck drivers in Ontario. WSIB RAC: \$29,905 at University of Waterloo (2008-2009)

Boyle E, Steenstra I, Beaton DE. Workplace characteristics impact on RTW. CREIDO: \$29,866 at CREIDO (2008-2009) Project 174

Davis A, Badley E, Beaton DE, Côté P, Flannery J, Gignac M, Hogg-Johnson S, et al. Outcome measurement: The importance of time. CIHR: \$624,224 at Toronto Western Hospital Research Institute (2005-2009)

Moher D, Furlan AD, Santaguida L, Gagnier J, Gross A, Ammendolia C, Cherkin D, Dryden T. Complementary and Alternative Therapies for Back Pain II. Agency for Healthcare Research and Quality (AHRQ) US\$249,905 at Chalmers Institute, Ottawa (Aug 2008–Aug 2009) Project 670

Stock S, Delisle A, Gravel S, Koulis T, Kramer D, Silverstein B, Tompa E, Vézina N, Wells R. Evaluation of the Quebec Public Health Program for Prevention of Work-Related Musculoskeletal Disorders, CIHR: \$249,223 (2008-2011)

Tompa E, Endicott M, de Wolff A, Franche R-L, Guzmán J, MacEachen E, Stone SD, Gildiner A, Storey R, Lippel K, Ballentyne P, Eakin J, Kirsh B, Tucker E. CURA: Workers' compensation and the consequences of work injury. SSHRC: \$997,322 at McMaster University (2006-2010) Project 428

Wells R, Amick B, Steenstra I. Development of valid and reliable physical exposure measures for users of hand held mobile communication devices. WSIB RAC: \$29,782 (2009-2010) @ Waterloo

Non-IWH Research Project Funding – Awarded

Ammendolia C, Steenstra I, Bombardier C. Involving stakeholders in the planning of a workplace intervention to improve return-to-work: Putting what we know into action using an intervention mapping approach. WSIB RAC: \$60,000 at University Health Network (2008-2009)

Cassidy JD, Côté P, Carette S, Franche R-L, et al. Centre of research expertise in disability outcomes (CREIDO) Toronto Western Hospital: \$2,000,000 (2006-2011)

Davis A, Badley E, Beaton DE, Côté P, Flannery J, Gignac M, Hogg-Johnson S, et al. Outcome measurement: The importance of time. CIHR: \$624,244 at Toronto Western Hospital (2005-2009)

Guzmán J, Alamgir H, Tompa E, Koehoorn M, Dhalla M. Documenting the economic and quality of life consequences of work injuries for healthcare workers in BC. WorkSafe BC: \$197,707 (2008-2010)

Koehoorn M, Barer M, Côté P, Hogg-Johnson S, McGrail K, McLeod C. Disability outcomes among injured workers: Does surgical setting or expedited payment make a difference? CIHR: \$350,085 at University of British Columbia (2007-2010)

Stock S, Vezina N, Wells R, Amick B, Shannon HS, et al. Development and evaluation of strategies and tools for workplace interventions to prevent work-related musculoskeletal injuries and work disability. CIHR Team: \$10,000 (2008-2009)

Pending or Approved in 2009

Bondy SJ, Smith P, Bigelow P, Kaufman J, Keelan P, Selby L, Zawertailo L. Smoking cessation and workplace policies in the construction and building sector: a text and discourse analysis. CIHR: \$112,780 (2010-2012)

Busse J, Keown K, Soric R, Klatt I, Wilson L, Guyatt G, Montori V. Management of fibromyalgia: a systematic review of randomized controlled trials. CIHR: \$90,143 (2010-2011)

Davis A, Perrucchio L, Badley E, Hogg-Johnson S, Gignac M, Beaton DE. The importance of self-rated health in predicting self-management practices and future health status in people with a chronic condition. CIHR: \$672,456 (2010-2014)

Furlan A, Gnam W, Irvin E, Carnide N, Jan, Keown K, Bültmann U, Brouwer S, DeRango K, Amick B. Depression in the workplace: a systematic review of the literature. CIHR: \$110,000 (2010-2011)

Gnam W, Amick B, Beaton D, Butte J, Carnide N, Irvin E, Keown K, Baynton M, MacRitchie I, Scott L, Smeall D, Varela P, Bacchiochi J, Bültmann U. Mood and anxiety disorders and their impact on worker performance, work productivity, sickness absence, and presenteeism. (from CAMH) CIHR: \$99,650 (2010-2011)

Gnam W, Busse J, Amick B, Beaton DE, Bacchiochi J, Bender A. Understanding return to work among workers with mental disorders. (from CAMH) CIHR: \$390,355 (2010-2012)

Gnam W, Busse J, Amick B, Beaton DE, Bacchiochi J, Bender A, Hogg-Johnson S. The impact of multidisciplinary management of post traumatic stress disorder on return to work. (from CAMH) Ontario Mental Health Foundation: \$144,331 (2010-2012)

Gotay C, Adair C, Amick B, Corbett K, Storoschuk S. Interventions to increase workplace wellness. Canadian Cancer Society: \$583,111

Loisel P, MacEachen E, et al. Knowledge synthesis on the core elements of intervention and implementation to foster the utilization of evidence-based RTW interventions for workers presenting with disability from musculoskeletal disorders. CIHR: \$100,000 (2009-2010)

Parminder R, Amick B, Shannon HS, Wolfson C, Kirkland K, et al. Understanding the complexity of injuries and its consequences in the aging population. CIHR: \$2,500,000 (2009-2013)

Scott-Marshall H, Mustard C, Tompa E, Moore I. Permanent impairment and work disability in later-life: Examining the impact on income trajectories and patterns of retirement in older workers. SSHRC: \$144,373 (2010-2012)

Smith P. Examining the relationship between diabetes and working conditions in Ontario. Ministry of Research and Innovation: \$140,000 (2010-2015)

Stock S, Amick B, Tompa E, Steenstra I, CIHR STAIR Team in prevention of work related musculoskeletal injuries (R.Wells, N.Vizina, H.Shannon, B.Silverstein, D.Kramer, K.Messing, A.Delisle, J.Côté, P.Bigelow, S.MacKinnon, P.Neumann, B.Neis) CIHR: \$2,318,237 (2009-2013)

Stock S, Delisle A, Gravel S, Koulis T, Kramer D, Silverstein B, Tompa E, Vézina N, Wells R. Evaluation of the Quebec Public Health Program for Prevention of Work-Related Musculoskeletal Disorders. CIHR: \$249,223 (2009-2012)

Waters E, LaMontagne A, Kelaher M, Carter R, Dunstan D, Gibbs L, de Silva- Sanigorski A, Davis E, Smith P, Paradies Y. Intervention research to improve the population health of children and workers. Centre for Research Excellence Grant, National Health & Medical Research Council of Australia: \$2,365,025 (2010-2015)

Saunders R, Mustard CA, Amick B. WSIB Project Proposal: Key labour market trends and their implications for the WSIB. \$91,800

Research Personnel Funding & Other Awards

Bombardier, Claire: CIHR Research Chair; CIHR Senior Scientist Award 2003-2010 – Administered at University Health Network

Busse, Jason: CIHR New Investigator Award 2008-2012: Trial to re-evaluate ultrasound in the treatment of tibial fractures (TRUST)

Carnide, Nancy: Ontario Graduate Scholarship for 2008-2009; S. Leonard Syme Fellowship for 2008-2009; University of Toronto Open Fellowship for 2008-2009

Kosny, Agnieszka: RACCWI Post-Doc Fellowship

Mansfield, Liz: Mustard Fellow

Smith, Peter: CIHR New Investigator 2008-2012: Examining labour market changes and their consequences on injury and illness in Canada: A focused examination of their effects on recent immigrants.

