

Institute for Work & Health Accomplishments Report 2008



Institute
for Work &
Health

Research Excellence
Advancing Employee
Health



2008 Accomplishments Report

Research
Knowledge Transfer & Exchange
Publications, Presentations & Awards

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

Telephone: 416-927-2027

Fax: 416-927-4167

Website: www.iwh.on.ca

2008 ACCOMPLISHMENTS REPORT

Table of Contents

Introduction	1
RESEARCH	
Prevention of Work-Related Injury and Illness	5
Synthesizing the Evidence	6
Working Conditions and Health	16
Vulnerable Workers.....	28
Preventing Musculoskeletal Disorders.....	40
Effective Occupational Health & Safety Practice	43
Regulation and Incentives.....	49
Evidence Guides and Tools	56
KTE Focus on Prevention of Work-Related Injury and Illness.....	61
Prevention and Management of Work Disability	64
Measuring Health and Function	65
Clinical Treatment	74
Return-to-Work Practices.....	83
Compensation and Benefits.....	195
Evidence Guides and Tools	113
KTE Focus on Prevention and Management of Work Disability.....	117
Foundation Programs	119
KNOWLEDGE TRANSFER & EXCHANGE	127
Stakeholder/Audience Relationships and Exchanges	129
Capacity Building	136
Communications	140
PUBLICATIONS, PRESENTATIONS & AWARDS	148
STAFF & COLLABORATORS	171
GLOSSARY	193

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 15 years the Institute has hosted over 60 in-residence trainees and sabbaticants.

Research at the Institute

A summary of our 2008 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 2008 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 2008 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 2008, as well as IWH adjunct scientists who have contributed to our activities in the past year.

RESEARCH

Prevention of Work-Related Injury and Illness	5
<u>Synthesizing the Evidence</u>	6
Systematic review: Participatory ergonomic interventions: Implementation and process evaluation (0985).....	7
Systematic review: Effectiveness of education and training strategies for the protection of workers (0975).....	9
Systematic review: Prevention of upper extremity musculoskeletal disorders (0971).....	10
Systematic review: Prevention of injuries in small businesses (0961).....	12
Systematic review: Studies that undertake economic evaluation of workplace interventions directed at primary and secondary prevention (0960).....	14
<u>Working Conditions and Health</u>	16
Working conditions and health in the Canadian labour market (0448).....	17
The measurement and surveillance of working conditions and lost-time claims in Ontario (0417).....	18
Refining exposure measurements in VDU workers: Comparison of four methods (0129).....	20
Ten-year mortality follow-up for occupations in the 1991 Canadian census (0461).....	22
The prevalence of hand disorders amongst hand held device users (0203).....	24
Labour market consequences of mental disorders, and the impact of treatment (0560)	25
Work-related insecurity in post-standard employment: Exploring the links to health (0434).....	26
Activity limitation and depression: A longitudinal analysis of Canadian workers (0332)	27
<u>Vulnerable Workers</u>	28
Geographic distribution of work injury (0437)	29
Vulnerable young workers using employment centres (0423).....	30
Work injuries and young people: A prospective survey (0451).....	31
Prevalence and determinants of work-related injuries among young workers in Ontario and British Columbia (0408).....	33
An examination of the working conditions and risk factors for work-related injuries among immigrant workers in Ontario (0413)	34
Vulnerable workers: Health effects of non-standard employment (0486).....	36
Work, health economic security and disability (0427).....	38
<u>Preventing Musculoskeletal Disorders</u>	40
Evaluation of a HSA-initiated collaborative partnership to implement participatory ergonomic programs (0233)	41

A RCT of the effectiveness of two office ergonomic training approaches for seated environments: comparing an in-person to computer-based training (0261)	42
<u>Effective Occupational Health & Safety Practice</u>	43
Assessing the Impact of Targeted Prevention Consultation Services (0432).....	44
Organizational policies & practices (0277).....	46
The safety case for business: A multi-stakeholder examination of best practices and health and safety outcomes (0429).....	47
Safety climate monitoring in Ontario (0269).....	48
<u>Regulation and Incentives</u>	49
Examining trends in the incidence and cost of workers compensation claims in the Ontario and B.C. long term care sectors 1998-2007 (0439)	50
Causes and nature of injuries reported as no-lost time claims in Ontario, 1991-2005 (0419)	51
Occupational Health and Safety Council of Ontario (0249).....	53
The impact of experience rating and occupational health and safety on claims experiences in Ontario (0416).....	54
<u>Evidence Guides and Tools</u>	56
Economic evaluation workbook for workplace partners and system partners (0218)	57
Prevention system OHS management audit tools: Description, content validation and an assessment of the feasibility of measurement research (0267)	59
KTE Focus on Prevention of Work-Related Injury and Illness	61

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 2008 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 effect 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.

2008 Quick Statistics

Completed projects (12)
Ongoing projects (20)
Papers published or in press (25)
Peer review papers submitted (13)
Reports to WSIB or other Prevention System Partners (7)
Presentations of results & stakeholder consultations (25)
External grants awarded (15)

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 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 will have completed 13 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 32 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 is 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. 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.

2008 Quick Statistics

Completed projects (5)
Ongoing projects (0)
Papers published or in press (3)
Peer review papers submitted (1)
Reports to WSIB or other Prevention System Partners (4)
Presentations of results & stakeholder consultations (18)
External grants awarded (0)

Systematic Review: Participatory Ergonomic Interventions: Implementation and Process Evaluation (0985)

Project Status: Completed

Introduction: Workplace participatory ergonomics (PE) interventions are a method of reducing musculoskeletal disorders (MSDs). A recent review of PE interventions indicated some evidence of effectiveness. Feedback from stakeholders suggested that a summary of evidence on PE process and implementation would be welcome.

Objectives:

- ▶ Systematically search relevant peer-reviewed and grey literature and conduct a review on the process and implementation of participatory ergonomics interventions in workplaces.
- ▶ Synthesize the findings in a transparent and meaningful way.
- ▶ Provide recommendations about participatory ergonomic intervention process and implementation as warranted by the literature.

Methods: A comprehensive search of peer-reviewed and grey literature included electronic bibliographic databases, conference proceedings, and reference lists. Relevance, content and quality were appraised. Data were extracted about: context, organizational structure, ergonomic training, the process of PE, facilitators and barriers, and reported effectiveness. Our synthesis summarized the nature of PE process and implementation. Relevant stakeholders were identified through a network of prevention associations in Ontario, British Columbia and Manitoba (funding was obtained from WorkSafeBC and WCB Manitoba). Stakeholders provided valuable feedback throughout the review. In addition, a practicing ergonomist was a member of the review team.

Results: The literature search yielded 2151 unique references. Of these 256 were deemed relevant and 52 met our quality criteria. These documents reported on PE interventions from many countries and industries/sectors. Ergonomic teams and training were important aspects of PE interventions. PE teams were responsible for problem identification, solution identification and solution implementation. Group consultation was used for decision making. PE included workers, supervisors (managers), external advisors, internal specialists, senior management and union representatives. Interventions targeted changes to tools/equipment or work processes. Barriers and facilitators included: support for PE intervention, ergonomic training, communication, creating appropriate teams, PE champion, organizational training, and resources.

Researchers: Dwayne Van Eerd (Principal Investigator), Donald Cole, Kim Cullen, Emma Irvin, Kiera Keown, Quenby Mahood, Judy Village (University of British Columbia)

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

2008 Publications:

Rivlis I, Van Eerd D, Cullen K, Cole DC, Irvin E, Tyson J, Mahood Q. Effectiveness of participatory ergonomic interventions: a systematic review. *Applied Ergonomics* 2008; 39(3): 342-358 [2005-021]

Van Eerd D, Cole DC, Irvin E, Mahood Q, Keown K, Theberge N, Village J, St. Vincent M, Cullen K, Widdrington H. Report on process and implementation of participatory ergonomic interventions: A systematic review. Toronto: IWH 2008. [2008-077]

2008 Presentations:

Keown K, Mahood Q. Involving stakeholders in research: How can you do it? 15-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Keown K. Developing a participatory ergonomics tool. 25 Sep 2008; Niagara Falls, ON: Occupational Therapist EI Network.

Keown K, Van Eerd D. What works in MSD prevention? 17 Oct 2008; Mississauga, ON: Kinesiologist EI Network.

Van Eerd D, Keown K. Participatory ergonomics: What does the research tell us about best practices? 21-23 Apr 2008; Toronto, ON: IAPA Health and Safety Canada 2008 Conference.

Van Eerd D, Keown K. Participatory ergonomics: Effectiveness and implementation. 25 Sep 2008; Niagara Falls, ON: Occupational Therapist EI Network.

Van Eerd D, Keown K. What works in MSD prevention? 5 Oct 2008; Gatineau/Alymer, PQ. Association of Canadian Ergonomists 39th Annual Conference.

Van Eerd D, Keown K. Findings from the PE Systematic Review and developing a PE tool. 7 Oct 2008; Gatineau/Alymer, PQ: Ergonomics EI Network (ACE).

Van Eerd D, Cole DC, Village J, Theberge N, St. Vincent M, Irvin E, Clarke J, Keown K, Mahood Q, Cullen K. A review of the literature on process and implementation of participatory ergonomics. 21-23 Oct 2008; Pittsburgh, PA: 2008 National Occupational Injury Research Symposium (NOIRS)

Systematic Review: Effectiveness of Education and 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 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:

- ▶ To provide a comprehensive summary of the effectiveness of education and training strategies for the protection of workers by systematically reviewing the quantitative literature.

Methods: Quality appraisal and data extraction using a standardized form was conducted by pairs of independent reviewers. The evidence synthesis method of the CDC Guide to Community Preventive Services synthesis was adapted to this review and applied to bodies of evidence. Recommendations were drafted based on the evidence synthesis and were revised based on stakeholder feedback.

Results: There is strong evidence for the effectiveness of OHS training on worker OHS behaviours. There is insufficient evidence for the effectiveness of OHS training on health (i.e. symptoms, injuries). There is insufficient evidence that a single session of high engagement training has a greater effect than a single session of low/medium engagement training on worker OHS behaviours.

Researchers: Ben Amick, Lynda Robson (Principal Investigator's), Jane Brenneman Gibson, Stella Chan, Kim Cullen, Emma Irvin, Kiera Keown, Quenby Mahood, Amber Bielecky, E. Cullen (NIOSH), D. Eggerth (NIOSH), P. Grubb (NIOSH), T. Heidotting (NIOSH), P. Schulte (NIOSH), C. Stephenson (NIOSH)

Stakeholder Involvement: NIOSH is a research partner

Potential Audiences and Significance: WSIB; MOL; HSAs; and anyone interested in worker training.

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

Publications: Robson LS, Stephenson C, Schulte P, Amick B, 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; Cincinnati, OH: NIOSH [2009-011]

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

Project Status: Completed

Introduction: Inappropriate design of workplaces and work processes contributes significantly to the development of common work-related musculoskeletal disorders. The Institute has contributed significantly to the literature on low back musculoskeletal disorders. This review will compliment this body of literature by focusing on the upper extremity musculoskeletal disorders, including the shoulder and neck.

Objectives:

- ▶ To conduct a systematic review to address the question: How effective are workplace (based) interventions on the prevention of upper extremity disorders?

Methods: A systematic review of the literature used a best evidence synthesis approach to address the general question “Do occupational health and safety interventions prevent upper extremity musculoskeletal symptoms, signs, disorders, injuries, claims and lost time? This was followed by an evaluation of specific interventions.

Results: An initial search identified 15279 articles. Among these, 36 articles were included in the review based on their relevance and quality. These articles identified 19 categories of OHS interventions. There is *mixed evidence* overall that OHS interventions are effective in preventing and managing upper extremity MSDs. As for particular interventions, there is *strong evidence* that workstation adjustments alone have no effect on upper extremity health. There is *moderate evidence* that arm supports are beneficial, and that biofeedback training and job stress management training have no effect. There is *limited evidence* of a positive effect on upper extremity health for four interventions: ergonomics training plus workstation adjustments, alternative keyboards, new chair and rest breaks. There is also *limited evidence* of no effect for two interventions: cognitive behavioural training and miscellaneous work redesign strategies. There is *mixed evidence* (showing both a positive effect and no effect) for four interventions: exercise programs, ergonomics training plus exercise, ergonomics training, and alternative pointing devices. There is *insufficient evidence* for the effectiveness of five interventions: rest breaks plus exercise, participatory ergonomics, broad-based musculoskeletal injury prevention program, multi-component patient handling, and prevention strategies plus physical therapy.

Conclusion: There is a lack of work-based intervention studies evaluating upper extremity MSDs and traumatic injuries in non-office based sectors. More high quality research is needed across industries and sectors.

Researchers: Ben Amick (Principal Investigator), Carol Kennedy-Yee (Institute Coordinator), 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 the usual practice for our Prevention reviews stakeholder meetings will be 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: The results of this review will be of interest to researchers and prevention partners. In particular the results of this review will be relevant for the OHSCO Strategic Initiative 2006-2008: Prevention of work-related musculoskeletal disorders.

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

2008 Publications:

Amick B, 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. 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. Toronto: IWH [2008-098]

Kennedy C, Amick B, 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. Submitted: Journal of Occupational Rehabilitation [2008-096]

2008 Presentations:

Keown K, Van Eerd D. Systematic review of the role of occupational health and safety interventions in the prevention of upper extremity musculoskeletal disorders. 17 Oct 2008; Mississauga, ON: Kinesiologist EI Network.

Kennedy C, Amick B. Managing upper extremity injuries: What are the best practices? 21-23 Apr 2008; Toronto, ON: IAPA Health and Safety Canada 2008 Conference

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

Project Status: Completed

Introduction: Small and medium sized businesses typically have higher injury and disability rates than large businesses and thus have unique prevention needs and challenges. A recent 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 are initiating a full systematic review in 2007. This review will combine 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?

Results: QA and DE completed, findings synthesized, findings report written. Final papers for publication have yet to be written.

Researchers: Ellen MacEachen, Curtis Breslin (Principal Investigator's), Ben Amick, Philip Bigelow, Rachel Couban, Kim Cullen, Emma Irvin, Agnieszka Kosny, Natasha Kyle, Quenby Mahood, Sara Morassaei, Krista Scott-Dixon, L. Brosseau (Consultant), Lori Chambers, 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

2008 Publications:

MacEachen E, Breslin FC, Kyle N, Irvin E, Kosny A, Bigelow P, Mahood Q, Scott-Dixon K, Cullen K, Morassaei S, Facey M, Chambers L, Couban R, Shannon HS, Amick BC. Effectiveness and implementation of health and safety in small enterprises: A systematic review of qualitative and quantitative literature. Toronto: IWH 2008. [2008-097]

2008 Presentations:

Breslin FC, Amick B, Kyle N. Effectiveness and implementation of H&S programs in small and medium enterprises. 21-23 Apr 2008; Toronto, ON: IAPA Health and Safety Canada 2008 Conference.

Eakin J, MacEachen E. Enduring challenges of OHS in small workplaces: What is the problem? 15-17 June 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Irvin E, Kennedy C, Tompa E, Van Eerd D, MacEachen E, Breslin FC, Keown K. Workshop: Occupational health and safety and prevention reviews: synthesizing and translating the evidence. 15-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

MacEachen E, Breslin FC, Irvin E, and the Small Business Systematic Review team. Effectiveness and implementation of health and safety programs in small and medium enterprises synergies between the qualitative and quantitative literatures. 15-17 June 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

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 H, Amick BC. Effectiveness and implementation of health and safety in small enterprises: A systematic review of qualitative and quantitative literature. 12 Sep 2008, Toronto, ON: Health and Safety Associations Liaison Committee

MacEachen E, Kosny A, Scott-Dixon K, Facey M, Chambers L, Kyle N, Breslin FC, Irvin E, Mahood Q, and the Small Business Systematic Review team. A systematic review of work and health in small businesses: how do small businesses fit (or not) with occupational health systems? 15-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Systematic Review: Studies that Undertake Economic Evaluation of Workplace Interventions Directed at Primary and Secondary Prevention (0960)

Project Status: Completed

Introduction: In this project, we are undertaking a systematic review of studies in which an economic evaluation has been completed of a workplace-based intervention directed at primary or secondary prevention of injury, illness, and disability. Primary prevention studies to be considered are those that are directed at reducing the probability of work-related injuries and illness. Secondary prevention studies to be considered are those that are directed at reducing the impact of injury and illness (not exclusively work-related) on work disability through various workplace-based return-to-work policies, programs and practices. Not included are workplace-based interventions directed at improving the general health of workers, e.g., some health promotion programs. Some interventions (e.g., ergonomic interventions) may be focused on improving productivity, quality, or other firm objectives. These will be included only if there is a primary or secondary prevention outcome included in the quantification of consequences.

The study will be undertaken in three phases in order to assess the feasibility and merits of completing a full scale systematic review. In Phase 1 we evaluated the feasibility of identifying workplace-based OHS studies that complete an economic evaluation. The key consideration was the development of a keyword search strategy that identified studies that met the principal inclusion criteria, and we assessed the number of studies that are likely to be identified. In Phase 2 we completed a pilot study that consists of a subset of subject matter within the broad topic of workplace-based OHS intervention for primary and secondary prevention. Specifically, we focused on interventions for the prevention of musculoskeletal and upper extremity injuries in office settings. In Phase 3 we are undertaking a full scale review, broadening the topic to include all workplace-based OHS interventions.

Objectives:

- ▶ Complete a systematic review of workplace-based OHS interventions.

Methods: This systematic review unfolded in stages: 1) a feasibility study, 2) a pilot study, and 3) full systematic review. Over the course of completing the full systematic review, three workshops were held with stakeholders to get their feedback at the start of the review, mid-way, and during preparation of the final report.

Results: We found strong evidence that ergonomic and other musculoskeletal injury prevention interventions in manufacturing and warehousing are worth undertaking in terms of their financial merits. We also found strong evidence that multi-sector disability management interventions are worth undertaking.

Researchers: Emile Tompa (Principal Investigator), Jane Brennehan Gibson, Roman Dolinschi, Emma Irvin, Kiera Keown, Quenby Mahood, Claire de Oliveira

Stakeholder Involvement: A stakeholder meeting was held in 2006 to fine tune the scope and focus of the systematic review. A second stakeholder meeting was also held in Q4 2006 to help fine tune the messages for workplace parties and policy makers.

Potential Audiences and Significance: This study will be of interest to workplace parties (employers, workers and their representatives), policymaker (WCBs and MOLs), consultants and other practitioners that provide services/advice to employers on OHS matters, and researchers who evaluate the effectiveness of OHS interventions.

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

Publications:

Tompa E, de Oliveira C, Dolinschi R, Irvin E. A systematic review of disability management interventions with economic evaluations. *Journal of Occupational Rehabilitation* 2008; 18(1):16-26. [2007-145]

Tompa E, Dolinschi R, de Oliveira C, Irvin E. A systematic review of occupational health and safety interventions with economic analyses. Accepted: Journal of Occupational and Environmental Medicine [2006-063]

Tompa E, Fang M. The impact of experience rating and firm size dynamics on occupational health and safety performance. Submitted: Safety Science [2004-091]

Tompa E, Dolinschi R, Liang A. An economic evaluation of a participatory ergonomics in an auto parts manufacturer. Submitted: Journal of Safety Research.

Presentations:

Tompa E, de Oliveira C, Dolinschi R, Irvin E. A systematic review of disability management interventions with economic evaluations. 20-24 Sep 2008; Berlin, Germany: 4th International Forum on Disability Management.

Tompa E, Dolinschi R, de Oliveira C, Irvin E. A systematic review of occupational health and safety interventions with economic analyses 21-23 Oct 2008; Pittsburgh, PA: 2008 National Occupational Injury Research Symposium (NOIRS)

Tompa E, Dolinschi R, de Oliveira C, Irvin E. Economic evaluation of workplace interventions for health and safety: A systematic review and methods initiative. Feb 2008; Toronto, ON: Ergonomics EI Inaugural Workshop.

Tompa E, Irvin E, Keown K. Economic evaluation of OHS interventions. 21-23 Apr 2008; Toronto, ON: IAPA Health and Safety Canada 2008 Conference.

Tompa E, Trevithick S, McLeod C. A systematic review of the prevention incentives of insurance and regulatory mechanisms for occupational health and safety. 31 Mar – 2 Apr 2008; Durban, South Africa: 8th International WorkCongress on Work Injuries Prevention, Rehabilitation and Compensation.

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.

2008 Quick Statistics

Completed projects (2)

Ongoing projects (6)

Papers published or in press (6)

Peer review papers submitted (4)

Reports to WSIB or other Prevention System Partners (0)

Presentations of results and stakeholder consultations (1)

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 the 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 in one paper currently under peer-review, 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 will be incorporated into a forthcoming paper on changes in working conditions and levels of physical activity in Canada.

Researchers: Cameron Mustard, Peter Smith

Stakeholder Involvement: None to date

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. In press: Australian & New Zealand Journal of Public Health [2008-041]

Smith P, Frank JW, Bondy S, Mustard CA. Do changes in job control predict differences in health status? Results from a longitudinal national survey of Canadians. Psychosom Med 2008; 70(1):85-91. [2007-090]

Smith P, Frank JW, Mustard CA. The monitoring and surveillance of the psychosocial work environment in Canada: a forgotten determinant of health. CanJ Public Health 2008; 99(6): 475-482. [2008-042]

Smith P, Frank JW, Mustard CA, Bondy S. Examining the relationship between job control and health status: A path analysis approach. J Epi Comm Health 2008; 62(1):54-61. [2006-039]

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 relevance 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.

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

Measurement at the population level through self-report or routinely collected administrative data is essential to studies across all areas.

Publications:

Smith P, Beaton DE. Measuring change in psychosocial working conditions: methodological issues to consider when data are collected at baseline and one follow-up time point. *Journal of Occupational and Environmental Medicine* 2008; 65(4): 288-296. [2006-054]

Smith P, Frank JW, Mustard CA. Trends in educational inequalities in smoking and physical activity in Canada: 1974 to 2005. In press: *Journal of Epidemiology and Community Health* [doi:10.1136/jech.2008.078204] [2008-102]

Smith P, Glazier RH, Sibley LM. Examining relative and absolute differences in self-perceived health status across socioeconomic groups in Canada. Submitted: Journal of Clinical Epidemiology [2007-073]

Wu JSY, Beaton DE, Smith P, Hagen NA. Validation of the brief pain inventory in patients with painful bone metastases: which patients have worse symptoms? Submitted: Journal of Pain and Symptom Management

Presentations:

Mustard CA, Smith P, Hogg-Johnson S. Current challenges and future uses of administrative and survey data in Ontario. 15-17 June 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

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

Project Status: Ongoing

Introduction: Work-related complaints of the musculoskeletal system in the upper extremities are prevalent in VDU workers. Primary and secondary preventive action are taken though are seldom evidence based. Interventions that intervene on work-rest schedules are potentially effective in the prevention of upper extremity disorders in VDU workers. Other research has found extended keyboard and mouse use associated with upper extremity complaints. There is a call for intervention based on the findings from this research. We propose a clinimetric/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 the four methods in workplace intervention studies.

Methods: We will compare four methods of exposure assessment of mouse use by computer workers. The methods are: 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 will be assessed through web-based questionnaires. The questions will address the amount of time participants use a keyboard, mouse and computer for two different time periods: over an hour and over a full work day. Questionnaire data will be collected using an intranet-based approach over 15 consecutive working days. This three week period will ensure that we capture beginning, middle and end of month work periods. Participants will receive an e-mail prompt to complete the questionnaire with a link to an intranet website from a secured in-house server. Near the end of each working day the participants will be asked to indicate how long they used their keyboard, mouse and computer for that day. In addition, at random points during the work day participants will be asked to complete a very brief questionnaire concerning their keyboard, mouse and computer use for the past hour. At the request of the participants, the researchers will offer a hard copy of the questionnaires to use in place of the web-based approach. Data on computer use will be gathered in a central file on the organization's network. The coupling of datafiles will be based on individual network login name (computer use) and individual e-mail addresses (questionnaire). This procedure has proven to be feasible in earlier research. The web-based questionnaires are very short, taking less than two minutes each to complete. Therefore the response burden will be quite low for the participants.

b) The second exposure assessment method will use 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 software will be installed on the company's server and in the participant's personal user profile. 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 will not be burdened in any way. The electronic monitoring will be done over a four month work period.

c) As a third method we will look 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 can be 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, will provide more information about the exposure to mouse use and associated postures. The enhanced electronic monitoring will be done over a four month work period at the same time as the electronic monitoring.

d) Digital video will be taken using a web camera. Since the focus of this study is on monitoring keyboard and mouse use, the webcam will be focused only on the workers hands, to be as unobtrusive as possible and minimize the ability to identify the individual. The webcam will be programmed to record for two

minute periods, randomly over the course of five consecutive working days. There will be between 10 and 15 periods in the course of a single day. The digital video information will be stored on a dedicated segment of the organization's server. The observation of the video will be performed using Noldus Video Observer software which allows a trained video analyst to rewind and slow down the video to ascertain hand contact with the mouse or keyboard to the nearest millisecond. The video analyst will be a student who will not be familiar with the participants in the study. This student will be versed in issues of privacy and confidentiality by the investigators, will sign a confidentiality agreement and will be asked to complete the Interagency Panel on Research Ethics' Introductory Tutorial for the Tri-Council policy statement: Ethical conduct for research Involving humans, or provide proof of equivalent.

We expect that all data related to this study will be in digital format. No personal identifiers will be entered electronically. In the event that a participant requests to complete questionnaires on paper, these data will be entered into the same database. The data entry will be done by a research assistant. The paper questionnaires will have no identifiers and will be placed in sealed envelopes and then into the mail folder of the research assistant. Once the data is entered the hard copy will be placed in a locked file cabinet.

Researchers: Ivan Steenstra, Dwayne Van Eerd (Principal Investigator's), Colette Severin (Institute Coordinator), Ben Amick, Dorcas Beaton, Philip Bigelow, Donald Cole

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

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: Results prepared to date in manuscript include a description of cancer mortality by occupational groups, a description of suicide mortality by occupational groups and a description of avoidable mortality by occupational groups.

Researchers: Cameron Mustard (Institute Coordinator), Jacob Etches, Kristan Aronson (Queens University), Amber Bielecky (Canadian Institute of Health Information), Russell Wilkins (Statistics Canada)

Stakeholder Involvement: Reimer Gaertner (WSIB) S Paradis (Health Canada), Richard Lessard (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:

Wilkins R, Tjepkema M, Mustard C, Choiniere R. The Canadian census mortality follow-up study, 1991 through 2001. Health Reports 2008; 19(3):25-43. [2008-036]

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

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.

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

Funding:

Wells R, Amick B. 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)

Labour Market Consequences of Mental Disorders, and the Impact of Treatment (0560)

Project Status: Completed

Introduction: Substantial attention has been given to estimating the prevalence and consequences of mental disorders, and the impact of mental disorders on work role functioning. However, much less is known about the longitudinal course of work disability related to mental disorders, its impact on labour market outcomes, and the impact of mental disorder treatment on labour market outcomes.

Objectives:

- ▶ The current research will analyze data from the following Statistics Canada survey datasets: the Canadian Community Health Survey, cycles 1.1, 1.2, and 2.1; the National Population Health Survey, longitudinal component, cycles 1 through 5 (1994/5 through 2002/3).
- ▶ The analyses will address the following questions:
 1. What is the impact of an episode of major depressive disorder (MDD) in adolescence upon educational attainment? (NPHS)
 2. Is the persistence or recurrence of a major depressive episode associated with adverse labour market consequences? (NPHS)
 3. What is the impact at the population level of treatment for major depressive disorder on labour market outcomes and self-rated health? (NPHS)
 4. How does the labour market participation and income of those with Bipolar disorder compare with respondents without such a disorder? (CCHS 1.2)
 5. What socioeconomic variables influence access to treatment, and subsequent labour market and health outcomes following treatment? (CCHS 1.2, NPHS)

Methods: All analyses related to this project involve longitudinal data from the National Population Health Survey, cycles 1 through 6. The major outcome variables for educational attainment analyses are completion of high school, enrolment in post-secondary education, and completion of a post-secondary program.

Results: The results demonstrate an association between the occurrence of a major depressive episode in childhood and lower educational attainment, but the association no longer holds when the educational attainment of parents and other variables are included in the multivariate models.

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

Stakeholder Involvement: Not applicable

Potential Audiences and Significance: The results of these analyses will be of interest to administrative/managerial audiences (especially employers). There is a great deal of interest among large private and public sector employers in the relationship between mental health problems, rates of health-related work absence and work-related injury, the impact of treatment.

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

Work-related Insecurity in Post-standard Employment: Exploring the Links to Health (0434)

Project Status: Completed

Introduction: This post-doctoral research represents an extension of dissertation work on the health impact of work-related insecurity in the contemporary labour market. This work transcends standard socio-epidemiological models of job insecurity which focus on only a single aspect of the experience - i.e., the strain that arises from an individual's lack of control over the continuity of employment. A political economy perspective is used to examine how macro-level changes in the economy and labour market have constituted work-related insecurity as a multidimensional and chronic occupational stressor that is embedded in the new organization of work. The paragon of this development is the rise of "post-standard" employment, which denotes work arrangements that are nominally secure (i.e., full-time, full-year, non-contractually limited) though can give rise to several forms of career, income and work-life balance insecurity. A political economy perspective also shed light on how different axes of social stratification such as gender, race and education might intersect with class to produce structured differences in exposure and/or vulnerability to work related insecurity experiences. Hence, the empirical component of this research uses a longitudinal approach to investigate how exposure to different aspects of work related insecurity affect workers' health over time, and how these effects might be socially patterned according to key socio-demographic characteristics denoting social position.

Objectives:

- ▶ To develop a framework for understanding the social distribution of work-related insecurity experiences according to key socio-demographic/structural characteristics (namely gender, age and education).
- ▶ To conduct an empirical mapping of the social distribution of work-related insecurity in the Canadian labour market.
- ▶ To investigate the longer-term health effects of exposure to several emergent dimensions of work-related insecurity and how these effects are distributed according to social position.

Methods: The methods for this project included: 1) a review of the literature and the subsequent development of a theoretical framework on work-related insecurity experiences and downstream health outcomes; 2) descriptive analyses involving an empirical mapping of work insecurity experiences in the Canadian labour market with a focus on differences in exposure according to age, gender and race; and, 3) drawing on Canadian labour market data from the Survey of Labour and Income Dynamics, longitudinal analyses of the relationships between exposure to work insecurity experiences and health testing for possible interaction effects with age, gender and race.

Results: The main findings from this study are: 1) specific dimensions of work-related insecurity show a cumulative adverse impact on health over time; 2) the health effects of certain work-related insecurity experiences are exacerbated for some groups namely, older people and visible minorities.

Researchers: Heather Scott-Marshall (Principal Investigator)

Potential Audiences and Significance: Potential audiences include: OHS researchers and practitioners, worker advocacy groups, public policy analysts, and employers.

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

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

Project Status: Ongoing

Introduction: Depression and activity limitation are both costly and affect a significant proportion of the work force. The 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.

Methods:

The team used data from the National Population Health Survey (NPHS). The National Population Health Survey began in 1994/95 and interviewed a nationally representative sample of Canadians, using a stratified, multi-stage sample. Depression was measured using the Composite International Diagnostic Interview-short form (CIDI-SF). 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. In addition, a number of psychosocial work stress dimensions were measured using an abbreviated 13-item measure of the job-content questionnaire. We used educational grouping as a proxy for social class: those with Bachelors degree vs. those with less than a Bachelors degree for the duration of the study. 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. Included were demographics in 1994 (age, gender), marital status, smoking status and part-time/fulltime work hours. We also controlled for work variables in 2000, 2002 and 2004.

Analyses

We used Statistical Analyses System (SAS) for descriptive analyses and Mplus version 5 for latent class growth analyses.

Results: Analysis currently ongoing.

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).

2008 Quick Statistics

Completed projects (3)
Ongoing projects (4)
Papers published or in press (6)
Peer review papers submitted (7)
Reports to WSIB or other Prevention System Partners (1)
Presentations of results and stakeholder consultation (1)
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 provinces. 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. This kind of knowledge could, for example, help the work safety prevention system target resources on regional 'hot spots.'

Objectives:

- ▶ Describe and map geographic variation in work injuries at the provincial and sub-provincial level, with sub-analyses by gender and industry;
- ▶ 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; and;
- ▶ 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 socio-economic 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: Provided OSSA with geographic distribution of service sector work injuries in Ontario.

Researchers: Curtis Breslin (Principal Investigator), Ben Amick, Selahadin Ibrahim, Peter Smith, Dr. James Dunn, Dr. 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.

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

Vulnerable Young Workers Using Employment Centres (0423)

Project Status: Ongoing

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 plan to survey 2000 15 to 24 year old respondents who are currently using Ontario employment centres. These respondents will also have worked for pay for an employer at some point in the past 12 months. Recruitment for respondents will be 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 will describe 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 will provide training and support for the employment centre staff to administer the survey on their computers.

To recruit participants, the employment centre staff will ask all young people currently using the employment centre who meet 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 will provide informed consent and the participant would complete the internet-based survey at the employment centre. Participants would be provided \$10 for their time. Measures. The information to be collected in this cross-sectional survey include 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 will have staff from the OAYEC as our research partner. As part of the advisory committee we will have 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 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

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)

Work Injuries and Young People: A Prospective Survey (0451)

Project Status: Ongoing

Introduction: Recently, the relationship between educational status, employment and work injuries has been explored. Among young Canadians 15 to 24 years old, those young workers out of school and not having completed high school (8.2 per 100 full-time equivalents [FTEs]) and those out of school with a high school degree (5.1 per 100 FTEs) had higher unadjusted rates of work injuries compared to those workers in school not having completed high school (3.1 per 100 FTEs) or those in school with a high school degree (2.7 per 100 FTEs). These differences in work injury rates were partly due to differences in demographic and work-related covariates included. In addition, young people out of school reported a different work environment as evidenced by decreased social support at work.

The cognitive and behavioral consequences of Learning Disabilities and/or Attention Deficit Hyperactivity Disorder may impact on the risk of a work injury. For example, both LD and ADHD can make it difficult to efficiently read instructions and remember something that was taught previously. Additional areas of difficulties can include executive functions such as prioritizing tasks and flexibility in changing behavior while learning new tasks. There may also be particular difficulty with multiple concurrent tasks, time pressure and having to complete tasks in a required sequence. Consistent with the notion that these conditions may influence work injury risk, a recent longitudinal study found that having met criteria for ADHD as a child or teenager led to a 40% risk of any kind of injury (not just work related).

Objectives:

- ▶ To examine the relationships between learning disabilities and attention deficit disorder, type of job held, and work injury risk among 15 to 24 year olds.

Methods:

For these analyses, the primary analytic samples in the surveys named below were respondents under 24 years old who reported working for pay. However, some questions about youth's risk of work injury needed to be compared to the rate for adults 25 and over.

Measures: The predictor and outcome domains used in our examination of these questions included: measures of health and mental health, sociodemographic and geographic variables, lifestyle patterns, and work-related information (e.g., type of job, measures of work stress).

Analyses: Descriptive statistics were computed to describe the sample of respondents and the rates of work injuries (for example). The type of regression analysis or structural equation model used to examine the association between individual, family, and work-related predictors to a health outcome such as chance of a work injury were determined by the conceptual model and the distribution of the dependent variable (e.g., binomial). In the case of assessing geographic variation in injury rates, multi-level models were employed.

Researchers: Curtis Breslin (Institute Coordinator), Ben Amick, Sheilah Hogg-Johnson, Ellen MacEachen, Anjali Mazumder, Cameron Mustard, Peter Smith, Emile Tompa, Jason Pole

Stakeholder Involvement: Cathi Carr (WSIB); S Boychuk

Potential Audiences and Significance: The results will interest the WSIB prevention division, health and safety organizations such as Ontario Service Safety Alliance (OSSA), and provincial ministries of labour across Canada. Employers and labour unions are also interested in young worker safety issues.

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

Publications:

Breslin FC. Educational status and work injury among young people: refining the targeting of prevention resources. *Canadian Journal of Public Health* 2008; 99(2):121-124 [2006-045]

Breslin FC, Tompa E, Zhao R, Amick BC, Pole JD, Smith P, Hogg Johnson S. The relationship between job tenure and work disability absence among adults: A prospective study. *Accident Analysis and Prevention* 2008; 40:368-375 [2008-042]

Karmakar SD, Breslin FC. The role of educational level and job characteristics on the health of young adults. *Social Science and Medicine* 2008; 66(9): 2011-2022 [2006-041]

Breslin FC, Pole JD. Employment and work injuries among youth with and without learning disabilities and attention-deficit/hyperactivity disorder. Submitted: *American Journal of Public Health* [2007-097]

Mazumder A, Breslin FC. Development of a scale to assess work safety beliefs among adolescent workers. Submitted: *Journal of Occupational Health Psychology* [2008-064]

Prevalence and Determinants of Work-Related Injuries Among Young Workers in Ontario and British Columbia (0408)

Project Status: Ongoing

Introduction: We have previously reported that workers in their first month on the job are more likely to have a lost-time claim than at any other time. Job characteristics, different sociodemographic mix in the work force (e.g., older work force), and changes in training may lead to shifts increases or decreases in the job tenure gradient over time. This project seeks to conduct secondary data analysis of Ontario workers' compensation databases to examine changes in the job tenure gradient over time, with an examination of job tenure and claim rates by age as well.

Objectives:

- ▶ Describe and compare the trends in claim rates by job tenure over the past 15 years for workers in different age groups.

Methods: To compute annual claim rates broken down by age (i.e., 15 to 19, 20 to 24, and 25 to 64 years old), gender, industry, and occupation, denominators will be derived using customized tables from the Labour Force Survey. This method of calculating denominators will allow for rates based on full-time equivalents. To examine geographic variation in claim rates, we will use the 1996 Census to compute claim rates for census divisions in both provinces. The census will also provide area-level information on indicators of socioeconomic status such as income and education.

Researchers: Curtis Breslin (Principal Investigator), Sheilah Hogg-Johnson, Hyunmi Lee, Cameron Mustard, Peter Smith, Emile Tompa, Marjan Vidmar, Mieke Koehoorn (University of British Columbia)

Stakeholder Involvement: Sue Boychuk, Ministry of Labour

Potential Audiences and Significance: The results of this project will be of interest to policy-makers and administrative/managerial audiences. Employers are also interested in preventing work-related injury among new workers.

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

An Examination of the Working Conditions and Risk Factors for Work-related Injuries Among Immigrant Workers in Ontario (0413)

Project Status: Completed

Introduction: Immigrants to Canada make up an increasing segment of the labour force. However, different cultural backgrounds, fewer social networks and lower proficiency in either of the two official Canadian languages, may lead immigrants, especially recent immigrants, to be exposed to more negative labour force experiences (both related to the availability of work and the nature of that work) than people born in Canada. These labour force experiences may place immigrant workers at higher risk of work-related injuries. In addition, because of lower language proficiency, some immigrant workers may have trouble accessing relevant prevention information and navigating the workers' compensation system.

Objectives:

- ▶ To describe the labour market experiences of immigrant workers in Ontario and Canada using a number of secondary data sources collected by Statistics Canada.
- ▶ To determine whether immigrant workers are exposed to workplace factors that may place them at higher risk for different types of work-related injuries.
- ▶ To examine barriers facing immigrants in securing safe and rewarding employment in Ontario and accessing adequate compensation in the event of workplace injury.

Methods: This project used multivariate logistic models to examine:

- Under-employment among immigrants relative to the Canadian-born population between 1993 and 2005
- Work-related occupational health and safety risk factors among immigrants relative to the Canadian-born population between 1993 and 2005.
- Risk of work-related injury among immigrants compared to the Canadian born population in 2003-2005.
- Whether compensation after a week-long absence from work is less likely among immigrants relative to the Canadian-born.
- Differences in over-qualification among a large cohort of immigrants over a four year period.
- Differences in physical demands of occupational among a large cohort of immigrants over a four year period.

Results: Using data from the Survey of Labour and Income Dynamics (SLID) we found that immigrants to Canada are subject to a number of labour market disadvantages relative to the Canadian-born population. These include a higher probability of being under-employed and exposed to work-related occupational health and safety risks (such as temporary employment, non-unionization, working in small workplaces). Using data from the Canadian Community Health Survey we found that immigrant men were more than twice as likely as Canadian-born men to report a work-related injury that required medical attention. Subsequent analyses of the SLID found that immigrants were less likely to receive compensation, relative to the Canadian-born population, after a week long absence from work due to a work-related injury or illness. Analyses of the Longitudinal Survey of Immigrants to Canada has allowed us to examine specific differences among the immigrant population. These analyses have found that country of origin, language proficiency and time spent in Canada before immigration play important roles in finding jobs for which you are qualified and jobs that have similar physical demands to jobs employed in before immigration.

Researchers: Peter Smith (Principal Investigator), Cynthia Chen, Cameron Mustard

Stakeholder Involvement: Marianne Levitsky (Director, Best Practices Branch, Prevention Division) wrote a letter of support for a previous unsupported funding application on this topic. We have informed Ms. Levitsky of our recent funding success, and hope to work with her on the dissemination of the study results over the next 18 months.

Potential Audiences and Significance: WSIB Prevention Division; immigrant worker placement groups

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

Publications:

Smith P, Chen C, Mustard CA. Employment in more physically demanding jobs in a recent cohort of immigrants to Canada. Submitted: Injury Prevention [2007-012]

Smith P, Kosny A, Mustard CA. Differences in access to wage replacement benefits for absences due to work-related injury or illness in Canada. In press: American Journal of Industrial Medicine [2008-070]

Smith P, Mustard CA. Comparing the risk of work-related injuries between immigrants to Canada, and Canadian-born labour market participants. [epub ahead of print] Occupational and Environmental Medicine [2007-046]

Smith P, Mustard CA. The many faces of under-employment among immigrants to Canada: 1993 – 2005. Submitted: Work & Stress [2009-015]

Smith P, Mustard CA. The unequal distribution of occupational health and safety risks among immigrants to Canada compared to Canadian-born labour market participants: 1993 to 2005. Submitted: Safety Science [2009-014]

Presentations:

Smith P, Chan S, Mustard CA. Factors associated with movement out of over-qualification. A longitudinal analysis. 1-4 Sep 2008; Quebec City, PQ: 3rd International ICOH-WOPS Conference.

Funding:

Smith P, Mustard C. An examination of the working conditions and risk factors for work related injuries among immigrant workers in Ontario. WSIB RAC: \$101,700 (Dec 2006-Nov 2008)

Vulnerable Workers: Health Effects of Non-standard Employment (0486)

Project Status: Completed

Introduction: The key question to be addressed by this study is: what are the health consequences of precarious employment experiences? The project uses the Survey of Labour and Income Dynamics (SLID) from Statistics Canada. A number of conceptual and methodological issues are addressed in the analytical work. Development of theoretical and operational constructs measuring precarious employment was an important first step. Four health-outcome measures are used in the analyses: 1) self-reported health status; 2) chronic health conditions causing work disability; 3) any health conditions causing work injury, and 4) illness-related work absences. An important issue addressed in the analytical work is the control for selection effects, (i.e., the possibility that less healthy workers are more likely to be selected into precarious employment experiences).

Objectives:

- ▶ To determine whether individuals who experience precarious employment have lower levels of health or suffer greater decline in health status than those who are in secure employment positions. To determine whether the association between precarious employment and health, if present, is stronger for individuals who experience precarious employment more frequently or for longer periods of time.
- ▶ To determine whether the association between precarious employment and health, if present, is magnified or modified by the context of these experiences.
- ▶ To determine whether exposure to precarious employment experiences is more likely to result in adverse health outcomes for individuals with specific socio-demographic characteristics (e.g., women, older individuals, single parents, individuals with little formal education).

Methods: Our research proceeded in three stages, namely: 1) development of a conceptual framework for “work-related precarious experiences”, which highlights the key dimensions of work experiences that make these insecure or physically hazardous and elaborates the paths between these experiences and downstream health effects; 2) examination of the trends, patterns and prevalences of non-standard work forms and the dimensions of work-related precariousness across gender and age groups for the period 1976 to 2002; and, 3) statistical regression analyses to investigate the impact of exposures to precarious employment experiences on several health-related outcomes including level of general and functional health, and the probability of transitioning to worse health. For the modeling component, we use a statistical procedure that accommodates the special properties of panel data, including the need to adjust for the correlation of multiple individual observations taken across time. We also took several steps to control for the problem of reverse causality (i.e., where poor health precedes exposure to negative employment experiences), lending credibility to our findings.