Institute for Work & Health Staff – 2009

* denotes departed staff

Research

Amick, Ben; PhD, Scientific Director

Ammendolia, Carlo, DC, PhD, Associate Scientist

Beaton, Dorcas; BScOT, MSc, PhD, Scientist

Bigelow, Philip; PhD, Scientist*

Bombardier, Claire; MD, FRCP(C) Senior Scientist

Breslin, Curtis; PhD, Scientist

Busse, Jason; DC, PhD, Scientist

Carnide, Nancy; MSc, Research Associate, PhD Student, Syme Fellow

Chambers, Andrea; PhD Student

Chen, Cynthia; MSc, Research Associate, Analyst

Clune, Laurie; Post-Doctoral Fellow

Cole, Donald; MD, DOHS, MSc, FRCPC(C) Senior Scientist

Couban, Rachel; MA MIS Library Sciences, Library Technician

Cullen, Kim; MSc, Research Associate

Davilmar, Arold; MSc, Research Associate, Analyst

Dolinschi, Roman; MSc, Research Associate, Analyst

Etches, Jacob; PhD, Research Associate

Fang, Miao; MSc, Research Associate, Analyst

Furlan, Andrea; MD, PhD, Scientist

Gnam, William; MD, PhD, Scientist

Hamer, Julie; OT, Research Associate

Harlowe, Linda; Research Operations Administrative Coordinator

Heath, Charmaine; Dip. Business Administration, Administrative Assistant

Hogg-Johnson, Sheilah; PhD, Scientist, Program Chair, Data & Information Systems Program

Ibrahim, Selahadin; MSc, Associate Scientist

Irvin, Emma; BA, Director, Research Operations

Kalcevich, Christina; MA, Research Associate

Kelly, Allison; Dip. S.T. Administrative Editorial Assistant

King, Trevor; BA, MA, Project Coordinator

Kosny, Agnieszka; PhD, Associate Scientist

Lee, Hyunmi; MSc, Programmer Analyst (part time)*

Lifshen, Marni; MA, Project Coordinator

Liu, Joanna; BA, Diploma Library and Information Technology

Lever, Bev; MSW, MHS, Liaison, Partner Relations, Workplace Disability Benchmarking Project

Macdonald, Sara; QEHS Management Diploma, Research Associate
MacEachen, Ellen; PhD, Scientist
Mahood, Quenby; BA, Manager, Library Services
Mansfield, Liz, Mustard Fellow
Mansurova, Lyudmila, BSc, Administrative Assistant
Maselli, Paolo; Network Administrator/Systems Analyst
Moore, Ian; PhD, Post Doctoral Fellow
Morassaei, Sara; BA, Research Operations Coordinator
Padkapayeva, Kathy; Administrative Assistant
Pennick, Victoria; RN, BScN, MHSc, Managing Editor, Cochrane Back Review Group, Education & Training Co-ordinator
Petch, Jeremy; Research Associate, PhD Student
Pugliese, Diana; BA, Administrative and Research Assistant
Raktoe, Shanti; BSc, Administrative Assistant
Robson, Lynda; PhD, Associate Scientist
Sarnocinska-Hart, Anna; MA Economics, Research Associate
Saunders, Ron; PhD, Senior Scientist
Schelkanova, Irina; Research Assistant, Cochrane Back Review Group *
Scott-Marshall, Heather; PhD, Research Associate
Severin, Colette; MSc, Research Associate
Smith, Brendan, PhD Student
Smith, Peter; PhD, Scientist
South, Harriet, BA, Administrative Assistant
Steenstra, Ivan; PhD, Associate Scientist
Subrata, Peter; MSc, Research Associate
Swift, Michael; MSc, Research Associate, Data Manager/Programmer
Tolusso, David; PhD, Post-Doctoral Fellow
Tompa, Emile; MBA, PhD, Scientist
van der Velde, Gabrielle; DC, PhD
Van Eerd, Dwayne; MSc (Kin), MSc (HRM), Associate Scientist, PhD Student
Vidmar, Marjan; MD (Macedonia), MSc, Research Associate, WSIB Data Specialist *
Yao, Grant; BComm, Network Administrator/Systems Analyst

Knowledge Transfer & Exchange

Brenneman Gibson, Jane; MCIsc, Director

Buccat, Kristina; Dip. Radio and Television Production, Administrative Assistant

Dubey, Anita; BSc, BAA, Manager, Communications

Keown, Kiera; MSc, KTE Associate

Kiff, Philip; MA, Communications Associate, Web & Production

Moser, Cindy; BA, Communications Associate

Neilson, Cynthia; MSc, KTE Associate

Palloo, Greer; BSc, Information & Events Coordinator

Russo, Katherine; Dip. Journalism, Communications Associate

Corporate Services

Cicinelli, Mary; BA, CHRP, Director, Human Resources & Corporate Services

Maccarone, Dylan; Accounting Clerk

Mustard, Cameron; ScD, President

Sir, Cathy; CMA, Manager, Financial Services

Research/Professional Collaborations and Networks, Appointments and Offices

AMICK, Benjamin

Chair: Data Safety Monitoring Board, Veterans Affairs Project CSP#560
Member: NIOSH Board of Scientific Councillors
Member: American Public Health Association
Member: American Society for Safety Engineers
Member: American Sociological Association
Member: Society for Epidemiological Research
Member: Human Factors and Ergonomics Society

AMMENDOLIA, Carlo

Member: Canadian Chiropractic Association
Member: Ontario Chiropractic Association
Member: Canadian Memorial Chiropractic College Governors' Club
Member: Canadian Chiropractic Research Foundation Allocating Committee
Member: Canadian Chiropractic Rehabilitation Sciences
Member: Ontario Acupuncture Council
Member: Associate Scientist, the Bone and Joint Decade 2000-2010 Task Force on Neck Pain and its Associated Disorders
Member: KTE Hub Steering Committee
Member: Steering Committee OSCHO Disability Prevention/RTW Project for HSAs

BEATON, Dorcas

Canadian Representative: Scientific Committee, International Federation of Societies of Hand Therapy
Canadian Delegate: Council of the International Federation of Societies of Hand Therapy
Chair: Research Committee, American Society of Elbow Therapists
Chair: Meeting Planning, Policy and Evaluation committee at ISOQOL
Founding Member: Canadian Society of Hand Therapists
Member: American Society of Shoulder and Elbow Therapists, Member of Research Committee, 1995 –
Member: Canadian Association of Occupational Therapists
Member: College of Occupational Therapists of Ontario
Member: Upper Extremity Collaborative Group (IWH, American Academy of Orthopaedic Surgeons)
Member: Canadian Arthritis Network
Member: International Society of Quality of Life Research
Member: Advisory Committee, The Bone & Joint Decade 2000-2010 Task Force on Neck Pain and its Associated Disorders
Member: Social Dimensions in Aging Panel

BOMBARDIER, Claire

Fellow: Royal College of Physicians of Canada F.R.C.P.(C)
Member: Advisory Board, SONORA Study, Abbott Pharmaceutical Company, 2000 –
Member: AMGEN - Kineret Registry Steering Committee, 2002 –
Member: Merck -Etoricoxib Outcomes Study Steering Committee , 2002 –
Member: Merck Frosst Rheumatology Medical Advisory Council (MEDAC), 2002 –
Member: AMGEN Global Advisory Board in Inflammation, 2003 –
Member: COX-2 International Lifecycle Advisory Board 2004 –
Member: Canadian Arthritis Network - Research Management Committee, 2005 –
Chair: Aleve Advisory Board (Bayer), 2006 –
Member: CORRONA Board of Directors, 2007 –
Member: Combinatorx Incorporated Scientific Advisory Board, 2007-2009
Member: Advisory Board, WHO International Task Force on Neck Pain, 1999 –
Member: American Federation for Clinical Research (AFCR)
Member: Canadian Society for Clinical Investigation (CSCI)
Member: Society for Medical Decision Making (SMDM)
Member: Canadian Rheumatism Society (CRS)

Member: American Public Health Association (APHA)
Member: American Rheumatism Association (ARA)
Member: Canadian Medical Association (CMA)

BRENNEMAN GIBSON, Jane

Member: Planning Committee Ontario KTE Community of Practice
Chair: HSA Liaison Committee
Chair: KTE Hub Steering Committee
Member: College of Audiologists and Speech-Language Pathologists of Ontario

BRESLIN, Curtis

Member: Ontario College of Psychologists
Member: Canadian Psychological Association
Member: Young Worker Delphi Panel, WSIB

BUSSE, Jason

Certified Fellow of the American Board of Disability Analysts
Editorial Board of the Journal of the Canadian Chiropractic Association
Member: Canadian Chiropractic Association
Member: Canadian Chiropractic Protective Association
Member: Canadian Chiropractic Research Association
Member: Canadian Pain Society
Member: College of Chiropractors of Ontario
Member: CLARITY (Clinical Advances through Research and Information Translation)
Member: Ontario Chiropractic Association
Member: Vocational Rehabilitation Association of Canada

CARNIDE, Nancy

Member: Canadian Association for Research on Work and Health
Member: Canadian Society for Epidemiology and Biostatistics

COLE, Donald

Fellow: Royal College of Physicians and Surgeons of Canada, in Occupational Medicine and Community Medicine
Head: Agriculture and Human Health Division of the International Potato Center
Member: Canadian Association for Research on Work & Health
Member: Canadian & Ontario Public Health Associations
Member: Canadian Society of International Health
Member: Centre for the Environmental Steering Committee
Member: International Society for Environmental Epidemiology

DOLINSCHI, Roman

Member: Canadian Pension & Benefits Institute

FURLAN, Andrea

Member: Editorial Board of the Cochrane Back Review Group
Member: Canadian Medical Association
Member: Ontario Medical Association
Member: Canadian Association of Physical Medicine and Rehabilitation
Member: Canadian Pain Society
Member: International Association for the Study of Pain

HOGG-JOHNSON, Sheilah

Member: Statistical Society of Canada

Member: Accreditation Committee of Statistical Society of Canada

Professional Statistician: Statistical Society of Canada

Member: Admissions Committee, Work Disability Prevention CIHR Work Disability Training Program, Université de Sherbrooke, Longueuil, PQ

Member: Canadian Association for Research on Work and Health

Member: Workers' Compensation Research Group

IBRAHIM, Selahadin

Member: Statistical Society of Canada

Professional Statistician: Statistical Society of Canada

IRVIN, Emma

Member: Publishing Policy Group of the Cochrane Collaboration

Convenor: Cochrane Library Users Group

KENNEDY, Carol

Member: College of Physiotherapists of Ontario

KEOWN, Kiera

Member: Ontario Kinesiology Association

Member: Canadian Association for Research on Work and Health Membership Subcommittee

KOSNY, Agnieszka

Executive Committee: Canadian Association for Research on Work and Health

MACEACHEN, Ellen

Member: Board of Directors (President), Canadian Association for Research on Work and Health,

Member: Program Executive Committee, Work Disability Prevention CIHR Strategic Training Program

University of Toronto

Member: Program Advisory Committee, Work Disability Prevention CIHR Strategic Training Program

University of Toronto

Member: Steering Committee, Centre for Critical Qualitative Health Research, University of Toronto

Member: Editorial Board, Journal of Occupational Rehabilitation

Member: Canadian Anthropology and Sociology Association

Member: British Sociological Association

Facilitator: IWH Qualitative Journal Club

MAHOOD, Quenby

Member: Canadian Health Libraries Association

MUSTARD, Cam

Member: Expert Advisory Committee, Canadian Health Examination Survey, Statistics Canada

Member: Editorial Advisory Board, Longwoods Review

Member: Occupational Health and Safety Council of Ontario, 2002 –

Member: Passport to Safety Standards and Advisory Board, 2002 –

Member: Research Advisory Council, WSIB of Ontario, Jul 2001 –

Member: Steering Committee, Toronto Region Research Data Centre, Sep 2005 –

Affiliate: Centre for Health Services and Policy Research, University of British Columbia, Jul 2008 –

Member: Scientific Advisory Committee, INTERxVENT Canada, Jun 2008 –

Member: Advisory Board International Journal of Social Security and Workers Compensation, 2008 –

NEILSON, Cynthia

Ontario Federation of Teachers

Member: Canadian Association for Research on Work and Health

Member: Syme Selection Committee

PENNICK, Victoria

Member: College of Nurses of Ontario

Member: Registered Nurses Association of Ontario

Member: Canadian College of Health Service Executives

ROBSON, Lynda

Member: Canadian Association for Research on Work and Health

Member: Canadian Evaluation Society

SAUNDERS, Ron

Chair: Program Committee, Canadian Association for Research on Work and Health 2010 Conference

Member, American Economics Association

Member, Advisory Committee for the Satellite Account of Non-profit Institutions and Volunteering

SCOTT-MARSHALL, Heather

Member: Canadian Association for Research on Work and Health

SEVERIN, Colette

Member: Canadian Public Health Association

SMITH, Peter

Member: Public Health Association of Australia

Member: Special Interest Group on Injury Prevention

Member: Canadian Association for Research on Work & Health

STEENSTRA, Ivan

Member: Workers' Compensation Research Group

Member: Dutch Society of Epidemiology (VVE)

Member: Dutch Society for Human Movement Sciences (VvBN)

Member: Scientific Committee, 3rd ICOH International Conference on Psychosocial Factors at Work

TOLUSSO, David

Member: Statistical Society of Canada

Member: Workers' Compensation Research Group

TOMPA, Emile

Member: Canadian Association for Research on Work and Health

Member: Workers' Compensation Research Group

Member: International Health Economics Association

van der VELDE, Gabrielle

Member: Canadian Chiropractic Association

Member: Ontario Chiropractic Association

Member: International Society of Quality of Life Research

Member: Society for Medical Decision Making

Member: Scientific Secretariat, the Bone and Joint Decade 2000-2010 Task Force on Neck Pain and its Associated Disorders

Teaching, Educational and Service Activities

AMICK, Ben

Teaching/Educational Role

Professor: Behavioural Sciences, Epidemiology and Occupational Safety and Health, University of Texas Health Science Centre, 2007 –

Co-Director: Fogarty International Training Program in Injury and Trauma, University of Texas Health Science Centre 2006 –

Director: Occupational Injury Prevention Research Doctoral Training Program, University of Texas Health Science Centre, 2001 –

Service Activities

Ad-Hoc Reviewer: Workers Compensation Board, British Columbia

Ad-Hoc Reviewer: Workers Compensation Research Advisory Committee

Ad-Hoc Reviewer: Workers Compensation Board, Saskatchewan

AMMENDOLIA, Carlo

Teaching/Educational Role

Assistant Professor: Dept Health Policy Management and Evaluation (HPME), University of Toronto

Tutor: Controlled Clinical Trials Graduate Course (HPME)

Lecturer: Introduction to Clinical Epidemiology (HPME)

Lecturer: Canadian Memorial Chiropractic College

Lecturer/instructor: Rheumatology Residents/Fellows, Mount Sinai Hospital

Service Activities

Reviewer: Canadian Chiropractic Association Journal

Reviewer: The Spine Journal

Reviewer: Spine

BEATON, Dorcas

Teaching/Educational Role

Associate Professor: Occupational Therapy, University of Toronto

Graduate Appointments: Health Policy Management and Evaluation and Graduate, Rehabilitation Sciences

Lecturer: Advanced Measurement course, University of Toronto

Course Coordinator: Introduction to Measurement, University of Toronto; Measurement Theory in the New Millennium - Graduate Rehabilitation Sciences Outcome Measurement: Measurement Properties, University of Toronto

Course Coordinator: Measurement in Clinical Research, HPME Course, Winter 2008

Reviewer: College of Reviewers, Canada Foundation for Innovation.

Service Activities

Grant Committees: CIHR, The Arthritis Society, Hospital for Sick Children Foundation, SSHRC, WSIB Research Advisory Council

Journal Referee: Journal of Clinical Epidemiology, Medical Care, JAMA, International Journal of Epidemiology, Quality of Life Research, Spine, Journal of Rheumatology, Journal of Shoulder and Elbow Surgery, Journal of Bone and Joint Surgery

BOMBARDIER, Claire

Teaching/Educational Role

Co-Scientific Director: Canadian Arthritis Network (CAN)

Director: Division of Rheumatology, University of Toronto

Director: Clinical Decision Making and Health Care, Toronto General Research Institute
Staff Physician: Rheumatic Disease Unit, Mount Sinai Hospital, Toronto
Professor: Medicine/Health Administration, University of Toronto
Guest Professor: University of Toronto, MSc, HAD 5302: Measurement in Clinical Research
Guest Lecturer: University of Toronto, Clinical Epidemiology Students - PhD Thesis Course
Instructor: IWH Systematic Reviews Workshop
MSc Thesis Supervisor: Bindee Kuriya, Roberta Berard, Wanruchada Katchamart
PhD Thesis Supervisor: Joel Gagnier
Post Doctoral Fellowship Supervisor: Carine Salliot, Judith Trudeau, Edith Villeneuve (co-supervisor)
Member: School of Graduate Studies, Division of Community Health, University of Toronto
Member: School of Graduate Studies, Institute of Medical Science, University of Toronto