Results:

Self-reported health status paper: We found that certain types of non-standard work arrangements (full-time temporary, part-time permanent) are associated with a decreased risk of adverse health, while other work characteristics (low earnings, unpaid overtime hours, lack of pension benefits, manual work) predict an increased risk.

Work-related sickness absence paper: Individuals in temporary jobs were as likely to have a work-related sickness absence as individuals in permanent jobs. Individuals with job tenure of 4-6 months were less likely to have an absence than individuals with longer tenures (specifically 64% less likely). Individuals in a union were more likely to have an absence. Firm size was not associated with absence.

Second sickness absence paper: Individuals in temporary jobs were less likely to experience a sickness absence than individuals in permanent jobs. Individuals with tenure of 1-3 months were less likely to have an absence than individuals with longer tenure. In contrast, individuals in a union were more likely to have an absence. Firm size was not associated with absence.

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

Stakeholder Involvement: Discussion document prepared in 2005. Feedback provided from presentation at WSIB Rounds and SAC in 2005, as well as several academic presentations.

Potential Audiences and Significance: This knowledge will be valuable to policy-makers at workers' compensation boards, provincial ministries of labour, and HRDC in relation to: the provision of employment insurance benefits; the provision of health and pension related work benefits; work related disability policy; employment standards; and the relative mix between private and public disability insurance coverage.

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

Publications:

Scott-Marshall H, Tompa E. The health consequences of precarious employment experiences. Accepted: Work and Occupation [2008-069]

Tompa E, Scott-Marshall H, Fang M. The impact of temporary employment and job tenure on work-related sickness absences. Occupational and Environmental Medicine 2008; 65(12): 801-807. [2004-086]

Tompa E, Scott-Marshall H, Fang M. Social protection and the employment contract: the impact on work absence. Submitted: Work [2008-094]

Work, Health Economic Security and Disability (0427)

Project Status: Completed

Introduction: The Equity in Health and Human Services Strategic Research Initiative is sponsored by the Deputy Ministers Social Policy Committee. The Initiative has been established to explore how Ontario Ministries can work together to address the determinants of inequalities in the health of Ontario citizens. The Initiative seeks to provide government decision-makers with enhanced knowledge and information on the health and well-being. The Strategic Research Initiative has requested a proposal from the Institute for Work & Health to develop a framework paper on 'Work, health, economic security and disability'.

Objectives:

- ▶ Provide a summary of the evidence for the role of labour market experiences in contributing to health inequalities.
- ▶ Identify potential policy levers (in the domains of regulation, incentives and social protection) that may be important in prevention the development of health inequalities arising from labour market experiences or that may be important in mitigating the consequences of health inequalities.

Methods: The initiative seeks to provide government decision-makers with enhanced knowledge and information on the causes and consequences of health inequalities among Ontario's citizens and to identify opportunities for policy coordination across Ministries with social and health policy responsibilities in Ontario. At the request of the MOH-LTC, the Institute prepared a briefing paper. In this briefing, we focus on how labour market experiences affect workers' health, with a particular focus on the role of labour market experiences in producing inequalities in the distribution of health in the Ontario population and on potential policy responses that may mitigate these effects. The briefing begins with a description of significant changes in the structure and organization of work over the past three decades that have implications for the health of working-age adults. We then briefly review evidence documenting the consequences of adverse work experiences on the health of the labour force, with an emphasis on how these adverse work experiences may shape inequalities in the health of the workforce. The briefing concludes with an assessment of public policy options that may be effective in preventing the development of health inequalities arising from labour force participation or that may be effective in mitigating the consequences of health inequalities.

Results: The achievements of the past 100 years in making work safer is one of the 10 most important public health achievements of the past century. In the brief 100 year period of the 20th century, the average life expectancy in North America increased by more than 30 years. More than 80% of this improvement in life expectancy (25 years) can be attributed to advances in public health, which includes the contributions of improvements in worker health protection. Despite these achievements, the cumulative effect of exposures and experiences arising from work continue to shape the distribution of health among working-age Canadians and contribute to the inequalities in health in the Canadian population.

The briefing recommended a policy focus in five areas: (1) policies addressing the intersection of work and family, (2) policies focused on addressing the health consequences of insecure employment, (3) policies designed to address health effects arising from the design of work, (4) income distribution policies and the extent to which these policies explicitly recognize the health effects of income inequality and particularly low wage employment, (5) the adequacy and equity of income security programs for disabled working-age adults.

Researchers: Cameron Mustard (Principal Investigator)

Stakeholder Involvement: Deputy Ministers Social Policy Committee

Potential Audiences and Significance: This paper will support discussion concerning opportunities for intersectoral policy to address the determinants of health inequalities among Ontario residents.

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

Publication:

Mustard CA. Work, health, economic security and disability. Report to the Equity in Health and Human Services Strategic Research Initiative, Ontario Ministry of Health and Long-Term Care (SAB08006).

Funding:

Mustard CA. Work, health, economic security and disability. Ministry of Health and Long-Term Care: \$70,000 (May 2008–Sep 2008)

Preventing Musculoskeletal Disorders

These research projects will assess the effectiveness of approaches to the prevention of non-traumatic musculoskeletal disorders in two economic sectors. The first project, working in partnership with one of the health and safety associations, the Electric & Safety Utilities Association (E&USA), examines the implementation of a participatory ergonomic program. The second project 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.

2008 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.

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

Researchers: Philip Bigelow (Principal Investigator), Suzan Krepostman (Institute Coordinator), Donald Cole, Sue Ferrier (Contract), Renée-Louise Franche, Mardon Frazer, Dee Kramer, Nancy Theberge and Richard Wells (University of Waterloo), Shannon Maracle (Electrical and Utilities Safety Association)

Stakeholder Involvement: CRE-Prevention of Musculoskeletal Disorders at the University of Waterloo; 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 provide 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)

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

Presentation:

Subrata P, Bigelow P, Krepostman S, Ferrier S, Hunt S, McKean C, Van Eerd D, Cole DC, Franche R-L, Kramer D, Wells R, Zohar D. Poster: Description of prevalence of pain, physical effort, work limitations in the Electric and Utilities sector. 16-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

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)

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

Project Status: Ongoing

Introduction: 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) 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

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

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 will initiate 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.

2008 Quick Statistics

Completed projects (1)

Ongoing projects (3)

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 (2)

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:
 1. 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?
 2. 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?
 3. What are the firm level and system level costs and consequences associated with responding to different aspects of the intervention?
 4. 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.

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

Stakeholder Involvement: The Ontario WSIB provides funding for HSA activities under this initiative. WSIB senior staff have been active in developing information systems to monitor the activities and outcomes of the intervention. The MOL is responsible for coordinating the alignment of MOL and HSA activities under this initiative. MOL senior staff have been actively supporting the design and development of an evaluation protocol and endorse the evaluation as an important contribution to the Ministry's commitment to enhancing evidence to support policy and program development. Health and Safety Associations in Ontario have made a strong commitment to support the objectives of the High Risk Firm/Last Chance Initiative. To conduct the evaluation, all three (WSIB, MOL, HSAs) will be required to provide data resources.

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

Funding:

Hogg-Johnson S, Cole DC, Amick B, Bigelow P, Mustard CA, Robson L, 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 2001-2004 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: Still cleaning and linking data.

Researchers: Ben Amick (Principal Investigator), Marjan Vidmar

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

Presentations:

Amick B. The role of organizational policies and practices in injury prevention and the management and prevention of work disability. 21-23 Oct 2008; Pittsburgh, PA: 2008 National Occupational Injury Research Symposium (NOIRS).

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:

- ▶ Empirically explore 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), Ben Amick, Sheilah Hogg-Johnson, Sara Macdonald, Lynda Robson, Emile Tompa, Markus Biehl and David Johnston (York University), Robert Klassen (University of Western Ontario), Anthony Veltri (Oregon State University)

Potential Audiences and Significance: Workplace parties (Employers, Workers, Unions), Workplace Safety & Insurance Board

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

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)

Safety Climate Monitoring in Ontario (0269)

Project Status: Completed

Introduction: This is a pilot project that will examine the feasibility of developing research in two areas. One, is the introduction of safety climate measures into a Statistics Canada survey (the WES) and the other is the integration of safety climate monitoring into evaluation of firms in the manufacturing sector who are undergoing an OHS intervention.

Objectives:

- ▶ Examine the feasibility and cost of linking WSIB claims records (firm level) to firms that are in the current WES sample.
- ▶ Develop relationships with firms in the manufacturing sector who are in the Safety Groups program and examine the feasibility of incorporating safety climate monitoring in the Safety Group evaluation process.
- ▶ Develop a proposal for submission to the WSIB RAC or CIHR to conduct a more detailed investigation in these two areas.

Methods: Communication with stakeholders, power computations using WSIB data, analyses to determine the accuracy of linking WSIB and Statistics Canada (WES) data, preparation and submission of grants, and organization of a workshop.

Results: The feasibility was examined and it was determined that this project would not move forward.

Researchers: Ben Amick (Principal Investigator), Philip Bigelow, Sheilah Hogg-Johnson, Selahadin Ibrahim, Lynda Robson, Marjan Vidmar

Stakeholder Involvement: Investigators on the project include individuals from IAPA, the WSIB, Statistics Canada, and Dalhousie University.

Potential Audiences and Significance: Safety climate is a leading indicator of injury and illness in workplaces so the findings from this investigation will have interest to a wide range of stakeholders. The IAPA, other HSAs, and the WSIB are interested in interventions that improve safety climate. OHS professionals are interested because of the clear link to injury reduction with improved safety climate.

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

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.

2008 Quick Statistics

Completed projects (0)
Ongoing projects (4)
Papers published or in press (0)
Peer review papers submitted (1)
Reports to WSIB or other Prevention System Partners (1)
Presentations of results and stakeholder consultations (2)
External grants awarded (3)

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, Chris 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 and Safety Agency for Healthcare 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 in Ontario.

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 P, Koehoorn M, McLeod C. Examining trends in the incidence and cost of workers' compensation claims in the Ontario and BC 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) reduced 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 NLTC 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 NLTCs 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 NLTCs to the WSIB, and examine if these injury types have changed over time.
- ▶ To report if certain types of NLTCs 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 NLTCs from firms who get premium rebates, firms who pay premiums surcharges and firms who do not pay premiums (i.e., Schedule two 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.

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

Stakeholder Involvement: Outline of project was presented to HSA's in early 2008 to discuss information to be extracted from NLTC forms.

Potential Audiences and Significance: This research project will provide a comprehensive overview of the type of work related injuries that result in NLTCs 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

Presentations:

Smith P, Mustard CA, Hogg-Johnson S, Tompa E, Vidmar M. An examination of trends in no-lost-time and lost-time claims in Ontario 1991 to 2006. 20-24 Sep 2008; Berlin, Germany: 4th International Forum on Disability Management.

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: Ongoing

Introduction: This project continues pre-existing work of the System Measurement Sub-committee of OHSCO. The Sub-committee has produced four annual reports on the performance of the Ontario Prevention System. The Sub-committee plans to continuously improve the quality of the performance indicators. This requires ongoing investigation of: opinions within the Prevention System, new concepts and techniques in the field, methods of data collection, and the strengths and limitations of data sources.

Objectives:

- ▶ Annually conduct a targeted scan of relevant research literature.
- ▶ Annually identify areas for improvement in the performance report.
- ▶ Investigate and develop new data sources and computation methods as required.
- ▶ Improve the efficiency, reliability and validity of the methods of data collection as required.
- ▶ Annually 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 and MOL. 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: New sources of data were investigated and drawn upon. A draft report on 2007 has been completed.

Researchers: Lynda Robson (Institute Coordinator), Cameron Mustard

Stakeholder Involvement: The collaboration with other members of the System Measurement Sub-committee of OHSCO involves interactions with other Prevention System members on an ongoing basis.

Potential Audiences and Significance: The primary audience is OHSCO. Future reports may be disseminated more broadly, including to other jurisdictions.

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

Publication:

Speers JC, Robson LS, Mustard CA. Occupational Health and Safety Council of Ontario System Performance Measurement Report 2006. Toronto: OHSCO.

Presentation:

Robson LS, Speers JC. Development of a performance measurement report for the Ontario prevention system. 16-17 June 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH).

Robson LS, Speers JC. Development of a performance measurement report for the Ontario prevention system in occupational health and safety. 6-7 Oct 2008; Toronto, ON: Canadian Evaluation Society - Ontario Chapter.

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

Project Status: Ongoing

Introduction: A system of experience-rated workers' compensation premiums (NEER and CAD-7) was phased in during the 1980s in Ontario. Subsequently, the injury claim rates for both lost-time and no-lost-time claims decreased suggesting that the programs might have had an impact on employer behaviour. Theoretically, a link between a company's claims history and the premiums paid for coverage provides an incentive to increase safety efforts, but to what degree the observed trend in claim rates is attributable to the introduction of experience rating is unclear and controversial. A decrease in claim rates also has been observed over this time period in other jurisdictions, suggesting that the phenomenon might, at least partially, be driven by cross-jurisdictional forces and not strictly by within-jurisdiction policy changes. The phasing-in of experience rating provides an interesting natural experiment to test the relationship between experience rating and claim rates. Data for this project come from three sources: WSIB administrative records on firms and their claim's activity, Ministry of Labour's (MOL) administrative records on occupational health and safety regulation enforcement activity and the Workplace and Employee Survey (WES). The latter will be the source of information on the characteristics of firms that is not available from the two administrative data sources.

Objectives:

- ▶ To assess whether the degree of experience rating is correlated with injury experiences at the industry level, after controlling for other characteristics of relevance.
- ▶ To assess whether the degree of experience rating is correlated with specific aspects of injury experiences such as the frequency, duration and nature of injuries.
- ▶ To investigate the impact of OHS regulation enforcement on injury experiences.

Methods: Regression modelling techniques using micro data at the firm level from WSIB administrative data sources.

Results: From the first micro analysis paper we found that a higher degree of experience rating was associated with lower total and lost-time claim rates, but a higher no-lost-time claim rate. Substantial growth, having an intermittent workforce, and being a newly opened firm were significantly associated with higher rates in all three categories, whereas substantial downsizing was associated with only a higher rate of no-lost-time claims. Experience rating appears to be effective in reducing lost-time claims, with some of the reduction due to shifting of claims to the no-lost-time category.

Researchers: Emile Tompa (Principal Investigator), Ben Amick, Sheilah Hogg-Johnson, Lynda Robson

Stakeholder Involvement: Ron Lovelock (WSIB) and Doug Potter (MOL) have been actively involved in this project from the early stages. Ian Welton provided information and data about the Experience Rating programmes at the WSIB and Bob Kusiak, now retired from the Ministry of Labour, has been instrumental in the access to the data on OHS regulation enforcement.

Potential Audiences and Significance: This project is relevant to employers, the WSIB and workers' compensation boards in other jurisdictions, and policy-makers in provincial ministries of labour.

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

Publication:

Tompa E, Fang M. The impact of experience rating and firm size dynamics on occupational health and safety performance. Submitted: 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)

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.

2008 Quick Statistics

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

Economic Evaluation Workbook for Workplace Parties (0218)

Project Status: Ongoing

Introduction: Workplace parties have expressed ongoing interest in the 'business case' for workplace interventions to reduce the burden of injury and illness. In addition, policy-makers have solicited literature reviews and sought a greater emphasis on economic evaluation. The focus of this project will be to develop a coherent framework and enhanced methods for economic evaluation of workplace interventions for health and safety. An environmental scan/methods paper was undertaken through work on project 960: Systematic Review of OHS Studies with Economic Evaluations. An international workshop on methods and application of economic evaluation as they apply to workplace OHS interventions was held in April 2006. The workshop proceedings were published in 2007.

Objectives:

- ▶ Hold a workshop on good practices in the application of economic evaluation methods in workplace OHS interventions.
- ▶ Publish a book from the workshop.

Methods: **Methods Book:** the initiative began in 2005 with a working group that met regularly for a period of approximately one year to develop the book idea, identify a list potential contributing authors, and plan an international workshop to serve as a forum for peer-review of contributions. The workshop, was held in Toronto, Canada on April 6 and 7, 2006. The book was developed from the workshop contributions over the following year. Second drafts of chapters were prepared by contributors based on the workshop feedback. Editors then revised all chapters to ensure that they dovetailed together in a way that readers could read the book from cover to cover, terminology and prescriptions were consistent, and there was minimal overlap. The book was published by Oxford UK in August 2008 and was available from Oxford US in December 2008. A launch of the book is planned for early 2009.

Workbook: Over a one-year time period, economic evaluation workbooks for workplace parties and system partners will be developed and field tested with the assistance of partners participating in the initiative. The workbooks will draw on previous work completed by IWH researchers, specifically a systematic review of OHS interventions with economic analyses, an economic evaluation methods book, and an environmental scan of existing tools. Three sector-specific books will be developed— one for manufacturing, one for the service sector, and one for healthcare.

Results: The methods book was published by Oxford UK in August 2008 and was available from Oxford US in December 2008. No results to date for the workbook.

Researchers: Emile Tompa (Institute Coordinator), Roman Dolinski, Jacob Etches, William Gnam (Centre for Addiction & Mental Health), Michele Grignon (McMaster University), Audrey Laport (University of Toronto)

Stakeholder Involvement: Some stakeholders for the WSIB and MOL were invited to the workshop held in April 2007. The book will also be distributed to a number of individuals at the WSIB, MOL and to researchers who undertake workplace intervention research.

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; Return to Work: Prevention & Management of Work Disability

Publications:

Economic Evaluation of Interventions for Occupational Health and Safety: Developing Good Practice.
Oxford Press: New York 2008, Tompa E, Dolinschi R, Culyer AJ, editors.

Amick BC, Bigelow P, Cole DC. Workplace-researcher relationship: early research strategy and avoiding the 'data dearth' Pp.117-134 [2006- 019]

Cookson R, Dorman P. Lessons from the literature on valuing reductions in physical risk. Pp.71-92 [2006-030]

Culyer AJ, Amick B, Laporte A. What is a little more health and safety worth? Pp. 15-36 [2006-028]

Culyer AJ, Sculpher M. Lessons from health technology assessment. Pp.51-70 [2006-022]

Culyer AJ, Tompa E. Equity. Pp. 215-234 [2006-017]

Gnam W, Grignon M, Dolinschi R. Adjusting for time preference and addressing uncertainty. Pp. 201-214 [2006-130]

Gnam W, Robson L, Kohstall T. Study design. Pp. 135-146 [2006-025]

Hoch JS, Dewa CS. Kind of analysis and decision rule. Pp. 147-164 [2006-029]

Hotopp U, Mendeloff J, Sinclair S, Tompa E, Eltard D, Koeper B, Clayton A. The institutional and regulatory settings for occupational health and safety: an international survey. Pp. 93-116 [2006-023]

LaPorte A, Dolinschi R, Tompa E. Costs. Pp. 165-178 [2006-026]

Mustard CA. The broad conceptualization of work and health. Pp. 3-14 [2006-020]

Tompa E, Culyer AJ, Dolinschi R. Suggestions for a reference case. Pp. 235-244 [2006-024]

Tompa E, Dolinschi R, de Oliveira C. Consequences. Pp.179-200 [2006-027]

Tompa E, Dolinschi R, de Oliveira C. The identification and valuation of consequences. [2004-085]

Tompa E, Dolinschi R, Niven K, de Oliveira C. A critical review of the application of economic evaluation methodologies in occupational health and safety. Pp. 37-50 [2006-021]

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)

Prevention System OHS Management Audit Tools: Description, Content Validation and an Assessment of the Feasibility of Measurement Research (0267)

Project Status: Completed

Introduction: Occupational health and safety management system audits are used by workplaces or workplace stakeholders for several diagnostic or evaluative purposes, including the following: identifying those aspects of the OHS management system for which improvement is warranted; evaluating the impact of any workplace interventions to improve the OHS management system; monitoring the OHS performance of the workplace; determining whether the workplace meets a particular OHS management standard.

Given these applications of audits, it is important that they have good measurement properties (e.g., reliability, validity). Yet, a recent literature review (Bigelow and Robson, 2005) found that little has been published in the research literature about the properties of audit instruments.

Objectives:

- ▶ Describe and compare the OHS management system audit methods used by Ontario Prevention System partners (i.e., Ministry of Labour, Workplace Safety & Insurance Board (WSIB) Prevention Division, 14 Health & Safety Associations supported by the WSIB).
- ▶ Investigate the content validity of the audit instruments.
- ▶ Assess the feasibility of a larger study of the measurement properties of the audit methods.

Methods: Data collection methods involved: interviews with key informants; review of audit-related documents; observations of auditors conducting audits and conversations with the auditors.

Cross-case analysis all methods was conducted. The content validity of five audit methods was analyzed using the CSA Z-1000 standard for OHS management as a definitional standard.

Results: Seventeen audit methods belonging to ten Prevention System organizations were identified. They had a wide range of characteristics. Across five methods where completeness of content was important, there was a median of 77% of CSA Z-1000 content being partially or fully represented. Deep cross analysis of five methods where measurement properties were important, showed large variation. Investigators developed a set of suggested practices for participating organizations to consider.

Researchers: Lynda Robson (Principal Investigator), Philip Bigelow, Garry Gray, Sara Macdonald, Dwayne Van Eerd, Lori Chambers

Stakeholder Involvement: Eleven Health & Safety Associations (HSAs) and WSIB. The HSAs are: Construction Safety Association of Ontario (CSAO); Electrical & Utilities Safety Association of Ontario (E&USA); Education Safety Association of Ontario (ESAO); Industrial Accident Prevention Association (IAPA); Mines and Aggregates Safety and Health Association (MASHA); Municipal Health & Safety Association (MSHAO); Ontario Forestry Safe Workplace Association (OFSWA); Ontario Safety Association for Community & Healthcare (OSACH); Ontario Service Safety Alliance (OSSA); Pulp and Paper Health and Safety Association (PPHSA); Transportation Health & Safety Association (THSAO)

Potential Audiences and Significance: Prevention System: Partner organizations can compare their own particular audit methods to those of other partner organizations and to the new Canadian OHS management system standard CSA Z1000. Comparisons could indicate ways in which organizations could modify their methods. Also, audits were seen by some partners as relevant to the anticipated OHS management system accreditation program that the WSIB launched in 2008.

Researchers: By examining content validity of a population of audit instruments, this study begins to address the gap in the research literature about the measurement properties of OHS audit methods.

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

Publication:

Robson LS, Macdonald S, Van Eerd D, Gray G, Bigelow P. Prevention system OHS management audit methods: description, content validation and an assessment of the feasibility of measurement research: Final report to the WSIB RAC; Toronto, Institute for Work & Health, 2008. [2009-004]

Presentation:

Robson L, Macdonald S, Bigelow P, Gray G, Van Eerd D. Prevention System OHS management audit methods: description, content validation, and assessment of the feasibility of measurement research. 4 Nov 2008; Toronto, ON: IWH Plenary Series.

Funding:

Robson LS, Van Eerd D, Bigelow P, Gray G, Chambers L, Macdonald S. Prevention systems occupational health and safety management audit tools. WSIB RAC: \$59,894 (2007-2008)

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 result.

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.

Prevention and Management of Work Disability	64
<u>Measuring Health and Function</u>	65
Measurement methodology studies (0925).....	66
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)	67
The measurement of work disability/disability at work (0117/0121)	68
Assessing prediction rules for the duration of disability in workers with low back pain (0170).....	70
Developing standardized metrics for work disability management benchmarking (0237).....	72
<u>Clinical Treatment</u>	74
Outcomes used for LBP in the literature: Is recurrent/episodic nature accounted (0308).....	75
Cochrane Back Review Group: Systematic reviews of the scientific literature on spinal disorders (0440).....	78
Evidence-based practice (0670)	80
Back Guide//Ontario Occupational Health Nurses' Association Journal (0830)	82
<u>Return to Work Practices</u>	83
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)	84
An ethnographic study of process and experience with labour market re-entry (0247)	87
RETORK- Ontario Trial of Sherbrooke Model (0251).....	89
Training initiatives in work disability prevention (0144).....	90
What workplace characteristics have an impact on an injured workers' return to work (0174).....	91
Economic perspectives on a workplace return-to-work clinical trial (0172)	92
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 (0134).....	93
<u>Compensation and Benefits</u>	95
WSIB lost-time injuries and income sources post-injury (0406)	96
Adequacy and equity of B.C. workers compensation benefits (0418).....	98
Examining explanations for the increasing frequency of long duration compensation claims (0327)	100
Immigrant workers' experience after work-related injury and illness (0273).....	101
RAACWI: Compensation and consequences of work injury (0428)	103
RAACWI: An ethnographic study of injured workers' claims experiences: A focus on mental health and substance use issues (0428A)	105

RAACWI: Mental health and quality of life after a work injury claim (0428C).....	107
Workers' compensation and occupational health & safety coverage in non-profit organizations (0263).....	108
An ethnographic study of Injured workers' complex claims (0244).....	109
Immigrant workers' experiences after work-related injury in B.C: Identifying key questions and building research capacity (0258).....	111
Accident compensation commission (ACC) trend identification and analysis (0447).....	112
<u>Evidence Guides and Tools</u>	113
Development of a green light and red flags toolkit for persistent claims (0253).....	114
Development and testing of the DASH outcome measure - DASH Instrument (0425).....	116
KTE Focus on Prevention and Management of Work Disability.....	117

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 had led to the development of tools for practical application in workplace parties and the compensation system.

In 2007 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.

2008 Quick Statistics

Completed projects (4)
Ongoing projects (26)
Papers published or in press (13)
Peer review papers submitted (2)
Reports to WSIB or other Prevention System Partners (0)
Presentations of results and stakeholder consultations (19)
External grants awarded (20)

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 2008 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.

2008 Quick Statistics

Completed projects (0)

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 (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.

Results: IWH continues to have a strong presence in the theory of measurement and the interpretability of scores. Our scientists are now at the core of two courses in measurement at the University of Toronto and our group has prepared and delivered workshops at three meetings in 2008. We have attracted a cadre of trainees and new investigators who are interested.

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

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

Presentation:

Beaton DE, Smith P, Van Eerd D and IWH Measurement Group. Applying measurement theory in work and health research. 15-17 Jun 2008; Montreal, PQ. Canadian Association for Research on Work and Health (CARWH) Conference.

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. This study is an expansion of work originated under project 124, and has as its specific objectives:

- ▶ 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.

Methods: This cohort is a longitudinal cohort of injured workers who are attending the WSIB specialty clinic in Toronto and in London. The project is reported under project 124, but has the specific objectives as follows:

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

Results: 610 injured workers were enrolled into this cohort and approximately 75% retained over a 1 year period. 50% were working at time of attendance at clinic. Data has been run for describing different trajectories of work status over time, and differences in scores for the at-work disability scales (completed only if the status was working).

Researchers: Dorcas Beaton (Principal Investigator), Claire Bombardier, Kim Cullen, Sheilah Hogg-Johnson, Pierre Côté (CREIDO), Renée-Louise Franche (Occupational Health and Safety Agency), 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 also 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 Rheumatoid Arthritic Clinical Trials (OMERACT) workshop 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: This is a composite of several projects.

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

Results: Worker productivity, that portion of workplace productivity that is the input of the worker in their job, is measured with combinations of absenteeism and at work productivity loss (presenteeism). In these projects we have worked with many different investigators to directly compare estimates of health state and costs associated with arthritis. The instruments fielded had varying levels of evidence for their properties generally aligning with their design and content. Instruments conceptualizing at work productivity loss in terms of the amount of difficulty experienced at work were responsive to changes in ability. Those more focused on amount of time having difficulty were more aligned with indicators of productivity. Analysis is ongoing. Though reassuring, it also suggests that the questionnaires are not interchangeable.

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

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

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

Project Status: Ongoing

Introduction: Although intervention strategies based on prediction rules seem promising, both effectiveness and cost-effectiveness have not been proven yet. In this project we will attempt to add evidence on the effectiveness of this approach.

The project will be 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.
3. Formulating interventions based on these prediction and grouping rules.

Objectives:

- ▶ Determine which combination of factors predict the duration of time of work in a worker who has filed a claim for disability benefits.
- ▶ Determine if and which subgroups exist in the population of workers applying for disability benefits.
- ▶ Establish an intervention strategy based on the results from 1&2.

Methods: Secondary analysis of Early Claimants Cohort data and Readiness for Return to Work Cohort data. After comparing a great number of different methods, Latent Class Analysis was chosen as the methods used for classification. The prediction rule will be built by means of Cox Regression analyses for recurrent events.

Results: This paper has been presented at IFDM in Berlin. A presentation at WSIB is planned in the beginning of next year. A paper is about to be submitted on subgrouping of workers claiming disability for low back pain:

Background: Low back pain (LBP) is a common and in some cases disabling condition. Until recently patients presenting with non-specific LBP have generally been regarded as a homogeneous population. We hypothesized that 1) Clusters of individuals could be identified based on risk factors, similar to those described by Shaw et al and, 2) These clusters would predict duration and recurrences 6 months post-injury.

Methods: The study focuses on the 442 low back pain claimants in the Readiness for Return to Work Cohort Study. Claimants (n=252) who had already returned to work at baseline, approximately 1 month post-injury, were categorized as the low risk group. A latent class analysis (LCA) was performed on 183 workers off work at baseline. Groups were classified based on: pain, disability, fear avoidance, physical demands, employer response, and depression.

Results: Three classes were identified. 1) workers with 'workplace issues', 2) as workers with a 'no workplace issues, but back pain', and 3) as workers having 'multiple issues' (the most negative values on every scale, especially depression). Classes 2 and 3 had a similar rate of return to work, worse than the rate of class 1, RTW status at six months and recurrences were similar in all three groups.

Conclusion: This study largely confirms the model by Shaw et al. Different groups of workers might be identified within the first month post-injury to better refer to appropriate care/intervention.

Researchers: Ivan Steenstra (Principal Investigator), Sheilah Hogg-Johnson (Institute Coordinator), Renée-Louise Franche (Institute Coordinator), Selahadin Ibrahim, Pierre Côté (CREIDO), Jill Hayden (Dalhousie University)

Stakeholder Involvement: Informal contacts with WSIB (Michel Schofield and Judy Geary); Clinicians and return to work coordinators at Rehab Solutions, Toronto Western Hospital; From research: Bill Shaw,

Liberty Mutual (Hopkinton, MA, USA) and Steven Linton, Orebro University (Orebro, Sweden); Judy Geary and Frances Share have been approached. Anthony Mincone, Case Manager at WSIB was available to provide feedback during the process.

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; Health Services: Effectiveness & Efficiency of Clinical Care

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 distil 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, include questionnaires provided in already addressed envelopes for return to the WDM consultant's staff or 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.

Researchers: Jason Busse, William Gnam (Principal Investigators) (Centre for Addiction and Mental Health), Ben Amick, Roman Dolinski, Sheilah Hogg-Johnson, Kathy MacDonald, Irina Rivilis, Andrew Clarke and Liz Scott (Disability Consultant's)

Stakeholder Involvement: Workplaces: Three diverse organizations have participated as part of the WSIB grant, in collaboratively developing WDM benchmarking metrics and processes along with the research team. Their participation in 2008 will be limited, aside from getting revised reports based on activities to date. In addition eight financial services organizations are participating in a parallel project. Additional companies may be recruited in future rounds of data collection.; Partners: Clarke, Brown & Associates and Organizational Solutions, as WDM consulting companies interested in applied research to improve WDM practices and outcomes. 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

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. WSIB is completing a comprehensive review of all aspects of its health care business with the goal of delivering a health care business model that provides appropriate, timely and evidence-based health care for injured and ill workers within a financially sustainable system. IWH researchers will be participating in a briefing to a regional family health network in March 2008, providing an overview of research evidence related to the optimal management of disability and opportunities to support primary care providers in improving disability outcomes among injured workers.

2008 Quick Statistics

Completed projects (0)
Ongoing projects (4)
Papers published or in press (7)
Peer review papers submitted (0)
Reports to WSIB or other Prevention System Partners (0)
Presentations of results and stakeholder consultations (2)
External grants awarded (2)

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

Project Status: Ongoing

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 are:
 1. 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.
 2. To use simulation models of different hypothetical courses of low back pain to investigate the relationships between different outcome measures of recurrence.
 3. To recommend a set of core measures which characterize the episodic nature of musculoskeletal conditions such as LBP with corresponding analytic approaches.

- ▶ Additionally, we would like to achieve the following:
 1. 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.
 2. 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 be used for this investigation, the literature on prognosis in LBP is selected here 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.” (Hayden 2007). 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 will examine several conceptual models and frameworks as potentially useful to classify outcomes used in low back pain prognosis research. Such frameworks will be evaluated to examine if they allow 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, we plan to integrate workshop findings as one of our secondary objectives

Data Extraction: A research associate will be trained to the framework of the study and will be primarily responsible for extracting data from the relevant articles. Data extraction for a subset of 40 articles will be replicated by one or the other of the co-researchers on the project and results will be compared between the research associate and the investigators to establish reliability of the data extraction process. Data to

be extracted will include: 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. Note there may be multiple outcomes per study.

Analysis: Each study of prognosis will be screened to identify the outcomes used and how they were analyzed, and extracting information from each study to describe them using the established framework. This extraction will be done by a research associate familiar with this literature, measurement and analytic techniques. We will examine trends over time by considering year of publication. Several hypothetical patterns of the course of LBP will be defined by the investigators based on experience and the literature. Simulation methods will be 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 will be 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 will be compared and contrasted using simulation methods. We will 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: Each paper reviewed to examine outcomes:

1. Did the outcome measurement capture recurrences or episodes (Explicitly/Implicitly)
2. What aspect of back pain captured? (ICF model)
3. What was distributional nature of outcome (binary, count, length of time etc.)
4. What statistical approach used?

Results:

- 133 articles reporting original studies identified
- 17/133 (13%) papers report on recurrences as outcome (explicit)
- 2/133 (1.5%) analyze episodes, including multiple episodes per person but don't look at patterns per person
- 92/133 (69%) papers report outcomes that may arise from recurrence (implicit) [Repeat measures of pain, function, participation, BUT cannot distinguish between continuing or recurrent episodes]

The 17 papers reporting on recurrences:

Reported on recurrence of: Pain (7); Sickness Absence (6); Lost Time (2); Compensation (3); Seeking Treatment (2). With a measurement that was: Binary Y/N (11); Count (6); Time to recurrence (4); Duration of recurrent episode (2). Using a statistical approach: Descriptive, n / % only (11); Logistic Regression (4); Survival Methods K/M estimates, Cox model (3).

Researchers: Sheilah Hogg-Johnson (Principal Investigator), Michael Swift, Renée-Louise Franche (Occupational Health & Safety Agency), 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: Return to Work: Prevention & Management of Work Disability

Presentation:

Hogg-Johnson S, Wasiak R, Hayden J, Franche R-L. How to analyze recurrent disability outcomes. (Component of Symposium "Measuring Return to Work" organized by Ivan Steenstra). 1-4 Sept 2008;

Quebec City, PQ: 3rd ICOH International Conference on Psychosocial Factors at Work, From Knowledge to Action.

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

Project Status: Ongoing

Introduction: The Cochrane Collaboration is an international network of individuals and institutions committed to preparing, maintaining, and disseminating systematic reviews of the scientific literature on the effects of health care. The Institute currently coordinates the Back Review Group (BRG), one of 50 review groups in the Cochrane Collaboration. The editorial and central coordinating activities associated with the BRG are described here as well as IWH researcher involvement in conducting systematic reviews within the BRG. The work of the Cochrane BRG is also closely aligned with the new systematic review program initiated at IWH in 2005.

Objectives:

- ▶ Prepare, maintain and disseminate systematic reviews of the scientific literature on spinal disorders.
- ▶ 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.
- ▶ Communicate regularly with our BRG membership.

Results:

Protocols

van der Windt DAWM, Simons E, Riphagen I, Ammendolia C, Verhagen AP, Laslett M et al. Physical examination for lumbar radiculopathy due to disc herniation in patients with low-back pain. Cochrane Database of Systematic Reviews 2008; 2008(4):CD007431.

McCarthy C, Keating JL, Kent PM, Lall R, Lamb SE, Strimpakos N. Targeted manual therapy for non-specific low-back pain (Protocol). Cochrane Database of Systematic Reviews 2008, 2008 (2):CD007135.

New reviews

Urquhart DM, Hoving JL, Assendelft WW, Roland M, van Tulder MW. Antidepressants for non-specific low back pain. Cochrane Database of Systematic Reviews 2008; 2008 Jan 23;(1):CD001703.

Engers A, Jellema P, Wensing M, van der Windt DA, Grol R, van Tulder MW. Individual patient education for low back pain. Cochrane Database of Systematic Reviews 2008; 2008 Jan 23;(1):CD004057.

Graham N, Gross A, Goldsmith C, Klaber MJ. Mechanical traction for mechanical neck disorders. Cochrane Database of Systematic Reviews 2007; 2007(1):CD006408.

Haines T, Gross A, Goldsmith CH, Perry L. Patient education for neck pain with or without radiculopathy. Cochrane Database of Systematic Reviews 2008, Issue 4. Art. No.: CD005106.

Updated reviews

Staal JB, de Bie R, de Vet HCW, Hildebrandt J, Nelemans P. Injection therapy for subacute and chronic low-back pain. Cochrane Database of Systematic Reviews 2008, Issue 3. Art. No.: CD001824.

Yousefi-Nooraie R, Schonstein E, Heidari K, Rashidian A, Pennick V, Akbari-Kamrani M et al. Low level laser therapy for nonspecific low-back pain. Cochrane Database of Systematic Reviews 2008;(2):CD005107.

van Duijvenbode ICD, Jellema P, Van Poppel MNM, van Tulder MW. Lumbar supports for prevention and treatment of low back pain. Cochrane Database of Systematic Reviews 2008; 2008(2):CD00182.

Furlan AD, Imamura M, Dryden T, Irvin E. Massage for low-back pain. Cochrane database of systematic reviews (Online) 2008;(4):CD001929.

Urrútia G, Burton AK, Morral Fernández A, Bonfill Cosp X, Zanolí G. Neuroreflexotherapy for non-specific low-back pain. Cochrane Database of Systematic Reviews 2004; 2008(4):CD003009.

Roelofs PD, Deyo RA, Koes BW, Scholten RJ, van Tulder MW. Non-steroidal anti-inflammatory drugs for low back pain. Cochrane Database of Systematic Reviews 2008; 2008 Jan 23;(1):CD000396.

Ostelo RW, Costa LO, Maher CG, de Vet HC, van Tulder MW. Rehabilitation after lumbar disc surgery. Cochrane database of systematic reviews (Online) 2008;(4):CD003007.

Khadilkar A, Odebiyi DO, Brosseau L, Wells GA. Transcutaneous electrical nerve stimulation (TENS) versus placebo for chronic low-back pain. Cochrane database of systematic reviews (Online) 2008;(4):CD003008.

By the end of 2008, we had submitted 2713 references of RCTs and CCTs to CENTRAL, an increase of 293 over the year.

Researchers: Claire Bombardier (Principal Investigator), Victoria Pennick (Institute Coordinator), Rachel Couban, Andrea Furlan, Emma Irvin, Allison Kelly, Marie-Andrée Nowlan, Pierre Côté (CREIDO), Jaime Guzman (Occupational Health & Safety Agency), 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 #617 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 Services: Effectiveness & Efficiency of Clinical Care

Publication:

Pennick V. Cochrane Back Review Group. J Can Chiro Assoc 2008; 52(2):124-126. [2008-083]

Presentations:

Gillies D, Maxwell H, New K, Pennick V, Fedorowicz Z, Van Der Wouden J, Oliver J, Scholten R, Ciapponi A, Verbeek J. A collaboration-wide survey of Cochrane authors. (Poster) 3-7 Oct 2008; Freiburg, Germany: 16th Cochrane Colloquium.

Pennick V. Attending 16th Cochrane Colloquium 2008; 3-7 Oct 2008. Freiburg, Germany.

Pictor M, Cracknell J, Pennick V, Thomas J. Improving support and raising standards: a pilot induction and mentoring programme for new Review Group Coordinators in The Cochrane Collaboration. (Poster) 3-7 Oct 2008; Freiburg, Germany: 16th Cochrane Colloquium.

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: The Institute has developed a database of systematic reviews of various treatments for chronic low-back pain. Many researchers at the Institute are authors (or co-authors) of systematic reviews, including Cochrane Reviews for the Back Review Group. As more reviews are conducted, discordance is often noted between the conclusions of the various research

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:

Protocols: See Project 440

New reviews: See Project 440

Updated reviews: See Project 440

Current Cochrane reviews were also used to update the POCKET evidence summary on the management of chronic low-back pain.

Researchers: Victoria Pennick, Andrea Furlan, Emma Irvin, Carlo Ammendolia, Maurits Van Tulder

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: 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 by patients, health care professionals, policy makers and payers.

Publications:

Ammendolia C, Furlan AD, Imamura M, Irvin E, van Tulder M. Evidence-informed management of chronic low back pain with needle acupuncture. *Spine* 2008;8(1):160-172. [2007-001]

Furlan AD, Imamura M, Dryden T, Irvin E. Massage for low-back pain. *Cochrane Database Systematic Review* 2008;4:CD001929 [2008-034]

Imamura M, Furlan AD, Dryden T, Irvin E. Evidence-informed management of chronic low back pain with massage. *Spine* 2008;8(1):121-133. [2007-064]

Martimo K, Verbeek J, Karppinen J, Furlan AD, Kuijjer P, Viikari-Juntura E, Takala E, Jauhiainen M. Effect of training and lifting equipment for preventing back pain in lifting and material handling: systematic review. *British Medical Journal* 2008; 23; 336: 429-431. [2006-175]

Yousefi-Nooraie R, Schonstein E, Heidari K, Rashidian A, Pennick V, Akbari-Kamrani M, Irani S, Shakiba B, Mortaz Hejri Sa, Mortaz Hejri So, Jonaidi A. Low level laser therapy for non-specific low-back pain. *Cochrane Database of Systematic Reviews* 2008, Issue 2. Art. No: CD005107. DOI: 10.1002/14651858. [2008-080]

Furlan AD. Interview to Medical Post – March 4 2008 – “Training in proper lifting no help”.

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. Linkages, distributed semi-annually with At Work and available in PDF through the Institute's web site, critically reviews the best available evidence in the peer-reviewed literature in soft-tissue injury. 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.

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:

Dubey A, Pennick V. Safety climate has 'Great Potential' in reducing workplace injury rates. Ontario Occupational Health Nurses' Association Journal 2008; 27(1):28-31.

Pennick V. Surgical masks or N95 respirators? What is the evidence? Ontario Occupational Health Nurses' Association Journal. Submitted.

Researchers: Victoria Pennick (Institute Coordinator), Claire Bombardier, Anita Dubey, Andrea Furlan, Emma Irvin, Allison Kelly, Philip Kiff, Sandra Sinclair

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.

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.

2008 Quick Statistics

Completed projects (1)
Ongoing projects (7)
Papers published or in press (3)
Peer review papers submitted (2)
Reports to WSIB or other Prevention System Partners (0)
Presentations of results and stakeholder consultations (5)
External grants awarded (7)

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: Ongoing

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 6 months post-injury, and they are more than twice as likely as workers without recurrences to be still be off work (2005 IWH analyses). Our study seeks to identify the risk factors of long-term RTW trajectories of injured workers, and to describe the long-term health, work limitations, and non-work role participation consequences of such trajectories, with a focus on recurrent and persistent work absence.