Service Activities

Member: Multidisciplinary Clinical Research Center in Musculoskeletal Diseases
Member: Canadian Arthritis Network Disease Management Core Instrument Committee@, 2001 –
Chair, Data Safety and Monitoring Board (DSMB) “Study to Prospectively Evaluate Reamed
Intramedullary Nails in Tibial Shaft Fractures Trial” (SPRINT). National Institute of Musculoskeletal and
Skin Diseases (NIAMS), 2002 –
Member: Multidisciplinary Clinical Research Center in Musculoskeletal Diseases (MCRC) Scientific
Advisory Board, Dartmouth Medical School, 2003 –
Member, Canadian Council of Academic Rheumatologists (CCAR) [as Director, Division of
Rheumatology, University of Toronto] 2003 –
Team Leader, Effectiveness Task Force, 2004 –
Member: Journal of Clinical Epidemiology Policy Advisory Board, 2004 –
Member: Pfizer - OSCARE Scientific Committee Meeting 2004 –
Member: American Pain Society Clinical Guidelines Project – Low Back Pain Panel 2005 –
Member: Canadian Rheumatology Association (CRA) Therapeutics Committee “Creating Canadian
Guidelines for Treatment of Rheumatoid Arthritis [RA]”, 2005 –
Member: Expert Task Force “Recommendations for the use of Biological (and Nonbiological) Agents in
the Treatment of Rheumatoid Arthritis” for American College of Rheumatology (ACR), 2006 –
Chair: Canadian Council of Academic Rheumatologists (CCAR) 2006-2008
Member: Medical Advisory Committee, Toronto Arthritis Society [as Canadian Council of Academic
Rheumatologists (CCAR)] 2006-2008
Member: Toronto Central LHIN Coordinating Council of the Hip and Knee Replacement Program (HKRP),
[sub program of the Joint Health & Disease Management (JHDM) program], 2006-2008
Chair (Canada): Abbott 3E Initiative in Rheumatology – Phase II, 2007-2008
Chair (International): Abbott 3E Initiative in Rheumatology – Phase III, 2008 –
Member: Selection Committee, 2008 National Health Innovation Patient Advocacy Awards for 2008
UCBeyond Rheumatoid Arthritis Scholarship Program, Toronto Arthritis Society, 2008 –
Member: Alliance for the Canadian Arthritis Program (ACAP) Government Relations Committee [as CAN
representative] 11/2007-current; Business Case Steering Committee 2008 –
Member: Executive Committee, Joint Health and Disease Management (JHDM) Initiative [The Hip and
Knee Replacement Program (HKRP) part of JHDM]. 2008
Member: HPME Clinical Epidemiology Visioning Committee, Jan- May, 2008
Panellist: American Pain Society Clinical Guidelines Project – Low Back Pain, 2005 –
Review Committee: Best Research on Low Back Pain Commission de la santé et de la sécurité du travail
Editorial Boards: American Journal of Medicine; Arthritis Care and Research
Co-ordinating Editor: Cochrane Collaboration Back Review Group, Joint Bone Spine, International
Edition; Nature Clinical Practice Rheumatology Journal Advisory Board; Journal of Clinical Epidemiology
Advisory Board, 2004 –

Journal Referee: Annals of Internal Medicine; Annals of Rheumatic Disease; Arthritis and Rheumatism;
Arthritis, Care and Research; Canadian Medical Association Journal; JAMA; Journal of Rheumatology;
Journal of Clinical Epidemiology; Journal of the Society for Medical Decision Making; Medical Care; New
England Journal of Medicine

BRENNEMAN GIBSON, Jane

Teaching/Educational Role

Host: Ministry of Labour students and Mary Grace Borgfes Strategic Planning Coordinator

BRESLIN, Curtis

Teaching/Educational Role

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

Service Activities

Editorial Board: Journal of Occupational Health Psychology

BUSSE, Jason

Teaching/Educational Role

Assistant Professor: Clinical Epidemiology & Biostatistics, McMaster University, July 2008 –

Lecturer: CHS-HRM 743. Systematic Review Methods – Jan 2009

Service Activities

Grant Reviewer: Sick Kids Foundation

Journal Referee: Annals of Internal Medicine; Archives of Medical Research; British Journal of Sports Medicine; British Medical Journal; Canadian Medical Association Journal; Journal of the American Medical Association; Journal of General Internal Medicine; Journal of Manipulative and Physiological Therapeutics; Journal of the Canadian Chiropractic Association; Medical Care; Vaccine

COLE, Donald

Teaching/Educational Role

Associate Graduate Faculty: Kinesiology, University of Waterloo, 1997 –

Full Member: School of Graduate Studies, University of Toronto, 2004 –

Member: Doctoral and MHS Selection Committees, PHS Epidemiology Program

Member: Program Committee, Community Medicine Residency Program, University of Toronto, 2001–

Co-Instructor: Epidemiology II, University of Toronto, 2003 –

Lead Instructor: Global Health Research Methods, University of Toronto, 2003 –

PhD Thesis Supervision (relevant): Dwayne Van Eerd (2007–). Epidemiology, University of Toronto

PhD Doctoral Committees (relevant): Lauren Griffith. Meta-analysis of biomechanical risk factors for back pain. Epidemiology, University of Toronto: 2003 –

Service Activities

Grant Committees: L'institut de recherche en santé et en sécurité du travail Québec; Fonds de

Recherches en Santé du Québec; CIHR

External Grant Reviews: CIHR, Michael Smith Foundation, Social Sciences and Humanities Research Council

Journal Referee: American Journal of Epidemiology; American Journal of Industrial Medicine; American Journal of Preventive Medicine; Applied Ergonomics; Canadian Medical Association Journal; Chronic Disease in Canada; Injury Prevention; International Archives of Occupational and Environmental Health; Journal of Occupational and Environmental Medicine; Occupational and Environmental Medicine; Social Science and Medicine

ETCHES, Jacob

Service Activities

Assistant IWH Research Ethics Co-ordinator

Assistant IWH Privacy Agreement Co-ordinator

Journal Referee: International Journal of Epidemiology, Journal of Health Economics

FURLAN, Andrea

Teaching/Educational Role

Assistant Professor: Division of Physiatry, Department of Medicine, University of Toronto
Staff Physician: Musculoskeletal Program, Toronto Rehabilitation Institute – Hillcrest Centre
Instructor: IWH Systematic Reviews Workshop
Guest Speaker: 2nd International Symposium of the Japan Society of Acupuncture and Moxibustion, Saitama, Japan, June 12 2009.
Guest speaker: NIH – NCCAM (National Center for Complementary and Alternative Medicine). Bethesda, MD, May 29, 2009
Guest speaker: I International Symposium of Placebo Research in Physical and Rehabilitation Medicine, February 14, 2009
PhD Thesis Committee Member: N Carnide, University of Toronto

Service Activities

Journal Referee: Cochrane Collaboration Back Review Group, CMAJ, Pain, European Journal of Physical and Rehabilitation Medicine, The Journal of Rehabilitation Medicine, Physiotherapy Canada, BMC Chinese Medicine
Grant Reviewer: AHRQ, CIHR (Clinical Trials)

HOGG-JOHNSON, Sheila

Teaching/Educational Role

Assistant Professor: Public Health Sciences, Faculty of Medicine, University of Toronto, 1995 –
Assistant Professor: Health, Policy, Management and Evaluation, University of Toronto, 2001–
Core Faculty Member: Graduate Program in Clinical Epidemiology and Health Services Research, University of Toronto, 1998 –
Chair Mentor: Qualitative and Quantitative Methods Workshop, CIHR Work Disability Training Program, Université de Sherbrooke, PQ
Instructor: Research Methods, CIHR Work Disability Training Program, Université de Sherbrooke, PQ
Teaching: CHL 7001 Advanced Quantitative Methods in Epidemiology, Module on Survival Analysis – Extending the COX Model/Advanced Methods in Epidemiology - Survival Analysis. University of Toronto
Instructor: Privacy Policy Training, IWH
PhD Thesis Committee Member: L Griffith, A Peruccio
PhD Thesis Supervisor: Nancy Carnide, Gayane Hovhannisyan

Service Activities

Journal Referee: Canadian Medical Association Journal, Occupational and Environmental Medicine, Scandinavian Journal of Work, Environment and Health
Special Consultant to the Editorial Board: The Spine Journal
Assistant Editorial Board: European Spine Journal

IBRAHIM, Selahadin

Teaching/Educational Role

Lecturer: Public Health Sciences, Faculty of Medicine, University of Toronto, 2002 –
Teaching: Module on Exploratory and Confirmatory Factor Analysis – Path Analysis and Structural Equation Modeling, CHL 7001 Advanced Quantitative Methods in Epidemiology, University of Toronto.

IRVIN, Emma

Teaching/Educational Role

Instructor: IWH Systematic Reviews Workshop
Instructor: Privacy Policy Training
Instructor: Systematic Reviews Course, University of Toronto, Health Policy, Management and Evaluation Graduate Program

Seminar Series: Workplace-based return to work. School of Occupational and Public Health, Ryerson University

Service Activities

Convenor: Cochrane Library User Group Meeting; Freiburg, Germany: XVI Cochrane Colloquium

KALCEVICH, Christina

Teaching/Educational Role

Instructor: Privacy Policy Training

KENNEDY, Carol

Teaching/Educational Role

Lecturer: Physical Therapy, University of Toronto: 1996 –

Service Activities

Patient Safety Champion, College of Physiotherapists of Ontario, 2010 –
Arthritis Health Professionals Association, Research Committee, 2008 –

KEOWN, Kiera

Service Activities

Joint Health & Safety Committee Certified Member

KOSNY, Agnieszka

Teaching/Educational Role

Instructor: Women and Health. Institute for Gender Studies and Women's Studies, University of Toronto
Co-Instructor, Occupational Health and Safety, Labour Studies/Health Studies, McMaster University

MACEACHEN, Ellen

Teaching/Educational Role

Assistant Professor (Status): Public Health Sciences, University of Toronto

Chair Mentor: Work Disability Prevention CIHR Strategic Training Program, Université de Sherbrooke, PQ

PhD Thesis committee member: Dana Howse, Dalla Lana School of Public Health, University of Toronto.