Objectives:

- ▶ 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), 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:

Franché R-L, Carnide N, Hogg-Johnson S, Côté P, Breslin FC, Bültmann U, Severin C. The course and correlates of depressive symptomatology in workers following a workplace injury: A prospective cohort study. Accepted: *Canadian Journal of Psychiatry* [2007-053]

Severin C, Franche R-L, Hogg-Johnson S, Lee H, Côté P, Krause N. A multivariate analysis of factors associated with offer and acceptance of a work accommodation following an occupational musculoskeletal injury. Submitted: *Journal of Occupational and Environmental Medicine* [2008-038]

Presentations:

Franché R-L, Corbière M, Lee H, Breslin FC, Hepburn CG. Assessing readiness for return-to-work: Development and validation of a self-report scale in lost-time claimants with musculoskeletal disorders. 22-24 Sep 2008; Berlin, Germany: 4th International Forum on Disability Management.

Franche R-L. The Readiness for Return-to-work cohort: Overview and main findings related to mental health. Plenary at the Occupational Health and Safety Agency for Healthcare in British Columbia. April, 2008.

Franche R-L, Lee H, Severin CN, Hogg-Johnson S, Hepburn CG, Vidmar M. Perceived justice of the compensation process: Development and validation of a self-report scale. 15-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Severin C, Franche R-L, Lee, H, Hogg-Johnson S, Côté P. Factors associated with offer and acceptance of a work accommodation. 1-4 Sept 2008; Québec City, Québec: ICOH 2008 3rd International Conference on Psychosocial Factors in the Workplace.

Funding:

Franche R-L, Breslin FC, Côté P, Frank JW, Hepburn CG, Hogg-Johnson S, Mustard CA, Reardon R. Recurrence and persistence of work absence: Understanding their risk factors, and long term impact on workers' health, work limitations, and non-work role participation. WSIB RAC: \$246,674 (2006-2008)

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

Project Status: Ongoing

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 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: 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 program is described by WSIB as aiming to provide the worker with the skills, knowledge, and abilities needed to successfully gain employment. The objective of this study is to gain an understanding of how LMR is carried out and of the particular challenges and opportunities in the LMR process. 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: Data collection and analysis are ongoing.

Researchers: Ellen MacEachen (Principal Investigator), Agnieszka Kosny, Cynthia Neilson, Sue Ferrier (Contract), Renée-Louise Franche (Occupational Health & Safety Agency)

Stakeholder Involvement: Project's Advisory Committee will meet four times over the course of the study. The committee members will provide feedback and suggestions regarding study progress, analysis, findings and the final report. Members are: Judy Geary, Vice President, Program Development Division, WSIB. Gary Hoag, Office of the Worker Advisor; Michael Zacks, Acting Director, Office of the Employer Advisor; Jamie McDermid, Associate Director Employment Services, March of Dimes (LMR Provider); Marion Endicott, Injured Workers Consultants; Peter Page, President, Ontario Network of Injured Workers Groups.

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

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)

RETORK- Ontario Trial of Sherbrooke Model (0251)

Project Status: Completed

Introduction: Scientists from IWH are participating in preparing a proposal for a workplace-based RTW coordination intervention for injured workers. This initiative led by Dr. David Cassidy from CREIDO involves planning of a randomized controlled trial for injured workers with neck or low back pain in the subacute phase.

Objectives:

- ▶ The objectives are to assess the impact of the RTW coordination intervention compared to usual care for work-related non-specific low back pain or non-specific neck pain with respect to 1) proportion of returned to work over one year 2) Time to return to work and number of compensated disability days over one year 3) patient-centered secondary outcomes (pain intensity, functional disability and health-related quality of life).

Methods: A randomized controlled trial in which injured workers, still off work at eight weeks, with non-specific low back pain (LBP) or non-specific (NSP) incurred at work will be randomized to either care under the RETORK protocol or to usual care. RETORK is an early intervention program in which usual care is augmented by a workplace RTW coordination designed to reintegrate the injured worker back into their pre-injury employment position. We will accrue 135 participants to each treatment arms to ensure 108 participants per group at the end of the one-year follow-up. Injured workers will be randomly allocated to the intervention and followed by computer-aided telephone interviews (CATI). Intention-to treat and per-protocol analyses with covariate adjustment will be used to compare the proportion and rate of RTW in the two groups over the follow-up. The rate of RTW and the number of disability days will be compared across treatment arms. Patient-centred outcomes will also be compared over follow-up period. Multivariate regression techniques will be used to evaluate treatment effect modification and the impact of various prognostic factors on the rate of RTW.

Results: This project has been postponed until further notice. A paper on the intervention mapping process for the development of the intervention has been submitted for publication.

Researchers: Carlo Ammendolia (Principal Investigator) (CREIDO - Toronto Western Hospital), Ivan Steenstra (Institute Coordinator), Renée-Louise Franche (Occupational Health & Safety Agency)

Stakeholder Involvement: Regular meetings with WSIB management staff have been ongoing since 2007. WSIB staff are involved as collaborators on this project.

Relevance: The study addresses two priorities of WSIB: RTW, Disability Management, and Rehabilitation and Occupational diseases, injury and health services. The study will be relevant to RTW coordinators, rehabilitation professionals, healthcare professionals, insurance and workplace parties.

Potential Audiences and Significance: Results of this study will be of high value to rehabilitation professionals, other healthcare providers, insurers, human resources, employers, unions and workers.

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

Funding:

Ammendolia C, Franche R-L, Steenstra I. RETORK – Ontario trial of Sherbrooke model. CREIDO: \$60,000 (2008-2009)

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.

Researchers: Ellen MacEachen (Institute Coordinator), Curtis Breslin, Donald Cole, Sheilah Hogg-Johnson, Emile Tompa, Pierre Côté (CREIDO), Renée-Louise Franche and Jaime Guzman (Occupational Health & Safety Agency)

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.

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

Publications:

Cann AP, MacEachen E, Vandervoort AA. Lay versus expert understandings of workplace risk in the food service industry: A multi-dimensional model with implications for participatory ergonomics. *Work* 2008; 30(3):219-228. [2006-145]

Skakon J, MacEachen E. Stress among leaders and employees – How does the leader’s stress affect the employees’ stress and well being? – Results from a qualitative case study. Submitted: *Health Education and Behaviour* [2007-108]

Loisel P, Hong QN, Imbeau D, Lippel K, Guzman J, MacEachen E, Corbiere M, Santos BR, Anema JR. The Work Disability Prevention CIHR Strategic Training Program: Program performance after 5 years of implementation [e-pub ahead of print]. *Journal of Occupational Rehabilitation* 2008 [2008-100]

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

Project Status: Ongoing

Introduction: The roots of epidemiology involve studying a disease with regards to time, person and place. Krieger 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 in prognosi 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 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: The data is currently discussed within the project group. Some interesting themes have emerged but further analysis will be needed.

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

Stakeholder Involvement: Will take part in focus groups; University Health Network (UHN). The Occupational Health and Safety Department (previously) injured workers at UHN

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)

Economic Perspectives on a Workplace RTW Clinical Trial (0172)

Project Status: Ongoing

Introduction: Economic evaluations of return-to-work (RTW) programs to date have been conducted primarily from the insurer's perspective, due to lack of data from other cost perspectives (e.g. the employer, the injured worker, society, etc.). This project concerns empirical work needed to develop economic evaluations from the perspective of the employer.

Objectives:

- ▶ Determine the employer's costs in the RTW process.
- ▶ Develop a questionnaire to collect data at the workplace and support cost-effectiveness and other economic evaluations from the employer's perspective.

Methods: In this study, we will conduct in-depth interviews with key informants at the workplace to determine the employer's costs in the RTW process. The steps involve both identifying and valuing cost items for employers caused by injury absenteeism and RTW interventions. From this information, a questionnaire will be developed that can be used to collect data at the workplace and support cost-effectiveness and other economic evaluations from the employer's perspective.

Researchers: Gabrielle van der Velde (Principal Investigator), Sheilah Hogg-Johnson, Emile Tompa, Sylvia Boddener (University Health Network, Rehab Solutions), Eleanor Boyle (CREIDO), David Cassidy (Toronto Western Hospital), Helen He (CREIDO)

Stakeholder Involvement: None

Potential Audiences and Significance: Cost-effectiveness of RTW initiatives is of interest to workplace parties and to the WSIB. This project will develop tools required to conduct cost-effectiveness analyses.

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

Funding:

He H, van der Velde G, Hogg-Johnson S, Tompa E. Economic perspectives on RTW clinical trial. WSIB RAC: \$29,914 at CREIDO (2007-2008)

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), Nancy Carnide, Mieke Koehoorn (University of British Columbia)

Stakeholder Involvement: None

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.

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

Funding:

Franche R-L, Guzmán J, Koehoorn M. Exploring multimorbidity: 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)

Franche R-L, Mustard CA, Koehoorn M, Smith P, Côté P, Ibrahim S, Guzman 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)

Compensation and Benefits

Over the course of regular meetings with WSIB staff in 2007, 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 Institutes' 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.

2008 Quick Statistics

Completed projects (3)
Ongoing projects (8)
Papers published or in press (0)
Peer review papers submitted (1)
Reports to WSIB or other Prevention System Partners (0)
Presentations of results and stakeholder consultations (9)
External grants awarded (10)

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

Project Status: Ongoing

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 focuses 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 will focus on addressing these two issues in Ontario. In the second phase we will investigate 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 will investigate the post-accident earnings experiences of individuals sustaining a temporary work disability arising from a work-related accident. The Institute will collaborate 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

- ▶ Determine the degree of and factors influencing labour-market success and the adequacy and equity of workers' compensation income benefits under two Ontario programs.
- ▶ 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

- ▶ Compare adequacy and equity of workers' compensation program across-jurisdictions.

Phase Three: Temporary Work Disability in Ontario

- ▶ 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. A control group for each event observation will be 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 analysis will consist of an evaluation of the adequacy and equity of wage replacement rates offered by the two long-term disability programs under investigation. Other related analyses will also be undertaken to investigate the social and economic costs of work injury based on the matched event-control and regression frameworks, specifically the probability of marital break-up.

Results: Preliminary results indicate that both the PD program and FEL/NEL programs were adequate and equitable based on earnings replacement rates of pre-injury and control counterpart earnings. On average, both programs replace more the target rate of 90% of after-tax pre-injury earnings for specific impairment brackets and for the entire sample. Regarding the marital dissolution study, married workers experiencing a permanent impairment from a workplace accident had between 22-24% higher probability of marital break-up than their uninjured control counterparts.

Researchers: Emile Tompa (Principal Investigator), Miao Fang, Cameron Mustard, Marjan Vidmar, Sandra Sinclair

Stakeholder Involvement: 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; Key stakeholder involvement will be with WSIB policy-makers, Steve Mantis, and some of the researchers from the WCRG in the US (e.g., Les Boden)

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

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

Presentations:

Tompa E, Fang M, Mustard CA, Chen C, Sinclair S, Koehoorn M. Benefits adequacy and equity: WorkSafe BC Study. 9 Sep 2008; Toronto, ON: IWH Internal Plenary

Tompa E, Fang M, Mustard CA, Chen C, Sinclair S, Koehoorn M. A study of benefits adequacy in British Columbia: Impact of a major legislative change for claimants with permanent impairment. 13-14 Nov 2008; Boston, USA: Workers' Compensation Research Group Semi-Annual Meeting.

Funding:

Tompa E, Mustard CA, Koehoorn M. Adequacy and equity of BC workers' compensation benefits. WorkSafe BC: \$163,200 (Sep 2006-Aug 2008)

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 (pob,noi,source and event), 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: Phase I completed and presented to WSIB executive committee, no results to date from phase II.

Researchers: Sheilah Hogg-Johnson (Principal Investigator), Ben Amick, Cynthia Chen, David Toluoso, 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

Presentation:

Hogg-Johnson S. The problem of claims persistency - what is driving increases in persistent and locked in claims? 14 Nov 2008; Hopkinton, MA: Workers' Compensation Research Group.

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), Gul Joya Jafri, Ellen MacEachen, Peter Smith

Stakeholder Involvement: Basil Boolis, Injured Worker Representative, Bright Lights Group c/o 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 SSHRC grant.
- ▶ 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.
- ▶ Increase research capacity in the social and health sciences on occupational health and safety and workers' compensation through training and mentoring of new researchers.
- ▶ Build strong community-researcher links in the course of undertaking the research.
- ▶ Encourage evidence-based policy decision making in the workers' compensation arena through ongoing linkage and exchange with key stakeholders.
- ▶ 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.

Researchers: Emile Tompa (Principal Investigator), Ellen MacEachen, Peri Ballantyne (Trent University), Claire de Oliveira, Alice De Wolf (Independent Consultant), Marion Endicott (Injured Workers' Consultant), Renée-Louise Franche (Occupational Health & Safety Agency), Alina Gildiner (McMaster University), Jaime Guzman (Occupational Health & Safety Agency), Bonnie Kirsh (University of Toronto), Katherine Lippel (Université du Québec à Montréal (UQAM)), Steve Mantis (Ontario Network for Injured Workers Groups), 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: 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.

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, Endicott M, Vienneau P. Research Action Alliance on the Consequences of Work Injury: Challenges Workshop. 16-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health

Funding:

Tompa E, Endicott M, de Wolff A, Franche R-L, Guzman 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)

RAACWI - An Ethnographic Study of Injured Workers' Claims Experiences: A Focus on Mental Health and Substance Use Issues (0428A)

Project Status: Completed

Introduction: Injured workers with compensation claims which extend beyond the expected healing time are of concern because their claims costs are higher than expected for their condition, and research has shown that social and mental health difficulties can increase in proportion to time away from work. However, the various studies that have documented links between protracted claims and injured worker mental health difficulties have not examined in detail the dimensions of these links and how they are sustained. This study will use qualitative methodology to examine the complexity of injured worker's protracted claim experience, including their trajectories through health care and compensation systems and their experiences with home and community, and how these experiences may relate to mental health and substance use outcomes. Grounded theory analysis will be conducted with approximately 40 in-depth injured worker interviews. The study results will be of interest to injured workers and their representatives, worker's compensation boards, and clinical practitioners. This project began in October 2006 for two years.

Objectives:

- ▶ Further explore problems associated with complex/persistent claims and how they become problematic.
- ▶ Focus on mental health and substance use problems experienced by workers and to account for them in the context of their claims experience.
- ▶ Identify those features of injured worker experience that have implications for service delivery, case management, and policy in both the workers' compensation and associated health care systems.

Methods: This study will use qualitative methodology to examine the complexity of injured worker's protracted claim experience, including their trajectories through health care and compensation systems and their experiences with home and community, and how these experiences may relate to mental health and substance use outcomes. Grounded theory analysis will be conducted with approximately 40 in-depth injured worker interviews. We may also interview up to five service providers who specialise in injured worker and mental health/pain/substance use issues.

Results: A draft of the findings report is ready. Final version needs to be prepared. Paper for publication needs to be written.

Researchers: Ellen MacEachen (Principal Investigator), Lori Chambers

Stakeholder Involvement: Advisory committee was established: RAACWI injured worker Pat Vinneau, WSIB Jamie Williams, IWOS injured worker Art Bourre (North Ontario), IWOS peer helper Linda Wood (Ontario East), Psychiatrist Leslie Kiraly.

Potential Audiences and Significance: WSIB's RTW program is concerned about claims persistence; this study will support their interest through identification of factors related to persistence, its development and trajectory.

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

Presentations:

MacEachen E, Chambers L, Kosny A, Ferrier S. Pain, medication use, and early return to work problems. 1-4 Sep 2008; Québec City, PQ: 3rd ICOH-WOPS International Conference.

MacEachen E, Chambers L, Kosny A, Ferrier S. Some of them are higher than a kite: How early return to work is implicated in pain, medication use, and injured worker mental health. 1-4 Sep 2008; Québec City, PQ: 3rd ICOH-WOPS International Conference.

Funding: Through Project 428 CURA

Tompa E, Endicott M, de Wolff A, Franche R-L, Guzman 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)

RAACWI - Mental Health and Quality of Life After a Work Injury Claim (0428C)

Project Status: Completed

Introduction: Work injury has been associated with significant negative health impacts as well as decreased participation in daily life activities. Deprived of the opportunity to engage in meaningful work, injured workers often experience a decreased sense of well-being. Recent unpublished data by Franche, Carnide et al. (2007) found that at one and six months post-injury, 43% and 27% of injured workers, respectively, had depression scores (CES-D scale, Radloff (1977)) indicative of a high likelihood of clinical depression.

Objectives:

- ▶ Based on data from our Readiness for Return to Work project (341):
 - 1) Document the prevalence, incidence, and course of depressive symptomatology longitudinally in a cohort of injured workers.
 - 2) Document use of pain medication among injured workers.

Methods: This analysis is based on existing data from a longitudinal survey of the Readiness for Return to Work cohort (Project #341) of 632 injured workers with lost-time claims for a work-related musculoskeletal disorder of the back or upper extremity, followed for a two-year period. Workers were interviewed at 1 month and 6 months post-injury. A high level of depressive symptoms was defined using the previously validated cutoff of 16 on the CES-D. Depression diagnosis and treatment were based on self-report.

Results: Prevalence of high depressive symptom levels 1 month and 6 months post-injury were 42.9% and 26.5%, respectively. Among participants reporting high depressive symptom levels 1 month post-injury, 47.2% experienced a persistence of symptoms 6 months post-injury. By 6 months, 38.6% of workers who never returned to work or had work disability recurrences had high depressive symptom levels, compared to 17.7% of those with sustained return-to-work. At 6-month follow-up, 12.9% of participants with persistently high depressive symptom levels self-reported a depression diagnosis since injury and 23.8% were receiving depression treatment.

Researchers: Renée-Louise Franche (Principal Investigator) (Occupational Health & Safety Agency), Nancy Carnide

Stakeholder Involvement: WSIB has participated in the formulation of research questions.

Potential Audiences and Significance: Injured workers; WSIB; healthcare providers

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

Funding: Through Project 428 CURA

Tompa E, Endicott M, de Wolff A, Franche R-L, Guzman 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)

Workers' Compensation and Occupational Health & Safety Coverage in Non-Profit Organizations (0263)

Project Status: Completed

Introduction: Why study OHS and WC coverage in NPOs. The nonprofit sector is large and growing – The NPS includes 7.5 million volunteers and employs over 1.6 million Canadians. It is estimated that the NPS is growing yearly and contributes between 4 and 10% to Canada's GDP. Some indication that work can be hazardous – for example, in certain kinds of NPOs workers can be exposed infectious disease, violence, high work load, etc. Current occupational health and safety systems may poorly serve these workplaces.

The Ontario example: In Ontario, the Occupational Health and Safety Act (OHSA) and the Workplace Safety and Insurance Act (WSIA) does not apply to volunteer (unpaid) workers. There is also some ambiguity around whether paid workers doing unpaid work (after hours, for example) are covered under the acts. This is a problem for workplaces that may rely, heavily at times, on unpaid labour and volunteer workers. Many non-profit workplaces appear not to have mandatory WSIB coverage. A review of the 2006 WSIB classification manual uncovered that the following types of enterprises do not have compulsory coverage under the WSIA (Workplace Safety and Insurance Act).

Objectives:

- ▶ To collect, review and examine how OHS and WC policy across Canada applies to or excludes non-profit organizations.

Researchers: Agnieszka Kosny (Principal Investigator), Diana Pugliese

Stakeholder Involvement: Part of RAACWI postdoc, involved are Alina Gildner, CPRN and other RAACWI members

Potential Audiences and Significance: WSIB and OHS policy makers, academic audiences

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

Presentation:

Kosny A, Scott-Dixon K. The hazards of helping? Gaps in workers' compensation and occupational health and safety coverage in non-profit agencies. 15-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Funding:

Kosny A. Workers' compensation and OHS coverage in non-profit organizations. National Network on Environments and Women's Health: \$19,000 at McMaster University (2007-2008)

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

Project Status: Ongoing

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 will use 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 will be approached. These groups will represent 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 will be 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 will provide ongoing feedback on analyses and findings.

Results: This study is complete, the report has been submitted to WSIB, and findings have been presented to various audiences. The findings paper for publication is in draft form and this work will continue into 2009.

Researchers: Ellen MacEachen (Principal Investigator), Lori Chambers, Renée-Louise Franche (Occupational Health & Safety Agency)

Stakeholder Involvement: Judy Geary: Vice President Program development, WSIB; Arthur Bourre: Injured Worker Peer Helper, Dryden & District, Injured Workers Support Group; Linda Wood: President, Injured Workers Support Network of Kingston & Area; Dr. Allen Hall: Occupational Health Physician, Dofasco (retired); Dr. Brian Gibson: Occupational Health Physician, LAMP Community Health Centre; Consultation with IWOS Director, Tom Yee. Consultation with three IWOS peer helpers in three regions of Ontario. Consultation with Frances Share (Director of RTW and LMR, WSIB); 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; Health Services: Effectiveness & Efficiency of Clinical Care

Publication:

Kosny A, MacEachen E, Ferrier S, Chambers L. Physicians' role in the workers' compensation system; examining inter-system practices and processes contributing to claim complexity and duration. Submitted: Canadian Medical Association Journal [2007-029]

Presentations:

Kosny A, MacEachen E, Ferrier S, Chambers L. Physicians' role in the workers' compensation system: Examining inter-system practices and processes contributing to claim complexity and duration. 22-24 Sep 2008: 4th International Forum on Disability Management, Berlin, Germany

MacEachen E, Kosny A, Ferrier S, Chambers L. Why do some people return to work while others don't? "The Toxic Dose" of social mechanisms. 22-24 Sep 2008: 4th International Forum on Disability Management, Berlin, Germany

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 B.C. context through literature review.
- ▶ Conduct community consultations and service provider interviews in B.C.
- ▶ Link and connect with researchers, policy makers and community stakeholders in B.C., 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 B.C.

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)

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

Project Status: Ongoing

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

Stakeholder Involvement: In 2008, the project engaged extensively with staff of the Accident Compensation Corporation.

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: No WSIB Links Reported

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)

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 two return-to-work interventions 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.

2008 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 (0)

External grants awarded (1)

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

Project Status: Ongoing

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 will develop 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 will be work-shopped with a range of system users. Our final product will further the development and targeted application of system resources, assist with more efficient use of existing system resources, and ultimately improve 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.

Results: Complex claims data that form the basis for the Toolkit were analysed for red Flags and Green Lights. The Toolkit was drafted. KTE and communications were consulted at later stages about audience, tone and format. Four workshops were held across Ontario in October, November, December. Also, the Toolkit was validated by members of the CC advisory committee who also gave feedback on the toolkit content and form. The final version of the Toolkit was presented to the Advisory Committee in December; formatting and distribution will occur in 2009 Q1.

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

Stakeholder Involvement: The following project partners have agreed to assist with the Toolkit 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
- OWA, OEA, IWC, ONIWG,
- Centre for Research in Occupational Disease

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

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: The DASH continues to be a well recognized tool for measuring disability and symptoms in the upper limb. It has been used in several clinical trials and many different groups have worked on its measurement properties and have published them. It is robust, with validity in several different cultural and language groups. The measurement work with the DASH continues to be around its validity and responsiveness. We are now moving into modern measurement theory techniques (item response theory, Rasch analysis) with it and have pooled our many data sets to allow us to use much more demanding analyses.

Researchers: Dorcas Beaton (Institute Coordinator), Claire Bombardier, Kim Cullen, Sheilah Hogg-Johnson, Carol Kennedy-Yee, Anjali Mazumder, Peter Subrata, Sandra Sinclair, 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: Health Services: Effectiveness & Efficiency of Clinical Care

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. Initial meetings have been planned with the final two EI networks, chiropractors and ergonomists for early in 2008.

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

Foundation Programs	119
WSIB data routine statistics (0845).....	120
Development of an instrument database and questionnaire design tools (0835).....	121
Data dictionary (0301).....	122
Keyword project (0311).....	123
Integrated information database (0307).....	124
Methodological developments in systematic reviews (0951).....	125
Systematic review workshop (0114)	126

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, among 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.

2008 Quick Statistics

Completed projects (0)

Ongoing projects (8)

Papers published or in press (2)

Peer review papers submitted (0)

Reports to WSIB or other Prevention System Partners (0)

Presentations of results and stakeholder consultations (2)

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), 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: Not applicable

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.

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

Stakeholder Involvement: External 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: Some structure and basic rules of use have been developed for the twiki, and it has been populated with some content about the WSIB data.

Researchers: Sheilah Hogg-Johnson (Institute Coordinator), Jacob Etches, Selahadin Ibrahim, Hyunmi Lee, Paolo Maselli, Peter Smith, Peter Subrata, Michael Swift, Marjan Vidmar, 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: Not applicable

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.

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 compiling 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 2000 Database in consultation with users.

Researchers: Emma Irvin (Institute Coordinator), Sandra Sinclair, 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.

Links to WSIB Policy & Program Priorities: Not applicable

Methodological Developments in Systematic Reviews (0951)

Project Status: Ongoing

Introduction: As part of the IWH's commitment to continuously improving the field of Systematic Review methodology, in 2007 we propose 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.

Researchers: Andrea Furlan, Emma Irvin, Kiera Keown, Quenby Mahood (Institute Coordinator's), 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)

Stakeholder Involvement: None to date

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.

Links to WSIB Policy & Program Priorities: Not applicable

Publications:

Keown K, Van Eerd D, Irvin E. Stakeholder engagement opportunities in systematic reviews: knowledge transfer for policy and practice. *Journal of Continuing Education in Health Professions* 2008; 28(2):67-72. [2007-005]

Amick BC, Brewer S, Tullar JM, Van Eerd D, Cole DC, Tompa E. Best ergonomic practices for the prevention of musculoskeletal disorders. Accepted: *Professional Safety* [2008-086]

Presentation:

Irvin E, Kennedy C, Tompa E, Van Eerd D, MacEachen E, Breslin FC, Keown K. Occupational health and safety prevention reviews: Synthesizing and translating the evidence workshop. 15-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Irvin E, Brewer S, Jullar J, Van Eerd D. Sharing best evidence: Results from four systematic reviews of the occupational health and safety literature. 21-23 Oct 2008; Pittsburgh, PA: 2008 National Occupational Injury Research Symposium (NOIRS)

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 Systematic Review Workshop since March 2001 with plans to continue through 2009. 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.

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

Knowledge Transfer & Exchange

Stakeholder/Audience Relationships and Exchanges

Return to work disability management\Labour market re-entry (0638)	129
Relationship building with policy-makers (0603).....	130
KTE HUB (0601)	131
Clinical networks (0617).....	132
Prevention partners networks (0640).....	133
Workplace parties networks (0612)	134
KTE young workers (0619)	135

Capacity Building

KTE advisory committee (0646).....	136
Tool development (0636)	137
Tracking KTE/evaluation (0629)	138
KTE partnerships (0652).....	139

Communications

Internal communications (0622); Corporate communications (0690).....	140
IWH Annual Report (0665); At Work (0660)	141
Media relations (0655)	142
Outreach (0650)	143
Alf Nachemson Memorial Lectureship (0645).....	144
Web development (0630).....	145

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:

- 1) 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. Developing evidence tools based on the results of the reviews will be a focus in 2008.
- 2) 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.
- 3) 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 RTW systematic review (Franche et al) focused on understanding the effectiveness of workplace interventions in RTW outcomes. The findings, combined with other research knowledge, was used to create the "Seven Principles for Successful RTW", which are messages for the 'players' (workplace parties, insurers, clinical care providers and disability managers) in the RTW continuum. This project will explore the feasibility of delivering the 'Principles' to local audiences with participants from each of the 'player' groups. The intended impact is to stimulate local action for improving RTW processes. 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 re-engage on this portfolio with them as new research emerges. More recently the HSAs have been encouraged by WSIB to become more engaged in this area of secondary prevention.

Objectives:

- ▶ Develop processes to transfer the '7 principles' messages to key parties in RTW process.
- ▶ Utilize the clinical E.I. networks (particularly OTs, Kins and Ergos) to get the RTW messages out.
- ▶ Support WSIB RTW strategic priority.
- ▶ If HSAs begin to engage in this area of prevention, provide support via workshops and other interactive events.
- ▶ Provide KTE support for research projects with messages for RTW/DM audiences (Complex Claims, LAD, WDMB)

Methods: Sat as member of OHSCO MHSA DP/RTW committee. Contributed to workshop program. Lead for WSIB RTW/LMR secondment opportunity. Provided lead and venue for OT EI research subgroup to prepare and implement evaluation plan on Working Together tool. Supported research teams for Complex claims study and WDMB project.

Results: Successful secondment from WSIB RTW/LMR team to IWH KTE group building capacity in using research evidence in policy making. OT EI tool Working Together completed and launched. Initially with OT EIs and then to full membership. Request from as far away as Australia using the tool in teaching. Six workshops for HSA consultants (225 consultants) on their new role in RTW planned and delivered. Seven Principles of RTW continues to be disseminated and used as a core reference document in practice. Support provided to get WDMB reports out to individual clients.

Team: Kathy MacDonald (Project Leader), Jane Brenneman Gibson, Kristina Buccat, Kiera Keown, Ellen MacEachen, Renée-Louise Franche

Stakeholder Involvement: WSIB RTW Branch; EI Networks; Workplace Parties; Disability Managers

Audiences: Players in the RTW continuum (workplace parties, insurers, clinical care providers and disability managers) will receive and be linked to discuss successful RTW.

Messages: Seven Principles of RTW continues as a successful evidence tool.

Relationship Building with Policy-Makers (0603)

Project Status: Ongoing

Introduction: Policy-makers are a key target audience for the Institute. Policy-makers include WSIB, Ministry of Labour and Ministry of Health & Long Term Care. In our new 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 continued to be a priority for 2008.

Objectives:

- ▶ Working with the Office of the President and the Scientific Director, KTE will continue to support development with WSIB e.g., bi-monthly research evidence meetings.
- ▶ Continue to provide mentoring to WSIB RTW staff member, Jamie Williamson.
- ▶ Support development of "Research 101" course with WSIB RAC for WSIB staff.
- ▶ Support the development and dissemination of "realists reviews" products for policy-makers.
- ▶ Assist with dissemination of Benefit Adequacy and Experience Rating research findings for WCBs across Canada.

Methods: Consultation with OH&S stakeholders. Workshops and seminars. Secondment/mentoring opportunity. Co-ordination with KTE Hub.

Results:

Secondment opportunity deemed success for all parties.

Research discussions proceed well with WSIB scientists.

Workshops for HSAs workshops on their new role in RTW completed with good evaluation results.

Seminars completed on request from WSIB PDD.

Strategic Collaborations with WSIB supported as appropriate.

Team: Jane Brenneman Gibson (Project Leader), Ben Amick, Kiera Keown, Kathy MacDonald, Cameron Mustard, Alice Peter (WSIB), Sandra Sinclair

Stakeholder Involvement: WSIB, MOL, WorkSafe BC, other WCBs

Audiences: WSIB, MOL, other WCBs in Canada

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. A joint work plan was approved at the December 4, 2007 Steering Committee meeting. CREIDO will be added to the MOU signed in 2006. We will utilize existing and develop new tools to highlight the research work being done by the CREs and IWH. We will work to improve capacity in our target audiences to understand and utilize research. 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 'Bridging the Gap' grant is funded, the KTE Hub working group members will undertake the development of an evaluation framework for assessing the effectiveness of networks as a KTE strategy.

Objectives:

- ▶ Build and share audiences/networks interested in work and health research.
- ▶ Build capacity in target audiences to utilize research.
- ▶ Build KTE capacity in work and health through the evaluation of networks as an effective KTE strategy.
- ▶ Develop KTE Hub branding.
- ▶ Sustain and develop joint communication tools.
- ▶ Continue to develop KTE Hub mandate and infrastructure.

Methods: Steering Committee approves the work plan of the KTE Hub working group.

Results: CREIDO added as new member of the KTE Hub and the HSALC. Addendum to add CREIDO to KTE Hub MOU completed. Carlo Ammendolia joins KTE Hub working group. Definitions of what constitutes a KTE Hub project and principles for accessing stakeholder networks of partners completed. Two CRE inserts to IWH AT Work newsletter completed. Intervention mapping workshop held with participation of CREs. KTE Hub members participate in 'Bridging the Gap' and CIHR 'Knowledge Synthesis' grants. Employer network discussions and report completed. Research Alerts product under review for broader distribution.

Team: Jane Brenneman Gibson (Project Leader), Kristina Buccat, Anita Dubey, Kathy MacDonald, Cameron Mustard, Carlo Ammendolia, Janet Brown (CRE-OD St Michael's Hospital), David Cassidy (Toronto Western Hospital), Linn Holness (St. Michael's Hospital), Dee Kramer, Richard Wells (University of Waterloo)

Stakeholder Involvement: HSAs, workplace parties, clinicians, WSIB

Audiences: The audiences include all the target audiences for work and health messages. Main focus has been on HSA audience. Will look at broader sharing of existing networks e.g., clinicians. Plan one new network e.g., employers .

Clinical Networks (0617)

Project Status: Ongoing

Introduction: Many clinical provider groups deliver care to populations of interest to IWH (MSK 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 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 family physicians (MDs), physiotherapists (PT), kinesiologists (Kin), occupational health nurses (OHN), occupational therapists (OT), chiropractors (Chiro) and ergonomists (Ergo).

There are many IWH research messages that are relevant and useful to these groups (management of back pain, disability management and RTW) and, 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. 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 OHN, kinesiology, PT, OT and family medicine. We are in process of creating EI networks with Chiropractors and Ergonomists. Each of these discipline groups have 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. Progress in this project dependant on arrival of new staff.

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., PT EI input to selected Cochrane reviews; regional cross discipline EI meetings on RTW).
- ▶ Finalize Chiro EI network and develop Ergonomist network.
- ▶ Create a comprehensive and accurate 'EI Database'.
- ▶ Determine where EI 'renewal' is necessary and undertake necessary new surveys.
- ▶ Disseminate information to EI groups as appropriate.

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: Completed final two networks Chiro and Ergonomists and held inaugural meetings. OHN network moves to a community of practice model and highlights in their professional journal. OT EIs complete evidence tool entitled Working Together: Strategies for Successful RTW. Tool introduced to OT EIs at workshop in May 2008. Evaluation in place. Tool posted on OSOT and IWH website in Q4. Evaluation extended to non EI OTS. POCKET work for focused on updating low back pain tool kit but active engagement was shifted to Centre for Effective Practice initiatives while Opioid guideline work is underway. KIN network met at ACE conference. PT network did not get much attention due to staff shortages. Work will be renewed in 2009.

Team: Kathy MacDonald, Jane Brenneman Gibson, Kristina Buccat, Kiera Keown, Victoria Pennick

Stakeholder Involvement: Clinicians; professional bodies (Associations/Regulatory Colleges); Guidelines Advisory Committee; WSIB (RTW & LMR Division); Centre for Effective Practice

Audiences: Family physicians, PTs, OHNs, OTs and Kins, Ergonomists, Chiros.

Prevention Partners Networks (0640)

Project Status: Ongoing

Introduction: KTE will continue to build relationships with the prevention partner community through vehicles like the HSA Liaison Committee (HSALC). Members of the KTE Hub (project 601) are now full partners in the HSALC and the "Research Alerts" product has been rebranded to be from the "Research Partners". Capacity building in the use of evidence in programming and planning will continue through the review of evidence from the prevention reviews and the Research Alerts. We will supplement this regular committee work 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 use webinars and other technology to be sure that HSALC members from outside Toronto can participate. If the Bridging the Gap grants are funded for tool development the HSALC will be one resource for feedback and disseminations of the tools.

Objectives:

- ▶ Continue to build relationships with prevention partners to take research evidence to Ontario workplaces.
- ▶ Continue to develop opportunities for our prevention partners to participate in the research process and review their experience with this participation.
- ▶ Assist IAPA in review of their research posters for their annual conference
- ▶ Build capacity in this audience to understand and utilize research evidence. Assist the IWH Team in developing and delivering a Research 101 Workshop
- ▶ Work jointly with KTE Hub members on this agenda.

Results: HSALC Committee continues to meet quarterly with the HSA and MOL consultants. Centres for Research Expertise are partners in the Committee with CREIDO joining in 2008. Feedback from the HSALC consultants is that this is still a good venue for learning about research and discussing research concepts (building capacity).

CHSI ran its research exchange series for the second year to share a similar format and discussion to a broader number and range of HSA consultants. Research Alerts format was updated. Feedback provided into a future Research 101 Course. A number of HSA consultants participated in the Intervention Mapping Workshop.

IWH sat in OHSCO committee on RDP/RTW new role for HSAs. Completed six workshop in Q4 with HSA consultants on this new role. IWH and CREIDO partnered in presenting what the evidence says about the link between primary and secondary prevention and effective RTW.

Team: Jane Brenneman Gibson (Project Leader), Kristina Buccat, Anita Dubey, Kiera Keown, Kathy MacDonald, Greer Palloo

Stakeholder Involvement: HSA Community, MOL, WSIB, CRE MSD, CRE OD, CREIDO via KTE Hub, IWH Team

Audiences: Health and Safety Association Consultants, OSHCO Membership, WSIB Prevention Division, WSIB RAC, MOL, CREs

Messages: Building capacity to understand research enhances its application to decision-making.

Workplace Parties Networks (0612)

Project Status: Ongoing

Introduction: As workplace parties are priority audiences for IWH research, this project will build "relationship pathways" with these audiences. The focus in 2008 was on an employer network through the KTE Hub partnership. However there is a need to engage employer partners and organized labour in the early stages of specific IWH research projects as well.

Objectives:

- ▶ Through KTE Hub prepare plan for employers network.
- ▶ Assist IWH Team in linking with workplace parties for specific IWH research projects.
- ▶ Continue to utilize HSA networks as conduit for research to workplaces.
- ▶ Review network methodologies that will sustain linkages with these audiences (BTG grant if funded).

Methods: Research; relationship building via in person meetings; determine process for building employer network.

Results: Completed interviews with employers and employer associations; determined that stand alone employer network not the approach to take; Initiated plan to use safety groups as a way to link with employers.

Team: Jane Brenneman Gibson (Project Leader), Kristina Buccat, Kiera Keown, Kathy MacDonald, Greer Palloo

Stakeholder Involvement: Workplace parties (employers, organized labour, disability managers).

Audiences: Establish ongoing linkages with 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:

- ▶ Build and maintain relationships with stakeholders interested in research findings on young workers, immigrant workers, new and older workers. Work with these partners to foster integrated and end of grant KTE strategies.
- ▶ Develop and implement a formal strategy for transfer of messages to immigrant, new and older workers.

Methods: Working with PI Curtis Breslin, provided KTE support for OAYEC project. Relevant stakeholders were brought together as an advisory committee for this project.

Results: Successfully organized and facilitated two advisory committee meetings. Assisted in preparing meeting presentation and led discussion on dissemination. Provided input on draft report. Final report is expected my April 2009. Dissemination will occur after that date.

Team: Kiera Keown (Project Leader)

Stakeholder Involvement: Organizations and individuals specifically working with early school leavers, including the Ontario Association of Youth Employment Centres.

Audiences: Policy makers including MOL, MOH/LTC, 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.

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: KTEAC report 2008

Team: Jane Brenneman Gibson (Project Leader), Kristina Buccat, Anita Dubey, Kiera Keown, Philip Kiff, Kathy MacDonald, Greer Palloo, Katherine Russo

Stakeholder Involvement: KTEAC Chair, Internal Committee

Audiences: KTE, IWH Team, Executive, Board of Directors

Tool Development (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 demonstrated 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.
- ▶ To update, repackage and market current tools within IWH toolkit as needed.
- ▶ To administer and coordinate all procedures related to translations of the DASH, QuickDASH and maintain related database.
- ▶ Monitor and maintain database of requests for commercial and non-commercial use of the DASH.

Results: Translation, commercial, and non-commercial databases for the DASH and QuickDASH have been monitored, updated and maintained. Three commercial use licences were issued in 2008. Translation guidelines and an Intent to Translate form were completed and posted on the DASH website. DASH translation licences were renewed for the French Canadian, Portuguese (Brazil), Spanish (Spain) and Chinese (Taiwan) languages. The Polish DASH, QuickDASH and Scoring Instructions were added to the DASH website. This latest addition brings the number of different language DASH translations to twenty-two.

Red Flags: Working with team to continue development; organized and facilitated regional workshops for stakeholder feedback; identified relevant stakeholder participants, continued development.

PE: Initiated development, incorporated findings from SR. Continued development; presented tool project to OT, Kin and Ergo EI’s for feedback, incorporating feedback into prototype, submitted grant for funding, continued development.

Econ Eval: Initial meetings have been held with partners to begin development.

Team: Greer Palloo (Project Leader), Jane Brenneman Gibson, Kristina Buccat, Carol Kennedy-Yee, Philip Kiff, Sandra Sinclair

Stakeholder Involvement: HSA community, workplace parties, clinicians, other stakeholders as appropriate.

Audiences: Workplace parties, clinicians

Tracking KTE/Evaluation (0629)

Project Status: Ongoing

Introduction: Underpinning the work of KTE is tracking the information gathered from key stakeholders and getting their feedback about the accessibility, applicability and usability of research/KTE products. Capturing this information in a systematic way and establishing a process for sharing information about the stakeholders in IWH continues to be a challenge. The Five Year Review also recommended that IWH develop some metrics which help to measure impact.

Objectives:

- ▶ 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.
- ▶ Identify a process to manage stakeholder interests in and suggestions for IWH.
- ▶ Follow KTE literature to watch for developments of impact metrics that may apply to IWH.

Results: Tracking mechanisms of SR stakeholder audiences and dissemination activities in place. Work on KTE metrics from literature postponed due to staff shortages. New tracking system in development for KTE indicators for Five Year Strategic Plan.

Team: Jane Brenneman Gibson and Kiera Keown (Project Leader's), Kristina Buccat, Kathy MacDonald, Sandra Sinclair

Stakeholder Involvement: Not applicable

Audiences: 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) will continue in 2008. Jane Gibson and Kathy MacDonald continue on the planning committee. We will engage colleagues from the KTE Community of Practice on the topic of KTE evaluation and metrics. We will continue to profile the IWH KTE work at appropriate conferences and workshops. KTE research alerts project which was started in 2007 will be implemented in 2008.

Objectives:

- ▶ Attend planning and member meetings of the Ontario KTE Community of Practice Practitioners Community of Practice will provide venue to share research evidence and best practices on what works in KTE.
- ▶ Initiate KTE Research Alerts project to assist with keeping current in KTE literature.
- ▶ Present IWH KTE work at appropriate conferences in 2008.
- ▶ Link with Li Ka Shing Institute KTE clearing house project.

Results: KTE C of P meetings well attended and gaining in popularity. KTE C of P website set up to capture profiles of members and their expertise. KTE C of P agrees on the need for a workshop in Q2 2009 on the use of web2.0 technology in KTE. Jane Gibson on planning committee.

Team: Jane Brenneman Gibson (Project Leader), Anita Dubey, Kiera Keown, Kathy MacDonald

Stakeholder Involvement: KTE Community in GTA

Audiences: KTE practitioners, Team in KTE

Messages: KTE C of P is good venue for exploring challenges 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 collected and analyzed - report produced; Innie pages monitored, reviewed and updated/modified, as required on an ongoing basis. Monthly, quarterly and bi-annual reports produced.

Team: Greer Palloo (Project Leader), Jane Brenneman Gibson, Kristina Buccat, Anita Dubey, Philip Kiff, Katherine Russo

Stakeholder Involvement: All staff

Audiences: All staff

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.
- ▶ Development and implementation of visual identity.
- ▶ Monitor and respond to ongoing requests for information and Institute products.
- ▶ Maintenance of the corporate contact and mailing database.
- ▶ Preparation of the quarterly communications statistics for internal and Board use.

Results: A new visual identity was developed and launched in 2008, including a new logo, fonts, stationery, At Work newsletter, website, and templates for corporate reports, report covers, scientific posters, slides and other items. The database was updated and maintained on a routine basis. All routine reports and product or information requests were completed.

Team: Anita Dubey (Project Leader), Jane Brenneman Gibson, Kristina Buccat, Philip Kiff, Greer Palloo, Katherine Russo

Audiences: 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: 2007 Annual Report with the theme "Achieving Together" was published and disseminated.

Team: Anita Dubey (Project Leader), Jane Brenneman Gibson, Kristina Buccat, Philip Kiff, Cameron Mustard, Katherine Russo

Audiences: 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 regarding Institute research and knowledge transfer and exchange activities. Research Highlights showcases Institute research that is relevant to stakeholders.