Post-doctoral Supervisor: Elisabeth Mansfield (2008-10), Garry Gray (2007-09)

Mentor: Christian Stahl, Ph.D. Candidate (National Centre for Work and Rehabilitation, Department of Medical and Health Sciences, Linköping University, Sweden. WDP-953 Short-term practicum, Work Disability Prevention CIHR Strategic Training Program. Topic: Cooperation for Return to Work: An International Perspective .

Mentor: Dörte Bernhard, Ph.D. (Chair for Labour and Vocational Rehabilitation), University of Cologne, Germany. WDP-953: Long-term practicum, Work Disability Prevention CIHR Strategic Training Program. Topic: Rehabilitation Counsellors and Disability Managers and their professional competencies in Work Disability Prevention: a cross-cultural comparison of Germany and Canada.

Mentor: Asa Tjulin, Ph.D. Candidate (National Centre for Work and Rehabilitation, Department of Medical and Health Sciences, Linköping University, Sweden). WDP-953: Long-term practicum, Work Disability Prevention CIHR Strategic Training Program. Topic: "Supervisors', co-workers' and re-entered injured workers experiences of return to work: An exploratory study in Linköping, Sweden"

Instructor: CHL5122H. Qualitative Research Practice, Dalla Lana School of Public Health , University of Toronto, 2005 –

Instructor: WDP812. Methodology in Work Disability Prevention, Work Disability Prevention CIHR Strategic Training Program, Université de Sherbrooke, PQ. 2003 –
Instructor: WDP811. Introduction to Methodological Challenges, Work Disability Prevention CIHR Strategic Training Program, Université de Sherbrooke, PQ. 2009-10

Service Activities

Member: Program Executive Committee, Work Disability Prevention CIHR Strategic Training Program, University of Toronto
Member: Faculty Awards Committee, Dalla Lana School of Public Health, University of Toronto, 2008 –
Member, SSHRC Awards Committee, Dalla Lana School of Public Health, University of Toronto, 2009 –
Member: Mustard Postdoctoral Award Committee, 2008 –
Member: IWH Promotions Review Committee
Reviewer: Social Science and Medicine, Journal of Occupational Rehabilitation, Policy and Practice in Health and Safety, Sociology of Health & Illness
External Reviewer: WorkSafe BC
External Examiner: Institute of Medical Sciences, Jesmin Antony, M/Sc. Defence, 2009 –

MAHOOD, Quenby

Teaching/Educational Role

Instructor: IWH Systematic Reviews Workshop
Tutorial. Literature Searching. HAD 5302: Measurement in Clinical Research
Department of Health, Policy, Management and Evaluation. University of Toronto. January 20, 2010.

MUSTARD, Cam

Teaching/Educational Role

Professor: Public Health Sciences, University of Toronto, July 2002 –
Review Panel Member: Comparative Program in Health and Society, Munk Centre for International Studies, University of Toronto

Service Activities

Chair: Multidisciplinary Assessment Committee, Canada Foundation for Innovation, April 20-22, 2009
Member: Scientific Visitors Advisory Board, Liberty Mutual Research Institute for Safety 2007 –
Member: Ontario Health Quality Council Performance Measurement Advisory Board, 2007 –
Member: Health Reports Editorial Board, Statistics Canada, 2007 –
Member: Fellowship Award Panel, Comparative Program on Health and Society, Munk Centre for International Studies, University of Toronto, 2004 –

Journal Referee: Editorial Advisory Board, Longwoods Review; Journal of Epidemiology and Community Health; Health Services Research Journal; American Journal of Public Health; Social Science and Medicine; Medical Care; Injury Prevention; Occupational and Environmental Medicine, Journal of Psychosomatic Research
Member: Board of Directors, Ontario Neurotrauma Foundation. 2008 – 2011
Member: Board of Advisors, RAND Center for Health and Safety in the Workplace. 2008 –

NEILSON, Cynthia

Service Activities

Joint Health & Safety Committee Member

PENNICK, Victoria

Teaching/Educational Role

Lecturer: Dalla Lana School of Public Health, Faculty of Medicine, University of Toronto, 2005 –

Mentor/Tutor: CHL5418 – Scientific Overviews in Epidemiology and Public Health, Dalla Lana School of Public Health, University of Toronto, 2008 –

Member: Thesis Committee, Chantelle Garritty, Public Health Sciences, University of Toronto (2006 – 2009)

Member: Course Planning Committee, Determinants of Community Health Course, Faculty of Medicine, University of Toronto, 1992 –

Tutor: Putting the person at the centre. University of Toronto Centre for the Study of Pain - Interfaculty Pain Curriculum. 2003 –

Marking Student presentations: Determinants of Community Health Course (Years 1 & 2), Faculty of Medicine, University of Toronto, 1992 –

Service Activities

Reviewer: Cochrane Pain, Palliative and Supportive Care Review Group

Reviewer: Canadian Physiotherapy Association Grants

Reviewer: Nova Scotia Health Research Foundation: Knowledge Transfer/Exchange Grants

Reviewer: Chiropractic & Osteopathy, BioMed Central

ROBSON, Lynda

Teaching/Educational Role

Guest Lecturer: OHS 810 – Seminars, School of Occupational and Public Health, Ryerson University

Service Activities

Grant Reviewer: Health Research Council of New Zealand, WorkSafe BC

Journal Referee: American Journal of Evaluation, Arthritis Care and Research, Journal of Occupational Health and Safety – Australia and New Zealand, Safety Science

SAUNDERS, Ron

Teaching/Educational Role

Associate Professor: School of Public Policy and Governance, University of Toronto

Service Activities

IWH Plenary Committee

Ad hoc Reviewer: Stanford University Press

SCOTT-MARSHALL, Heather

Teaching/Educational Role

Assistant Professor (Status Only): Dalla Lana School of Public Health, University of Toronto

Service Activities

Journal Referee: Social Science and Medicine

Reviewer: Reports and Knowledge Products: National Collaborating Centre for Determinants of Health

STEENSTRA, Ivan

Teaching/Educational Role

Mentor: Esther van Kleef MSc Student Management, Policy-Analysis and Entrepreneurship in Healthcare VU University, Amsterdam, The Netherlands

Service Activities

Reviewer: Spine and Occupational and Environmental Medicine, BioMed Central

Participant: CIHR Work Disability Program, Université de Sherbrooke, Longueuil, PQ.

SMITH, Peter

Teaching

Course Coordinator: Measurement in Clinical Research, Health Policy, Management and Evaluation, University of Toronto

Lecturer: Advanced Quantitative Methods in Epidemiology (CHL 5424), Dalla Lana School of Public Health, University of Toronto.

Measurement in work-disability prevention research. Invited presentation Work Disability Prevention Strategic CIHR Training Program. June 10th, 2009

Service Activities

Reviewer: Social Forces, Social Science and Medicine, Occupational Medicine, Critical Public Health, CMAJ

Scientific Officer: CIHR Strategic Teams in Applied Injury Research Panel.

Committee Member: Jas Chahal, MSc, Department of Health Policy Management and Evaluation, University of Toronto.

Committee Member: Brendan Smith, PhD (Epidemiology), Dalla Lana School of Public Health, University of Toronto.

Panel Expert: Stranger in a Strange Land: How does immigration impact on mental health? CIHR Cafe Scientifique, Toronto, Ontario. October 27, 2009.

TOLUSSO, David

Teaching/Educational Role

Assistant Professor: Dalla Lana School of Public Health, University of Toronto, 2009 –

Teaching: CHL 5424 Advanced Quantitative Methods in Epidemiology, Module on Survival Analysis – Extending the Cox Model/Advanced Methods in Epidemiology. University of Toronto

Service Activities

Journal Referee: Quantitative Finance

TOMPA, Emile

Teaching/Educational Role

Adjunct Assistant Professor: Public Health Sciences, University of Toronto. May 2004 -

Adjunct Assistant Professor: Economics, McMaster University: 2001 –

Lecturer: Work Disability Prevention Course. University of Sherbrooke, Montreal, Quebec, June 2009.

Mentor: Work Disability Prevention Program. University of Sherbrooke, Montreal, Quebec, June 2009.

Guest Lecturer: CHL 5110 Theory and Practice of Programme Evaluation. Dalla Lana School of Public Health, University of Toronto, October 2009.