Objectives:

- ▶ Produce four editions of At Work, including a themed issue on RTW/disability management.
- ▶ Meet with Team, KTAs and communications committee to generate potential story ideas.
- ▶ Investigate and incorporate ideas generated from readership surveys.
- ▶ Implement any visual identity changes into At Work and Research Highlights.
- ▶ Produce Research Highlights as scientific papers are published.

Results: Four editions of At Work produced, including a themed issue on return to work/disability management. The fall 2008 issue incorporated a new look in line with IWH's new visual identity.

Team: Anita Dubey (Project Leader), Katherine Russo, Jane Brenneman Gibson, Kristina Buccat, Philip Kiff

Audiences: External stakeholders.

Media Relations (0655)

Project Status: Ongoing

Introduction: Increasing the profile and visibility of the Institute with the commercial and trade media is an ongoing objective of the Institute and the KTE group. Regular contact with OHS, work-health, clinical and business reporters and editors in both commercial and trade media should lead to increased dissemination of Institute research findings and products.

Objectives:

- ▶ Set specific targets for published articles about IWH research in trade and commercial media.
- ▶ Update media room.
- ▶ Maintain database.

Results: From April 2007-May 2008, there was a 35 per cent increase in the number of IWH articles in trade media. Communications staff continued or began ongoing columns in Accident Prevention, Ontario Occupational Health Nurses Journal, CBI newsletter and the Canadian Kinesiology Journal. In the consumer media, articles were published in the Canadian Press, Globe and Mail, Metro News and Calgary Herald among others. Two podcasts based on interviews with IWH scientists were posted online by Employee Benefit News Canada.

Team: Anita Dubey (Project Leader), Jane Brenneman Gibson, Kristina Buccat, Katherine Russo

Stakeholder Involvement: Not applicable

Audiences: 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.

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.

Results: Events tracked - quarterly reports produced for communications and quarterly update reports calendar of events produced and maintained. IWH successfully participated in the IAPA Conference and Trade Show.

Team: Jane Brenneman Gibson, Kristina Buccat, Anita Dubey, Philip Kiff, Greer Palloo, Katherine Russo

Stakeholder Involvement: Not applicable

Audiences: 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 2008 Alf Nachemson Memorial Lecture was held on October 22 at the Design Exchange, Bay Street, Toronto. The sixth recipient of this memorial award, Dr. Thomas Wickizer, Professor of Health Services at the University of Washington's School of Public Health and Community Medicine in Seattle, presented: Quality improvement in health-care services for injured workers. Approximately 85 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 and show the new IWH corporate branding.

Team: Greer Palloo (Project Leader), Jane Brenneman Gibson, Kristina Buccat, Anita Dubey, Philip Kiff, Katherine Russo

Audiences: 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 update content on an ongoing basis and to complete an IWH website redesign. 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:

- ▶ Continue to develop content for the current site.
- ▶ Create a workplan for the new website.
- ▶ Work with consultants to propose a new design and technical backbone for the IWH new website.
- ▶ Build and launch a rebranded IWH website.
- ▶ Explore information sharing with other organizations (HSAs, Canadian Health Network, preventiondynamics.ca, etc.).
- ▶ Explore web technologies and other interactive features (blogging, webcasting, podcasting).

Results: A new website was launched in December 2008 with improved navigation and content organization. It was built on an open-source content management system, Drupal, and designed in line with IWH's new visual identity. The site offered automatic content generation based on IWH's nine research areas, an improved search engine and other features.

Team: Jane Brenneman Gibson, Anita Dubey, Philip Kiff, Kathy MacDonald, Greer Palloo, Katherine Russo

Stakeholder Involvement: External stakeholders, Possible input from HSAs on the idea of information sharing.: Possible input from HSAs on the idea of information sharing.

Audiences: External stakeholders

2008 Accomplishments

Publications

Journal Articles: Peer Reviewed	148
Journal Articles: Forthcoming or Submitted Peer Reviewed	151
Contributions to Books	156
Contribution to Books: Forthcoming.....	157
Other Papers, Unpublished Reports and Reviews	157
Media.....	157

External Scientific/Academic Presentations/Conferences

International	158
National	159
Local and Provincial	161
IWH Plenaries	162

Funding and Awards

Research Project Funding – Awarded	164
Funding Administered Externally	166
Non-IWH Research Project Funding – Awarded	167
Research Grants Pending or Approved for 2009.....	167
Research Personnel Funding & Other Awards	169

Staff and Collaborators

IWH Staff – 2008.....	171
Research/Professional Collaborations and Networks, Appointments and Offices	174
Teaching, Educational and Service Activities	178
Adjunct Scientists	187
Glossary	193

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Published – Peer Reviewed

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Pennick V. Evidence-based, non-traditional approaches to the treatment of back pain: Interventions for preventing and treating pelvic and back pain in pregnancy. 11 Dec 2008; New York, USA: NY Post Graduate Anaesthesia Meeting, American Academy of Pain Medicine.

Robson LS, Irvin E, Keown K, Amick B, Keown K, Amick B. Systematic review on education and training. 25 Sept 2008; NIOSH Stakeholder Meeting

Smith P, Breslin FC. A review of the research on how work-based injury risks are distributed across youth's jobs in Canada. 3-5 Oct 2008; Chapel Hill, North Carolina: NIOSH Young Worker Symposium

Tompa E, Fang M, Mustard CA, Chen C, Sinclair S, Koehoorn M. A study of benefits adequacy in British Columbia: Impact of a major legislative change for claimants with permanent impairment. 13-14 Nov 2008; Boston, MA: Workers' Compensation Research Group Semi-Annual Meeting

Tompa E, Fang M. The impact of experience rating and firm size dynamics on occupational health and safety performance. 31 Mar-2 Apr 2008; Durban, South Africa: 8th International WorkCongress on Work Injuries Prevention, Rehabilitation and Compensation

Tompa E, Trevithick S, McLeod C. A systematic review of the prevention incentives of insurance and regulatory mechanisms for occupational health and safety. 31 Mar-2 Apr 2008; Durban, South Africa: 8th International WorkCongress on Work Injuries Prevention, Rehabilitation and Compensation

Tullar J, Brewer S, Amick B, Irvin E, Mahood Q, Pompeii L, Wang A, Van Eerd D, Gimeno D, Evanoff B. Interventions in health care settings to protect musculoskeletal health: a systematic review. 21-23 Oct 2008; Pittsburgh, PA: 2008 National Occupational Injury Research Symposium (NOIRS) (Project 980)

van der Velde G, Beaton DE, Hogg-Johnston S, Hurwitz E, Tennant A. A Rasch analysis of the neck disability index. 11-13 Sep 2008; Bethesda, MA: International Conference on Objective Measures

van der Velde G. Neck Pain Revisited: Bone & Joint Decade 2000-2010 Task Force on Neck Pain. 20 Sep 2008; Canadian Memorial Chiropractic College Continuing Education (Results of a Decision Analysis of Non-surgical Neck Pain Treatments)

van der Velde G. Results of a Decision Analysis of Non-surgical Neck Pain Treatments. 1 Oct 2008; Rotterdam, The Netherlands: 2008 Dutch Congress on Neck Pain

van der Velde G. Bone and Joint Decade 2000-2010 Task Force Results: A New Conceptual Model. 1 Oct 2008; Rotterdam, The Netherlands: 2008 Dutch Congress on Neck Pain

van der Velde G. The course and determinants of neck pain in whiplash-associated disorder and the general population. 7 Nov 2008; Vancouver, BC: Canadian Society of Medical Evaluators

National

Beaton DE. Workshop: Quality of measurement process. 15-17 June 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Bültmann U, Franche R-L, Hogg-Johnson S, Côté P, Lee H, Severin C, Vidmar M, Carnide N. Health outcomes and return-to-work trajectories in lost-time claimants with MSD. 1-4 Sep 2008, Québec City, PQ: ICOH 2008, the 3rd International Conference on Psychosocial Factors in the Workplace

Bültmann U, Carnide N, Franche R-L, Hogg-Johnson S, Côté P, Breslin FC, Severin C, Krause N. Depressive symptomatology following a workplace injury: a prospective cohort study. 1-4 Sep 2008, Québec City, PQ: ICOH 2008, the 3rd International Conference on Psychosocial Factors in the Workplace

Dixon SM, Theberge N, Cole DC. I wouldn't have known that: Exploring the nature of, and access to, knowledge in two occupational health programs. 15-17 June 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Eakin JM, MacEachen E, Mansfield E, Clarke J. How the front-line works in Ontario's WSIB. 15-17 June 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Etches J, Mustard CA. Income dynamics and premature adult mortality in Canada and the United States. 5-6 May 2008; Ottawa, ON: Statistics Canada Socio-economic Conference

Etches J, Mustard CA. Work-related motor vehicle collision injury in Ontario. 15-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Furlan AD. Cochrane Systematic Reviews: Finding Reliable Information to Guide Clinical Practice Canadian Memorial Chiropractic College Faculty Development Day. 20 Aug 2008:

Furlan AD. Comparing the evidence supporting needle acupuncture vs. massage. Workshop: Evidence Informed Management of Chronic Low Back Pain without Surgery. 14 Oct 2008; Toronto, ON: 23rd Annual Meeting of the North American Spine Society (NASS)

LaMontagne AD, Smith P, Louie A, Quinlan M, Shoveller J, Ostry A. Unwanted sexual advances in Australian workplaces: variations by employment arrangement. 1-4 Sep 2008; Quebec City, PQ: 3rd International ICOH-WOPS Conference

Langlois LE, Shannon HS, Griffith LE, Walter SD, Cole DC, Hogg-Johnson S, Wells RP. Quality assessment of observational studies of low back pain among workers. 15-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

MacEachen E, Polzer J. Flexible work or flexible workers? Work, health and neoliberal citizenship in Ontario's software industry. May 2008; Montreal, PQ: Joint Interim Meeting for the Research Committee on the Sociology of Health of the International Sociological Association and Inaugural Meeting of the Canadian Medical Sociology Association

MacEachen E, Polzer J, Clarke J. You are free to set your own time: Understanding work flexibility and health in the knowledge economy. 15-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Mustard CA. Disability income security benefits for working-age Canadians. 5-6 May 2008; Ottawa, ON: Statistics Canada Socio-economic Conference

Langlois LE, Shannon HS, Griffith LE, Walter SD, Cole DC, Hogg-Johnson S, Wells RP. Quality assessment of observational studies of low back pain among workers. 15-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Pennick V, Jauca C. Review Manager 5 Workshop for review authors. 4-5 Mar 2008; Edmonton, AB: 6th Canadian Cochrane Symposium

Polzer J, Power E, MacEachen E. Health and Citizenship. May 2008; Montreal, PQ: Joint Interim Meeting for the Research Committee on the Sociology of Health of the International Sociological Association and Inaugural Meeting of the Canadian Medical Sociology Association

Robson LS, Bigelow P. Occupational health and safety management audit instruments: a literature review. 16-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Smith P, Chan S, Mustard CA. Examining the labour market experiences of immigrants to Canada from 1993-2002. 5-6 May 2008; Ottawa, ON: Socioeconomic Conference

Smith P. Workshop: Sensibility – a common sense assessment of measurement instruments and introduction to cognitive testing to appraise your scale. 16-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Stock S, Koehoorn M, McLeod C, Smith P. Generating new knowledge in occupational health and safety from existing databases and surveys: What has been done and where should we go? 16-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

van der Velde G. The course and determinants of neck pain in whiplash-associated disorder and the general population. 7 Nov 2008; Vancouver, BC: Canadian Society of Medical Evaluators

Van Eerd D, Steenstra I. Workshop: Principles of measurement and exercise to experience in measurement. Measurement properties – an overview and their application. 16-17 Jun 2008; Montreal, PQ: Canadian Association for Research on Work and Health (CARWH)

Local and Provincial

Furlan A. Consulting services to the College of Physicians and Surgeons of Ontario. Guidelines for safe and effective use of opioids for chronic non-cancer pain

Furlan AD. An evidence-based clinical approach to the diagnosis and treatment of neuropathic pain. 5 May 2008; WSIB Clinical Services.

Irvin E, Keown K, Van Eerd D, Gibson J, Mahood Q, Cullen K, Couban R, Catli S. Types of evidence-based products. 20 Nov 2008; IWH/WSIB Joint Workshop

Keown K, Van Eerd D. What works in MSD prevention? 17 Oct 2008; Mississauga, ON: Kinesiologist EI Network

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, Amick BC. Effectiveness and implementation of health and safety in small enterprises: A systematic review of qualitative and quantitative literature. 12 Sep 2008; Toronto, ON: Health and Safety Associations Liaison Committee

MacEachen E, Kosny A, Ferrier S, Chambers L. Reconsidering the notion of “Hurt versus Harm” in early & safe return to work. 22 Jul 2008; Thunder Bay, ON: Thunder Bay Injured Workers Group

MacEachen E, Kosny A, Ferrier S, Chambers L. “The toxic dose”: A study of system problems that harm claims and return to work. 15 May 2008; Toronto, ON: Research Action Alliance on the Consequences of Work Injury Team Meeting

MacEachen E, Kosny A, Ferrier S, Chambers L. “The toxic dose”: A system perspective on prolonged workers’ compensation claims. 13 May 2008; Toronto, ON: IWH Scientific Advisory Meeting

Mustard CA. Assessing the impact of policy in worker health protection and compensation: three current examples. 26-27 Oct 2008; Vancouver, BC: Policy Conference, Association of Workers’ Compensation Boards of Canada

Mustard CA. Disability income security benefits for working-age Canadians. 2 Oct 2008; Ottawa, ON: OECD Study Team meeting, Human Resources and Social Development Canada

Mustard CA. Navigating the landscape for employee health. 16 Sep 2008; Toronto, ON: Conference Chair, Ontario Hospital Association

Mustard CA. Current and future trends in occupational health and safety. 28 May 2008; Toronto, ON: Education Safety Association of Ontario Safety Conference

Mustard CA. Work, health, disability and economic security. 27 Mar 2008; Toronto, ON: Policy Innovation & Leadership Expert Policy Forum: Health and Equity in Well Being

Pennick V. Applying evidence-based research to teaching and practice. 15 Nov 2008; Hamilton, ON: Canadian Institute of Dental Hygiene Inc. Workshop

Pennick V. Unravelling the literature: Finding and using reliable information to guide practice. 25 Oct 2008; Niagara-on-the-Lake, ON: Dental Hygiene Workshop; Niagara College

Pennick V. Using the literature to inform evidence-based decision-making. 24 Oct 2008; Niagara Falls, ON:
Niagara College

Pennick V. Review Manager 5 & Handbook Version 5 Workshop for review authors. 5 May 2008:
Hamilton, ON

Tompa E, de Oliveira C, Scott-Marshall H, Fang M. Does permanent impairment from a workplace accident increase the risk of marital break-up? 17 Oct 2008; Toronto, ON: Ontario Network of Injured Workers' Conference

Tompa E, Mantis S, Endicott M, Vinneau P. Challenges in developing a Community-University Research Alliance. 17 Oct 2008; Toronto, ON: Opening plenary session at the Ontario Network of Injured Workers' Conference

van der Velde G. Neck pain revisited: Report of the Bone & Joint Decade 2000-2010 Task Force on Neck Pain. 20 Sep 2008; Canadian Memorial Chiropractic College Continuing Education (Results of a Decision Analysis of Non-surgical Neck Pain Treatments)

Plenaries

Kita, Mary – Building a shared understanding: How occupational therapists evaluate a client's readiness to return to work following acquired brain injury (Jan 8)

Etches, Jacob – Work-related motor vehicle collisions in Ontario (Jan 15)

HSA's Panel – High Risk Firm Initiative from the perspective of three Health and Safety Associations (Jan 22)

Tompa, Emile – A systematic review of occupational health and safety interventions with economic analyses (Jan 29)

Kosny, Iggy – Physicians' role in the workers' compensation system; examining intersystem practices and processes contributing to claim complexity and duration (Feb 5)

Cifuentes, Manuel – From clinical severity and healthcare utilization to health outcomes and return to work: challenges of modeling (Feb 19)

Williamson, Jamie – Work of the RTW/LMR team at WSIB (Feb 26)

Waters, Tom – Developing transferable tools in MMH for multiple end users (Mar 5)

van der Velde, Gabrielle – Identifying the best treatment among common non-surgical neck pain treatments (Mar 11)

Brenneman Gibson, Jane; Macdonald, Kathy; Keown, Kiera – What do KTAs do and why are they doing it! (Mar 25)

Daraz, Lubna – A KTE dissemination project – helping patients/ consumers access to quality web health information (Apr 1)

Mustard, Cam – Trends in Canadian workers' compensation: a comparison of British Columbia and Ontario (Apr 15)

Shannon, Harry – Workplace incivility and other work factors: Effects on psychological distress and health (Apr 29)

Kirsh, Bonnie – The nature and consequences of stigma experienced by injured workers: Preliminary findings from the RAACWI Study (May 20)

van Eerd, Dwayne – Participatory ergonomics process and implementation: KTE experiences and research directions (May 27)

Duncan, Andrea – The labour market re-entry program: Moving forward with best practices (Jun 3)

Amir Ziv – Cancer survivorship and employment - A British experience (Aug 19)

Tompa, Emile – LAD linkage (Sep 9)

Breslin, Curtis – The epidemiology of work-related injury and other health risks among youth (Sep 23)

Guzman, Jaime – Making healthcare a healthier place to work: Opportunities for strengthening collaboration between OHSAH and IWH (Sep 30)

MacEachen, Ellen – Why do some injured workers fail to return to work as expected? The “toxic dose” of system-related problems (Oct 7)

Kennedy, Carol; Amick, Ben – Systematic review of the role of occupational health & safety interventions in the prevention of upper extremity musculoskeletal disorders (Oct 21)

O'Hagan, Fergal – Cardiac illness and return to work: A qualitative exploration from the workplace (Oct 28)

Robson, Lynda; Macdonald, Sara – Prevention system OHS management audit methods: Description, content validation, and assessment of the feasibility of measurement research (Nov 4)

Mustard, Cam – A review of evaluations of social marketing campaigns in occupational injury, disease or disability prevention (Nov 11)

Sackville-Duyvelshoff, Carol – Safe at Work Ontario (Nov 18)

Tompa, Emile – Does permanent impairment from workplace accident increase the risk of marital break-up? (Nov 25)

Neumann, Patrick – Action research in OHS – Shifting from hypothesis testing to experiential learning? (Dec 2)

Eakin, Joan – How the front-line works at Ontario's WSIB (Dec 9)

Research Project Funding - Awarded

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) Project 261

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

Bigelow P, Stuewe D, Zohar D. To determine what increase Manitoba's CEO's and other top management commitment to workplace safety. Manitoba WCB: \$93,258 (2007-2008) Project 257

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) Project 423

Franche R-L, Breslin FC, Côté P, Frank JW, Hepburn CG, Hogg-Johnson S, Mustard CA, Reardon R. Recurrence and persistence of work absence: Understanding their risk factors, and long term impact on workers' health, work limitations, and non-work role participation. WSIB RAC: \$246,674 (2006-2008) Project 341

Furlan A, Dissemination and implementation of the NOUGG Guidelines of Opioids for Chronic Non-Cancer Pain. CIHR: \$25,000 (2008-2009)

Hogg-Johnson S, Cole DC, Amick B, Bigelow P, Mustard CA, Robson L, 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) Project 432

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) Project 308

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) Project 327

Kosny A. Workers' compensation and OHS coverage in non-profit organizations. National Network on Environments and Women's Health: \$19,000 at McMaster University (2007-2008) Project 263

Kosny A, MacEachen E, Smith P, Shields J. Knowledge exchange forum on immigration, work and health in British Columbia. CIHR: \$24,870 (2008-2009) Project 2105

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) Project 273

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) Project 258

MacEachen E, Franche R-L. Groundwork for an injured worker and mental health intervention study. CREIDO: \$9,573 (2008-2009) Project 244

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) Project 253

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) Project 247

Mustard CA. Identification and analysis of critical trends in the New Zealand accident compensation scheme. Accident Compensation Corporation: \$99,700 (Jul 2008-Feb 2009) Project 447

Mustard CA. Work, health, economic security and disability. Ministry of Health and Long-Term Care: \$70,000 (May 2008-Sep 2008) Project 427

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) Project 461

Mustard CA, Tompa E, Smith P, Koehoorn M, McLeod C. Examining trends in the incidence and cost of workers' compensation claims in the Ontario and BC long term care sectors: 1998-2007. WorkSafe BC: \$327,500 (2008-2010) Project 439

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) Project 429

Robson LS, Van Eerd D, Bigelow P, Gray G, Chambers L, Macdonald S. Prevention systems occupational health and safety management audit tools. WSIB RAC: \$59,894 (2007-2008) Project 267

Smith P, Mustard C. An examination of the working conditions and risk factors for work related injuries among immigrant workers in Ontario. WSIB RAC: \$101,700 (Dec 2006-Nov 2008) Project 413

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) Project 419

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) Project 129

Tang K, Beaton DE. Rasch analysis of the At Work Disability Measurement. CREIDO: \$10,000

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) Project 416

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) Project 218

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) Project 218

Tompa E, Mustard CA, Koehoorn M. Adequacy and equity of BC workers' compensation benefits. WorkSafe BC: \$163,200 (Sep 2006-Aug 2008) Project 418

Wells R, Amick B. 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) Project 203

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) Project 129

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)

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) Project 134

Franché R-L, Mustard CA, Koehoorn M, Smith P, Côté P, Ibrahim S, Guzman 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 British Columbia (2008-2010) Project 134

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) Project 440

He H, van der Velde G, Hogg-Johnson S, Tompa E. Economic perspectives on RTW clinical trial. WSIB RAC: \$29,914 at CREIDO (2007-2008) Project 172

Koehoorn M, Barer M, Côté P, Hogg-Johnson S, McGrail K, McLeod C. Investigating outcomes for musculoskeletal surgeries among injured workers in B.C. WorkSafe BC: \$178,836 at University of British Columbia (Sep 2006-Aug 2008)

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) Project 233

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, Franché R-L, Guzman 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, McGill S, Frazer M, Green H, Theberge N, Ranney D, Cole DC, Kerr MS, et al. Centre of Research Expertise for an Action Centre for the Prevention of Work-related Musculoskeletal Disorders (CRE-MSD) WSIB RAC: \$2,035,000 at University of Waterloo (2003-2008)