Course Co-instructor: Advanced Topics in Health Economics (ECON 791)

Service Activities

Journal Referee: Journal of Occupational Rehabilitation; Ergonomics; Journal of Occupational and Environmental Medicine; Journal of Health Economics; Journal of Epidemiology and Community Health. External Grant/Report Referee: Veterans Affairs Canada, Human Resources and Social Development Canada.

Participant/Keynote Speaker: Repository of Occupation Health Well-being Economics Workshop (ROWER). European Union funded workshops on occupational health and safety economics research directed at policymakers, practitioners and researchers.

Participant/Speaker: Occupational Safety and Health Financial Incentives Initiative. European Agency Safety and Health at Work.

Adjunct Scientists

Dr. Carlo Ammendolia – Clinical Epidemiologist, Rehabilitation Solutions, University Health Network (since 2006)

Carlo Ammendolia is a clinical epidemiologist at the University Health Network and a knowledge transfer and exchange scientist at the Centre for Research Expertise in Improved Disability Outcomes (CREIDO) in Toronto. He is also assistant professor in the Department of Health Policy, Management and Evaluation at the University of Toronto. His research interests include identifying gaps between evidence and clinical practice, implementing strategies to improve clinical outcomes, and preventing occupational injuries.

Dr. Peri Ballantyne – Assistant Professor, Department of Sociology, Trent University (since 2001)

Peri Ballantyne is an assistant professor in the Department of Sociology at Trent University in Peterborough, Canada. Her research interests include examining the social determinants of health such as work, retirement, income security, gender and age. She is also involved in health behaviour studies such as how people make decisions about medication and how those with chronic illness use the health-care system.

Ute Bültmann – Associate Professor, Department of Health Sciences, University Medical Center Groningen, University of Groningen, The Netherlands (since 2007)

Ute Bültmann is an associate professor in the Department of Health Sciences at the University Medical Center in Groningen (UMCG), the Netherlands. Her research interests include the epidemiology of work and health, the impact of the psychosocial work environment on workers' health including mental health, and the prevention of work disability. She is involved in collaborative projects on work and health in Denmark and Canada.

Dr. Linda J. Carroll – Associate Professor, Department of Public Health Sciences, University of Alberta, Canada (since 2004)

Linda Carroll is an associate professor of epidemiology in the Department of Public Health Sciences at the University of Alberta in Edmonton. She holds a Health Scholar Award from the Alberta Heritage Foundation for Medical Research. Her research focuses on psychological aspects of musculoskeletal disorders, with an emphasis on examining the interface between depression, coping, chronic pain disability and recovery from soft-tissue injuries.

Dr. J. David Cassidy – Senior Scientist, Division of Outcomes and Population Health, Toronto Western Hospital Research Institute (since 2001)

J. David Cassidy is director of Centre of Research Expertise in Improved Disability Outcomes (CREIDO) and a senior scientist in the Division Health Care and Outcomes Research at the Toronto Western Research Institute. He is also a professor of epidemiology at the Dalla Lana School of Public Health at the University of Toronto. Cassidy's research interests include musculoskeletal and injury epidemiology, as well as evidence-based health care.

Dr. Anthony (Tony) Culyer – Ontario Chair in Health Policy and System Design, HPME, University of Toronto (since 2007)

Tony Culyer has taught at more than a dozen universities around the world. He currently holds the Ontario Chair in Health Policy and System Design at the University of Toronto. He holds an honorary doctorate in economics from the Stockholm School of Economics. He is the founding co-editor of the Journal of Health Economics and has been on the boards of journals of health economics, medicine, medical ethics, social science and medical law. He was the vice-chair of the National Institute for Health and Clinical Excellence in London, England, and was IWH's chief scientist from 2003 to 2006.

Dr. Kelly Joseph Durango – DeRango & Associates, LLC, Kalamazoo, MI (since 2009)

Kelly Joseph DeRango is an economist and President of his company DeRango Associates. He has a background in economics and political science, earning a PhD at University of Wisconsin, Madison, May 2000. DeRango is a Visiting Professor at Kalamazoo College in Michigan. From 1999-2007, he worked as a Research Fellow at the Upjohn Institute for Employment Research (Kalamazoo, Michigan). He has worked on several cost-effectiveness assessments of ergonomic interventions and has a continued interest in collaborating on these issues.

Dr. Joan Eakin – Professor, Department of Public Health Sciences, Faculty of Medicine, University of Toronto (since 2001)

Joan Eakin is a sociologist and qualitative research methodologist in the Dalla Lana School of Public Health at the University of Toronto. Her research focuses on work and health, particularly the relationship between health and the social relations of work. Most of her research has centred on prevention and return to work in small workplaces. Current/recent studies include home health-care work, return to work policy and practice, front-line service work in Ontario's Workplace Safety and Insurance Board, physicians' role in compensation.

Dr. Renée-Louise Franche – Director of Disability Prevention, Occupational Health & Safety Agency for Healthcare, British Columbia (since 2008)

Renée-Louise Franche is director of disability prevention at the (Occupational Health & Safety Agency for Healthcare, BC). She is an adjunct professor at the Faculty of Health Sciences, Simon Fraser University, and an adjunct assistant professor, Dalla Lana School of Public Health, University of Toronto. Her research focuses on developing a better understanding of how worker, workplace, insurer, and health-care factors contribute to safe, sustainable and healthy return to work following injury or ill health. She also conducts evaluations of work disability prevention interventions.

Dr. Monique Gignac – Scientist, Division of Outcomes & Population Health, Toronto Western Hospital (since 2003)

Monique Gignac is a senior scientist with the Toronto Western Research Institute at the University Health Network in Toronto. She is also an associate professor in the Dalla Lana School of Public Health at the University of Toronto and co-scientific director of the Canadian Arthritis Network. Dr. Gignac is a social psychologist who studies coping and adaptation to chronic stress, especially working with a chronic illness and disability.

Dr. David Gimeno – Associate Professor, Division of Occupational and Environmental Health Sciences, University of Texas School of Public Health (since 2008)

David Gimeno is a Senior Research Associate of The Whitehall II Study in the Department of Epidemiology & Public Health at the University College London Medical School.

David's research focuses on occupational and social epidemiology, with emphasis on the measurement of work organizational exposures and workers' health, social inequalities in health and the use of multilevel statistical models applied to occupational health. He is involved in collaboration projects in USA, Canada, Spain and the UK.

Dr. Michel Grignon – Assistant Professor, Departments of Gerontology and Economics, McMaster University (since 2005)

Michel Grignon is a professor in the Department of Economics and in the Gerontology Studies Program at McMaster University in Hamilton. His research interests include issues related to health-care financing, such as the impact of supplemental health-care insurance on welfare, equity in financing, and regulation

of universal coverage for the poor. He also conducts research on the economics of health-care distribution and delivery, including determinants and patterns of health-care consumption across income and age groups.

Dr. Jaime Guzmán – Scientific and Medical Director for Disability Prevention, Occupational Health & Safety Agency for Healthcare in BC (since 2006)

Jaime Guzmán is chief scientific and medical director for the Occupational Health and Safety Agency for Healthcare in British Columbia. He is also assistant clinical professor of medicine at the University of British Columbia. His research interests relate to preventing disability in people with musculoskeletal injuries. His most recent publications deal with how to obtain sustainable disability prevention through collaborative action and how to best integrate the perspectives of different stakeholders into research.

Dr. Jill Hayden – Assistant Professor, Dalhousie University (since 2007)

Jill Hayden is an assistant professor in the Department of Community Health & Epidemiology, Dalhousie University, Halifax, Nova Scotia. Her research experience and expertise includes systematic review and meta-analysis methods, prognostic research, and musculoskeletal health - specifically low back pain.

Dr. C. Gail Hepburn – Assistant Professor, Department of Psychology, University of Lethbridge (since 2004)

Gail Hepburn is an assistant professor in the Department of Psychology at the University of Lethbridge in Alberta. She also holds an associate graduate faculty appointment in the Department of Psychology at the University of Guelph. Gail specializes in organizational psychology. Her research interests include the impact of workplace factors such as perceptions of justice or fairness, safety climate, workplace aggression, and work-family balance on employee well-being.

Dr. Linn Holness – Director, Gage Occupational and Environmental Health Unit (since 2001)

Linn Holness is director of the Centre for Research Expertise in Occupational Disease (CREOD), which is based at St. Michael's Hospital in Toronto. She is an associate professor in the Departments of Public Health Sciences; Medicine; and Health Policy, Management and Evaluation at the University of Toronto. Her main research interests are occupational skin and lung disease, occupational health services program delivery and workplace health and safety issues.

Dr. William G. Johnson – Professor of Economics, School of Health Administration & Policy and Dept of Economics, Arizona State University (since 2003)

William Johnson is a professor in the Department of Biomedical Informatics and founder and director of the Center for Health Information & Research, a research arm in the School of Computing and Informatics, Ira A. Fulton School of Engineering at Arizona State University (ASU). His current research focuses on clinical quality of health care, access to care, the Arizona Health Care Workforce, occupational illness and injury (ASU Healthy Back Study), the effects of health on work and other activities, health-care outcomes, and the development of health information systems for use in research (Arizona HealthQuery).

Dr. Bonnie Kirsh – Associate Professor, Department of Occupational Therapy, University of Toronto (since 2006)

Bonnie Kirsh is an associate professor in the Department of Occupational Science and Occupational Therapy at the University of Toronto, with cross appointments to the Graduate Department of Rehabilitation Science and the Department of Psychiatry. She conducts research in community mental health and employment, and has investigated Canadian principles and practices in work integration for people with mental illness. Kirsh is currently studying the mental health and well-being of injured workers in Ontario.

Dr. Mieke Koehoorn – Assistant Professor, Department of Health Care & Epidemiology, University of British Columbia (since 2004)

Mieke Koehoorn is an assistant professor in the Department of Health Care and Epidemiology, University of British Columbia (UBC) and a Michael Smith Foundation for Health Research Scholar. She also holds an appointment with the School of Occupational and Environmental Hygiene at UBC. Her research interests focus on the epidemiology of work-related musculoskeletal injuries, in particular among health-care workers. Koehoorn also conducts research on the relationship between work organization and the health of health-care workers, and the epidemiology of injuries among young workers.

Dr. (Desre) Dee Kramer – Associate Director, Networks & KTE, Centre for Research Expertise in Musculoskeletal Disorders (CRE-MSD), University of Waterloo (since 2005)

Dee Kramer is associate director at the Centre of Research Expertise for the Prevention of Musculoskeletal Disorders (CRE-MSD) at the University of Waterloo. She is a research assistant professor in the Department of Kinesiology at the University of Waterloo. Her research interests are in knowledge transfer, diffusion of innovation, adult education, and organizational change in the construction, transportation, electrical utilities and manufacturing sectors. She is an adjunct professor in the School of Occupational and Public Health at Ryerson University. She teaches courses within Ryerson's certificate program in occupational health and safety.

Dr. Louise Lemieux-Charles – Associate Professor and Chair, Department of Health Policy, Management & Evaluation, University of Toronto (since 2000)

Louise Lemieux-Charles is chair of the Department of Health Policy, Management and Evaluation at the University of Toronto. She is involved in several research projects examining issues of evidence and decision-making in health-care organizations and management of organizational and team performance. Her research interests are in the areas of performance management, health human resource management, organizational learning, knowledge transfer and organization of health systems.

Dr. Katherine Lippel – Chair on Occupational Health and Safety Law, Law Faculty, University of Ottawa (since 2006)

Katherine Lippel is a professor in the Faculty of Law at the University of Ottawa and holds the Canada Research Chair on Occupational Health and Safety Law. Lippel specializes in legal issues relating to occupational health and safety and workers' compensation and has authored several articles and books in this area. Her research interests include work and mental health; health effects of compensation systems; policy, precarious employment and occupational health; women's occupational health; and regulatory issues in occupational health and safety.

Christopher McLeod – Associate of the Centre for Health Services and Policy Research at the University of British Columbia (since 2009)

Christopher McLeod is a Postdoctoral Fellow in the College for Interdisciplinary Studies, Associate Faculty, School of Population and Public Health, and an Associate of the Centre for Health Services and Policy Research at the University of British Columbia. Dr. McLeod has a Masters in economics from McMaster University and PhD in population and public health from the University of British Columbia. Dr. McLeod has extensive experience conducting research on occupational health and safety policy in British Columbia and has expertise with the WorkSafeBC claims data and firm-level measures. He is a key research member of a research partnership that UBC has had with WorkSafeBC for the past six years that seeks to develop and use WorkSafeBC data in conducting policy relevant OHS research. More broadly, Dr. McLeod is developing a research program focussed on understanding whether and how societal and institutional factors matter in reducing work-related health inequities.

Dr. Anne Moore – Assistant Professor, School of Kinesiology and Health Science, York University (since 2004)

Anne Moore is an assistant professor in the School of Kinesiology and Health Science at York University in Toronto. Her research interests include physical exposure assessment for work-related musculoskeletal disorders of the upper limb, occupational assessment and modeling of the upper limb during repetitive manual tasks. She is particularly interested in work-rest cycles and has used psychophysical adjustment approaches to assess acceptable demands on the hands during manual tasks.

Dr. Carles Muntaner – Chair in Psychiatry and Addictions Nursing Research, Social Policy and Prevention Research Department, CAMH (since 2004)

Carles Muntaner is the Psychiatry and Addictions Nursing Research Chair, Social Equity and Health Section at the Centre for Addiction and Mental Health (CAMH). He is also professor of nursing, public health sciences and psychiatry at the University of Toronto. Muntaner's research focuses around social class, politics, work organization and health within a global perspective. He is the recipient of the Wade Hampton Frost award of the American Public Health Association and a chair of the Employment Conditions HUB of the WHO Commission on Social Determinants of Health.

Dr. W. Patrick Neumann – Associate Professor, Department of Mechanical and Industrial Engineering, Ryerson University (since 2006)

Patrick Neumann is an assistant professor in the Department of Mechanical and Industrial Engineering at Ryerson University in Toronto. Neumann has been engaged in both epidemiological studies of low-back pain in the auto sector and in ergonomic intervention research. Dr. Neumann's research now focuses on improving work systems, system design, and designing work systems that are both highly competitive and humanly sustainable work systems through improved design processes and the development of human factors simulation tools.

Dr. Aleck Ostry – Tier 2 Canada Research Chair in the Social Determinants of Community Health, University of Victoria (since 2003)

Aleck Ostry is an assistant professor in the Faculty of Social Sciences at the University of Victoria. He is a Canada Research Chair (Tier 2) in the Social Determinants of Community Health and Michael Smith Foundation for Health Research Scholar. Ostry conducts research on the social determinants of health with a focus on workplace health, nutrition policy and health, and rural and northern health.

Dr. Glenn Pransky – Director, Center for Disability Research, Liberty Mutual Research Center for Safety & Health (since 2001)

Glenn Pransky is director of the Center for Disability Research at the Liberty Mutual Research Center for Safety and Health in the United States. He holds appointments at the University of Massachusetts in its medical school and School of Public Health, as well as the Harvard School of Public Health's Department of Occupational and Environmental Health. His research interests are in disability and outcome measurement, particularly for work-related musculoskeletal disorders.

Dr. Susan Rappolt – Associate Professor, Rehabilitation Sciences Building, University of Toronto (since 2004)

Susan Rappolt is an occupational therapist and sociologist. She is chair of the Department of Occupational Sciences and Occupational Therapy at the University of Toronto. She is also senior scientist at the Toronto Rehabilitation Institute. Rappolt is studying the effectiveness of occupational therapy for sustained re-engagement work roles following illness or injury. She also conducts research in knowledge translation and exchange that focus on models for research use in clinical practice, and organizational capacity to support evidence-based professional practices.

Dr. Robert Reville – Director, RAND Institute for Civil Justice (ICJ) (since 2003)

Robert Reville is director of the RAND Institute for Civil Justice (ICJ). He holds a PhD in economics from Brown University. As a labour economist, he has a national reputation in the United States on workers' compensation policy and the impact of disability on employment. He has written extensively on workers' compensation in California, New Mexico and other states. Reville is a member of the Board of Scientific Counsellors of the National Institute for Occupational Safety and Health (NIOSH)

Dr. Harry Shannon – Professor, Program in Occupational Health and Environmental Medicine, McMaster University (since 2004)

Harry Shannon trained in the United Kingdom in mathematics and statistics. He is a professor in the Department of Clinical Epidemiology & Biostatistics at McMaster University, where he has been a faculty member since 1977. He also holds an appointment in public health sciences at the University of Toronto. He is a past president of the Canadian Association for Research on Work and Health (CARWH), and has published extensively in this field. Shannon's research interests include musculoskeletal and other work-related injuries and the relationship between work stress, workplace organization, and health and safety.

Dr. Nancy Theberge – Professor, Department of Kinesiology, University of Waterloo (since 2003)

Nancy Theberge is a professor in the Departments of Kinesiology and Sociology at the University of Waterloo. She teaches courses in the sociology of health; work and health; and social aspects of injuries in sport and work. Theberge conducts research on participatory ergonomics (PE) and the social factors related to successful implementation of PE programs. She has a related research program on the professional practices of ergonomists and human factors engineers.

Dr. Gabrielle van der Velde – Scientist, Toronto Health Economics & Technology Assessment Collaborative (since 2008)

Gabrielle van der Velde is a scientist at the Toronto Health Economics and Technology Assessment (THETA) Collaborative, and a scientific associate in the Division of Decision Making and Health Care Research, Toronto General Research Institute, University Health Network. Her work at THETA focuses on health technology assessment, including systematic review, meta-analysis and economic evaluation. Her research expertise also includes the measurement of health-related quality-of-life, including Rasch analysis of health instruments and valuation of health for economic evaluation.

Dr. Maurits van Tulder – Epidemiologist, Institute for Research in Extramural Medicine and Vrije Universiteit Medical Centre, The Netherlands (since 2003)

Maurits van Tulder is an epidemiologist at the Department of Health Sciences and the EMGO Institute of the VU University in Amsterdam, the Netherlands. He is also co-editor of the Cochrane Collaboration Back Review Group. van Tulder is the author of many scientific papers in peer-reviewed scientific journals and has written several books and book chapters. His interests are in evidence-based practice and include trials, systematic reviews and economic evaluations of diagnostic and therapeutic interventions for musculoskeletal disorders. He also participated in or chaired several guideline committees on back pain.

Dr. Richard Wells – Professor, Department of Kinesiology, University of Waterloo (since 2001)

Richard Wells is a professor in the Department of Kinesiology at the University of Waterloo (UW) and director of the Centre of Research Expertise in Musculoskeletal Disorders (CRE-MSD). He is also the director of UW's Ergonomics & Safety Consulting Service, which is an information dissemination and consulting centre. He specializes in applied mechanics as it applies to human function and injury. For the last decade, his main research and training interests have been work-related musculoskeletal disorders of the upper-extremity and low back in industrial and office settings.

Dr. Kathryn Woodcock – Associate Professor, School of Occupational and Public Health, Ryerson University (since 2001)

Kathryn Woodcock is an associate professor in the School of Occupational and Public Health at Ryerson University in Toronto. Her research interests include the application of human factors engineering to occupational and public safety issues of human performance and error, interface design, accident investigation and safety inspection expertise, practices, and tools, and disability and accessibility, particularly deafness and hearing loss.

Glossary

A	ACE	Association of Canadian Ergonomists	
	ACR	American College of Rheumatology	
	AHCPR	Agency for Health Care Policy and Research	
	ALBP	Acute Low Back Pain	
	AMA	American Medical Association	
	APA	American Psychological Association	
	ARHP	Association of Rheumatology Health Professionals	
	AWCBC	Association of Workers' Compensation Boards of Canada	
B	BRG	Cochrane Back Review Group (CCBRG) or Cochrane Collaboration Back Review Group)	
C	CAMH	Centre for Addiction & Mental Health	
	CARWH	Canadian Association for Research on Work and Health	
	CAW	Canadian Auto Workers	
	CCA	Canadian Chiropractic Association	
	CCOHS	Canadian Centre for Occupational Health and Safety	
	CES	Centre for Epidemiological Studies	
	CFIB	Canadian Federation of Independent Business	
	CHSRF	Canadian Health Services Research Foundation	
	CIAR	Canadian Institute for Advanced Research	
	CIHI	Canadian Institute of Health Information	
	CIHR	Canadian Institutes of Health Research	
	CIWA	Canadian Injured Workers Alliance	
	CLUG	Cochrane Library Users' Group	
	CMA	Canadian Medical Association	
	CMCC	Canadian Memorial Chiropractic College	
	CNO	College of Nurses of Ontario	
	COA	Canadian Orthopaedic Association	
	CPA	Canadian Physiotherapy Association	
	CPHA	Canadian Public Health Association	
	CPHI	Canadian Population Health Initiative	
	CPRN	Canadian Research Policy Networks	
	CPSO	College of Physicians and Surgeons of Ontario	
	CRE-OD	Centre for Research Excellence – Occupational Disease	
	CRE-IDO	Centre for Research Expertise in Improved Disability Outcomes	
	CRE-MSD	Centre for Research Excellence – Musculoskeletal Disorders	
	CRTN	Canadian Research Transfer Network	
	CSAO	Construction Safety Association of Ontario	
	CSEB	Canadian Society for Epidemiology and Biostatistics	
	CSIH	Canadian Society for International Health	
	CSST	Commission de la santé et de la Sécurité du travail	
	CURA	Community-University Research Alliance	
	D	DASH	Disabilities of the Arm, Shoulder and Hand
	E	EBP	Evidence-based Practice
		EI	Educational Influential
EPICOH		Epidemiology in Occupational Health	
EUSA		Electrical & Utilities Safety Association	
H	HCHSA	Health Care Health & Safety Association	
	HCP	Health Care Provider	
	HIRU	Health Information Research Unit	

	HRDC	Human Resources Development of Canada
	HSALC	Health and Safety Association Liaison Committee
	HSAs	Health and Safety Associations
	HWP	Healthy Workplace
	HWW	Health Work & Wellness Conference
I	IAB	Institute Advisory Board (IAPH)
	IAIABC	International Association of Industrial Accident Boards & Commissions
	IAPA	Industrial Accident Prevention Association
	ICES	Institute for Clinical Evaluative Sciences
	ICOH	International Commission of Occupational Health
	IHSPR	Institute of Health Services and Policy Research
	ILO	International Labour Organization
	INCLEN	International Clinical Epidemiology Network
	IPPH	Institute of Population and Public Health (CIHR)
	IRSST	L'institut de recherche Robert Sauvé en santé et en sécurité du travail
J	JCQ	Job Content Questionnaire
	JHSC	Joint Health and Safety Committee
K	KTE	Knowledge, Transfer & Exchange
	KTEAC	Knowledge, Transfer & Exchange Advisory Committee
	KTE C of P	KTE Community of Practice
L	LAD	Longitudinal Administrative Databank
	LBP	Low-back pain
	LTD	Long Term Disability
M	MDD	Major Depressive Disorder
	MOH-LTC	Ministry of Health and Long Term Care
	MOL	Ministry of Labour
	MSHA	Municipal Health and Safety Association
	MSK	Musculoskeletal
N	NCE	Networks of Centres of Excellence
	NHS	National Health Service
	NIH	The National Institutes of Health
	NICE	National Institute for Clinical Excellence
	NICHD	National Institute for Child Health and Development
	NIOSH	National Institute for Occupational Safety and Health (USA)
	NOIRS	National Occupational Injury Research Symposium (USA)
	NORA	National Occupational Research Agenda
	NPHS	National Population Health Survey
O	OCHS	Ontario Child Health Study
	OEA	Office of the Employer Adviser
	OEMAC	Occupational & Environmental Medical Association of Canada
	OFL	Ontario Federation of Labour
	OFSWA	Ontario Forestry Safe Workplace Association
	OHA	Ontario Hospital Association
	OHCOV	Occupational Health Clinic for Ontario Workers
	OHIP	Ontario Health Insurance Plan
	OHN	Occupational Health Nurse
	OKA	Ontario Kinesiology Association
	ONA	Ontario Nurses Association
	OOHNA	Ontario Occupational Health Nurses Association

	OSACH	Ontario Safety Association for Community and Healthcare
	OSHA	Occupational Safety and Health Administration (USA)
	OSSA	Ontario Service Safety Alliance
P	PHS	Public Health Sciences, University of Toronto
	POCKET	Physicians of Ontario Collaborating for Knowledge Exchange & Transfer
	PPHSA	Pulp & Paper Health and Safety Association
Q	QOLR	Quality of Life Research
R	RFP	Request for Proposals
	RNAO	Registered Nurses Association of Ontario
	RPNAO	Registered Practical Nurses Association of Ontario
	RSI	Repetitive Strain Injury
	RTW	Return-to-work
S	SAC	Scientific Advisory Committee
	SER	Society for Epidemiologic Research
	SHARP	Safety and Health Assessment and Research for Prevention (Washington State)
	SMDM	Society for Medical Decision Making
	SR	Systematic Review
	SRC	Systems Review Committee
	SRDC	Social Research and Demonstration Corporation
	SSHRC	Social Sciences and Humanities Research Council of Canada
	Star/SONG	Star/Southern Ontario Newspaper Guild
T	TENS	Transcutaneous electrical nerve stimulation
	TSAO	Transportation Safety Association of Ontario
U	UE	Upper Extremity
	UHN	University Health Network
W	WCB	Workers' Compensation Board
	WHSC	Workers' Health & Safety Centre
	WHO	World Health Organization
	WMSDs	Work-related Musculoskeletal Disorders
	WSIB	Workplace Safety & Insurance Board
	WSIB/RAC	Workplace Safety & Insurance Board Research Advisory Council