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)

Beaton DE, Bogoch ER, et al. Initial evaluation of the osteoporosis screening program for fragility fracture patients: Setting up data collection system and initial focus groups. MOH-LTC: \$111,303 (2007-2008)

Beaton DE, Kennedy C, Franche R-L. A pilot study of the effectiveness of an education program for adults with inflammatory arthritis. Arthritis Society: \$5,000 at St. Michael's Hospital (2008-2009)

Beaton DE, MacDermid J. Targeted evaluation and management of work, orthopedics, rehabilitation and knowledge translation. CIHR: \$97,955 at McMaster University (2007-2008)

Bigelow P, Wells R. Ergonomic intervention with transportation safety group. WSIB RAC: \$307,465 at University of Waterloo (2006-2008)

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)

Guzman 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)

Koehoorn M, Hogg-Johnson S. Investigating outcomes for musculoskeletal surgeries among injured workers in B.C. WorkSafe BC: \$178,836 at University of British Columbia (Aug 2006-Aug 2008)

Loisel P, Baril R, Durand M-J, Franche R-L, Gagnon D, Larivière C, Rainville P, Sullivan M, Vézina N. Développer, évaluer et implanter des modes de prise en charge pour le retour et maintien au travail des personnes ayant des troubles musculo-squelettiques. Fonds de la recherche en santé du Québec: \$800,000 (2004-2008)

MacDermid J, Beaton DE. Targeted evaluation and management of work, orthopedics, rehabilitation and knowledge-translation. Institute of Musculoskeletal Health and Arthritis (IMHA-CIHR): \$100,000 at McMaster University (2007-2008)

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 for 2009

Amick B, Hogg-Johnson S, Mustard C, Smith Pr, Tompa E, Robson L, Steenstra I. Benchmarking leading organizational indicators for the prevention and management of injuries and illnesses. WSIB RAC: \$433,272 (2009-2012)

Beaton DE, Bombardier C, Amick B, MacEachen E, Gnam W, Tang K, Côté P, Lacaille D, Gignac M, MacDermid J, Richards R. The contextual nature of worker productivity: impact for measuring return to

work and at work productivity loss in program evaluation and research. WSIB RAC: \$273,922 (2009-2012)

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) (Project 437)

Busse J, Gnam W, Guyatt G, Bhandari M. An economic evaluation of low intensity pulsed ultrasound in patients with tibial shaft fractures. WSIB RAC: \$122,548 (2009-2012)

Feuerstein M, MacEachen E, et al. Augmented cognition occupational rehabilitation system: Optimizing function and work productivity in mild traumatic brain injury. Dept of Defence Research Programs: \$1,413,409

Furlan A, Hogg-Johnson S, Bombardier C, Reardon R, Irvin E. An evaluation of the impact of the Guideline for Safe and Effective Use of Opioids for Chronic Non-cancer Pain. WSIB RAC: \$57,654 (2010-2011)

Gnam W, Beaton DE, Bacciochi J, Bender A, Busse J, Hogg-Johnson S, Kosny A. Understanding return to work among time-loss claimants with mental disorders. WSIB RAC: \$422,734 (2009-2012)

Guzman 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)

Kosny A, Lifshen M, Keown K, Smith P, Breslin FC, Cullingworth J, Kapoor K, Tucker C, Vander Doelen J, Lok R. Prevention is the best medicine: Developing a tool to share information about workplace rights, occupational health & safety and workers' compensation with new immigrant workers. Citizenship & Immigration Canada: \$153,873 (2009-2011)

Loisel P, Anema JR, Baril R, Breslin FC, Bultmann U, Cassidy JD, Cooper JE, Corbière M, Côté P, Coutu MF, Dewa C, Dionne C, Durand MJ, Feuerstein M, Franche R-L, Gagnon D, Guzman J, Hogg-Johnson S, Koehoorn M, Krause N, Lambert C, Lippel, K, MacEachen E, Mairiaux P, Pransky G, Ranville P, Shaw W, Tompa E, Vézina N, Scardamalia M. CIHR strategic training program in work disability prevention. CIHR: \$1,950,000. (2009-2015)

MacEachen E, Franche R-L, Kosny A, Lippel K. New Investigator: Vocational rehabilitation systems in the changing world of work: challenges of older injured workers. CIHR: \$300,000 (2009-2013)

MacEachen E, Kosny A, Lippel K, Saunders R. Understanding the management of injury prevention and return to work in temporary work agencies. WSIB RAC: \$262,854 (2009-2012)

Mansfield L, Breslin FC, Smith P, Koehoorn M, Saunders R, Boychuk S. Developing measures for evaluating occupational health and safety interventions for youth in Canada. WorkSafe BC: \$299,258 (2009-2011)

Mustard C, Smith P. Mortality by occupation in Canada: A surveillance resource for compensation and health protection authorities in Canada. WSIB RAC: \$123,000 (2009-2010)

Robson LS, Amick B, Bigelow P, Hogg-Johnson S, Mansfield L, Pagell M, Shannon HS, Tompa E. Factors in breakthrough change in workplace OHS performance. WSIB RAC: \$299,096 (2009-2012)

Smith P, Beaton DE, Hogg-Johnson S, Ibrahim S, Koehoorn M, McLeod C, Mustard C, Saunders R, Scott-Marshall H, Toluso D. Examining determinants and consequences of work-injuries among older workers. WorkSafe BC: \$267,361 (2009-2011)

Smith P, Beaton DE, Hogg-Johnson S, Ibrahim S, Mustard C, Saunders R, Scott-Marshall H, Tulusso D. Examining determinants and consequences of work-injuries among older workers. WSIB RAC: \$262,471 (2009-2012)

Smith P, Glazier R, Mustard C. Examining the relationship between immigrant labour market experiences and health behaviours, diabetes incidence and mortality. CIHR: \$186,859 (2009-2011)

Steenstra I, Amick B, Hogg-Johnson S. Inside the black box of intervention research, path analysis alongside a randomized controlled trial on training in office ergonomics. CIHR: \$96,342 (2010-2012)

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: \$102,941 (2009-2011)

Tompa E, Hogg-Johnson S, Amick B, Scott-Marshall H. Work disability trajectories and claim duration in Ontario under three workers' compensation legislations. WSIB RAC: \$178,888 (2009-2011)

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)

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)

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

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

Rivilis, Irina: CIHR-IPPH Doctoral Fellowship Award 2006-2009: Public Health Agency of Canada

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.

Steenstra, Ivan: Mustard Fellowship Award 2006-2008

Institute for Work & Health Staff – 2008

* denotes departed staff

Research

Amick, Ben; PhD, Scientific Director
Beaton, Dorcas; PhD, BScOT, MSc, Scientist
Bielecky, Amber; MSc, Research Assistant*
Bigelow, Philip; PhD, Scientist*
Bombardier, Claire; MD, FRCP(C) Senior Scientist
Breslin, Curtis; PhD, Scientist
Busse, Jason; PhD, Scientist
Cai, Noah; BA, Systems Support*
Carnide, Nancy; MSc Epidemiology, Research Associate, PhD Student, Syme Fellow
Chambers, Lori; BA, BSW Social Work, Administrative and Research Assistant*
Chan, Stella; MSc, Research Associate, Analyst*
Chen, Cynthia; MSc, Research Associate, Analyst
Cole, Donald; MD, DOHS, MSc, FRCPC(C) Senior Scientist
Couban, Rachel; MA MIS Library Sciences, Library Technician
Cullen, Kim; BSc Kin, MSc, Research Associate
de Oliveira, Claire; MSc, Research Associate*
Dickie, Caroline; PhD, Writer
Dolinschi, Roman; MSc, Research Associate, Analyst
Etches, Jacob; MSc, Research Associate, PhD Student
Fang, Miao; MSc, Research Associate, Analyst
Franche, Renée-Louise; PhD, MA, Clinical Psychology, BA, Psychology, Scientist*
Furlan, Andrea; PhD, MD, Scientist
Gnam, William; MD, PhD, Scientist
Gray, Garry; MSc, Len Syme Fellow, PhD Student*
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 (since July 2008); Manager, Systematic Review Program and Information Systems and Library
Jafri, Gul Joya; MA, Social Anthropology, Research Associate*
Kalcevich, Christina; MA Economics, Research Associate
Karim, Preetom, Library Assistant*
Kelly, Allison; Dip. S.T. Administrative Editorial Assistant

Kennedy, Carol; BScPT, MSc, Research Associate
Kosny, Agnieszka; MSc, PhD, Associate Scientist
Krepostman, Suzan; BA, MA, Environmental Psychology, Program Coordinator*
Kyle, Natasha; MSc, Project Coordinator, Systematic Reviews*
Lee, Hyunmi; MSc, Programmer Analyst
Lifshen, Marni; MA, Project Coordinator
Macdonald, Sara; QEHS Management Diploma, Research Associate
MacEachen, Ellen; PhD, Scientist
Mahood, Quenby; BA, Manager, Library Services (since July 2008)
Mansfield, Liz, Mustard Fellow
Mansurova, Lyudmila, BSc, Administrative Assistant
Maselli, Paolo; Network Administrator/Systems Analyst
Moore, Ian; [MASc](#), Post Doc PhD
Morassaei, Sara; BA, Administrative and Research Assistant
Neilson, Cynthia; MSc, Research Associate
Nowlan, Marie-Andree; BA, Research Associate, Cochrane Back Review Group*
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
Rivilis, Irina; MSc, PhD Student
Robson, Lynda; PhD, Associate Scientist
Saunders, Ron; PhD, Senior Scientist
Schelkanova, Irina; Research Assistant, Cochrane Back Review Group
Scott-Dixon, Krista; PhD, Research Associate*
Scott-Marshall, Heather; PhD, Research Associate
Severin, Colette; MSc, Research Associate
Sinclair, Sandra; Dip.P&OT, MSc, Associate Scientist, Director Operations*
Smith, Peter; MPH, 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; BSc (Kin), MSc (Kin), Associate Scientist, PhD Student
Vidmar, Marjan; MD (Macedonia), MSc, Research Associate, WSIB Data Specialist
Webb, Alison; BA, Administrative Coordinator, Office of the President*
Williamson, Jamie*
Yao, Grant; Network Administrator/Systems Analyst

Knowledge Transfer & Exchange

Brenneman Gibson, Jane; MCIsc, Director
Buccat, Kristina; Dip. Radio and Television Production, Administrative Assistant
Dubey, Anita; BSc Biology, BAA Journalism, Manager, Communications
Keown, Kiera; MSc Biomechanics, KTE Associate
Kiff, Philip; MA, Communications Associate, Web & Production
MacDonald, Kathy; MA MIS Library Sciences, BSc Human Kinetics, Dip/BA Massage Therapy*
Moser, Cindy; BA, Communications 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
McPherson, Kerry-Ann, Accounting Clerk
Mustard, Cameron; ScD, President
Sir, Cathy; CMA, Manager, Financial Services

Research/Professional Collaborations and Networks, Appointments and Offices

AMICK, Benjamin

Member, NIOSH Board of Scientific Councillors
Chair, Data Safety monitoring Board, Veterans Affairs Project CSP#560
Ad-Hoc Reviewer: Workers Compensation Board, British Columbia
Ad-Hoc Reviewer: Workers Compensation Research Advisory Committee
Ad-Hoc Reviewer: Workers Compensation Board, Saskatchewan
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

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

BIELECKY, Amber

Member: Canadian Academy of Psychiatric Epidemiology

BIGELOW, Philip

Sub-committee Co-chair: Threshold Limit Values Committee, American Conference of Governmental Industrial Hygienists
Member: Society for Epidemiologic Research
Member: American Board of Industrial Hygiene
Member: American Academy of Industrial Hygiene
Member: Canadian Registration Board of Occupational Hygienists
Member: Academic-Community-Agency Network for Environmental Justice (ACA-NET)
Member: Mustard Fellowship Committee

BOMBARDIER, Claire

Fellow: Royal College of Physicians of Canada F.R.C.P.(C)
Member: Advisory Board, SONORA Study, Abbott Pharmaceutical Company, 2000 –
Member: AMGEN - Kineret Registry Steering Committee, 2002 –
Member: Merck -Etoricoxib Outcomes Study Steering Committee , 2002 –
Member: Merck Frosst Rheumatology Medical Advisory Council (MEDAC), 2002 –
Member: Merck - Worldwide Arthritis Advisory Board (WAAB), 2002-2008
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: Steering Group of the Coxib and NSAID Trialists' (CNT) Collaboration, July 2008
Member: Tribute Committee - University of Toronto and the Weizmann Institute of Science, Dr. Arnie Aberman Gala Dinner in support of MD/PhD Programs, 2008
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

Chair: HSA Liaison Committee
Chair: KTE Hub Steering Committee
Member: Advisory Committee IAPA Conference
Member: Ontario KTE Community of Practice
Member: Physician Education Project in Work & Health (PEPWH)
Member: College of Speech Language Pathology and Audiology

BRESLIN, Curtis

Member: Ontario College of Psychologists
Member: Canadian Psychological Association

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

FRANCHE, Renée-Louise

Member: Ontario College of Psychologists
Member: Canadian Psychological Association
Member: Mustard Fellowship Committee

FURLAN, Andrea

Member: Canadian Medical Association
Member: Ontario Medical Association
Member: Canadian Association of Physical Medicine and Rehabilitation
Member: Canadian Pain Society
Member: Editorial Board of the Cochrane Back Review Group
Member: International Association for the Study of Pain (IASP)

HOGG-JOHNSON, Sheila

Member: Scientific Secretariat, 2000-2010 Bone and Joint Decade Task Force on Neck Pain and Its Associated Disorders
Member: Statistical Society of Canada
Member: Accreditation Committee of Statistical Society of Canada
Professional Statistician: Statistical Society of Canada

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
Member: Arthritis Health Professionals Association
Member: Research Committee, Arthritis Health Professionals Association

KOSNY, Agnieszka

Executive Committee – Canadian Association for Research on Work and Health

MACEACHEN, Ellen

Member: Canadian Anthropology and Sociology Association
Member: British Sociological Association
Member: Canadian Association for Research on Work and Health,
Member: Program Executive Committee, Work Disability Prevention CIHR Strategic Training Program, Universite de Sherbrooke, Longueuil
Member: Editorial Board of Journal of Occupational Rehabilitation
Member: Faculty Awards Committee, Department of Public Health Sciences, University of Toronto
Member: Steering Committee, Qualitative Research Inquiry Group, University of Toronto
Member: Mustard Post-Doctoral Awards Committee
Member: IWH Promotion Committee
Chair: 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 –
Member: Canadian Arthritis Network Partnerships and Sustainability Committee, 2005-2009
Member: Scientific Visitors Advisory Board, Liberty Mutual Research Institute for Safety, Jul 2007 –

Member: Ontario Health Quality Council Performance Measurement Advisory Board, Jul 2007 –
Member: Board of Directors, Ontario Neurotrauma Foundation, Jul 2008 –
Member: Board of Advisors, RAND Center for Health and Safety in the Workplace, Mar 2008 –

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

Research Associate, Canadian Policy Research Networks
Member, American Economics Association
Member, Work and Learning Knowledge Centre of the Canadian Council on Learning

SCOTT-MARSHALL, Heather

Member: Canadian Association for Research on Work and Health

SEVERIN, Colette

Member: Canadian Public Health Association

SINCLAIR, Sandra

Member: Advisory Committee, Workers' Compensation Research Group
Member: Advisory Committee, Workers' Compensation Policy Review, School of Industrial Relations, Rutgers University
Member: International Association of Industrial Accident Boards and Commissions

SMITH, Peter

Member: Public Health Association of Australia
Member: Special Interest Group on Injury Prevention

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

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 –

BEATON, Dorcas

Teaching/Educational Role

Associate Professor: Occupational Therapy, University of Toronto

Graduate Appointments: Health Policy Management and Evaluation and Graduate, Rehabilitation Sciences

Course Coordinator: Measurement in Clinical Research, Health Policy, Management and Evaluation Graduate Program, 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

BIGELOW, Philip

Teaching/Educational Role

Associate Professor: Public Health Sciences, Faculty of Medicine, University of Toronto

Adjunct Professor: Environmental and Radiological Health Sciences, Colorado State University

Adjunct Professor: Institute of Public Health, Florida A&M University

Adjunct Professor: Institute of Health Promotion Research, University of British Columbia

Course Co-coordinator: CHL 5110H – Theory and Practice of Program Evaluation, University of Toronto

Course Co-coordinator: - CHL 5910F – Introduction to Occupational Hygiene, University of Toronto

Lecturer: CVOH 221–Topics in Occupational Health and Safety, (risk assessment, program evaluation)

Ryerson University; University of Toronto, Public Health Sciences – CHL 5110H Theory and Practice of Programme Evaluation (Development of syllabus and teaching); University of Toronto, Public Health Sciences – CHL 5910F Introduction to Occupational Hygiene (teaching)

PhD Committee meetings:

Kathryn Nichol, Public Health Sciences (The Organizational, Environmental and Individual Factors that Influence Nurses' Decisions to use Facial Protection to Prevent Occupational Transmission of Infectious Respiratory Illness in Acute Care Hospitals)

Steven Thygerson, Environmental and Radiological Health Sciences, Colorado State University (Increasing Compliance with Respirator use Requirements through a Leadership-based Intervention)

Service Activities

Journal Referee: Journal of Agricultural Safety and Health; Environmental Health Perspectives, Journal of Occupational and Environmental Hygiene, Canadian Journal of Public Health

Reviewer: Journal of Occupational and Environmental Hygiene; American Journal of Industrial Medicine

Curriculum Reviewer: Public Health Sciences, Occupational and Environmental Health

BOMBARDIER, Claire

Teaching/Educational Role

Co-Scientific Director of the 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

PhD Committee Member for Lubna Daraz, Syme Fellow
Mentor for WSIB staff member Jamie Williamson

Service Activities

Member of Five Year Review Team for Ontario Tobacco Research Unit
CIHR Knowledge to Action Grant Review Committee

BRESLIN, Curtis

Teaching/Educational Role

Associate Professor: Dalla Lana School of Public Health, University of Toronto
Co-instructor: CHL 5804H Health Behaviour Change, Dalla Lana School of Public Health, University of Toronto
Lecturer: Work Disability Prevention Course, University of Sherbrooke, Montreal, Quebec, June 2008.

Service Activities

Editorial Board: Journal of Studies on Alcohol, 1996-2008
Guest reviewer: American Journal of Epidemiology
Member: Admissions Committee, Health Behaviour Sciences Stream, Dalla Lana School of Public Health, University of Toronto

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 MHSc 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): Irina Rivilis (2004 –), 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

CULLEN, Kim

Teaching/Educational Role

Sessional instructor, Human Kinetics, University of Guelph for 4th year undergraduate course: "Clinical Biomechanics" Fall 2008

Invited speaker, Physiotherapy, McMaster University for Unit 6 PT Clinical Lab on Work Assessment, May 2008

FRANCHE, Renée-Louise

Teaching/Educational Role

Assistant Professor: University of Toronto, Faculty of Medicine, Public Health Sciences and Graduate Public Health Sciences, 2001 –

Assistant Professor: Psychiatry, Women's Mental Health Program, Faculty of Medicine, University of Toronto, 2000 –

Professional Advisory Committee: Work Disability Prevention CIHR Strategic Training Program, Université de Sherbrooke, Longueuil, PQ, 2002 –

Mentor: Work Disability Prevention CIHR Strategic Training Program, Université de Sherbrooke, 2003 –

PhD Thesis Committee Member: Janet Parson, Institute of Medical Sciences, University of Toronto

Associate Member: Women's Health Program, University Health Network, 2000 –

Service Activities

Grant Committees: CIHR and Health Information & Promotion Committee, Operating Grants Competition; Arthritis Society Scientific Review Panel – Epidemiology/Health Services; WSIB Research Advisory Committee; Fonds pour la Formation de Chercheurs et l' Aide la Recherche and Canadian Innovation Funds

Plenary Committee, IWH, 2004 –

Journal Referee: Journal of Psychosomatic Obstetrics and Gynecology; Canadian Journal of Behavioural Sciences

FURLAN, Andrea

Teaching/Educational Role

Facilitator: Undergraduate Education, University of Toronto Centre for the Study of Pain (UTCSP)

Interfaculty Undergraduate Pain Curriculum. Mar 2008

Facilitator: HPME - Clinical Epidemiology Rounds. Non-randomized studies: Evaluation of search strategies, taxonomy and comparative effectiveness with randomized trials in the field of low-back pain. Apr 2008

Post-graduate Education: Residents and Fellows of Radiology, University of Toronto. What is a case-control study? Feb 2008; 5th Canadian Comprehensive Review Course in Physical Medicine and Rehabilitation. Research in Rehabilitation, Apr 2008

Service Activities

Journal Referee: Cochrane Collaboration Back Review Group; Cochrane Pain, Palliative and Supportive Care Group (PaPAS group); BioMed Central; Journal of Clinical Epidemiology; American Journal of Physical Medicine & Rehabilitation

Conference abstract referee: 3rd National Spinal Cord Injury Conference / 16th Interurban Spinal Cord Injury Conference

Grant referee: CIHR Clinical Trial, Nova Scotia Health Research Foundation – Knowledge Transfer/Exchange Program – Systematic Review Grant 2007/2008

HOGG-JOHNSON, Sheilah

Teaching/Educational Role

Assistant Professor: Public Health Sciences, Faculty of Medicine, University of Toronto, 1995 –

Assistant Professor: Health, Policy, Management and Evaluation, Faculty of Medicine, 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 Program, Université de Sherbrooke, Longueuil, PQ

Instructor: Research Methods; CIHR Work Disability Program, Université de Sherbrooke, Longueuil, 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 Supervisor: G. van der Velde, University of Toronto

PhD Thesis Committee Member: F Ahmad, L Griffith, I Rivilis, A-C Bedard, A Peruccio, Anusha Raj, University of Toronto

Service Activities

Grant Committees: External Reviewer for WSIB RAC

Journal Referee: Canadian Medical Association Journal, Scandinavian Journal of Work, Environment and Health, Occupational and Environmental Medicine, Chronic Diseases in Canada, Journal of Clinical Epidemiology, American Journal of Industrial Medicine

External Reviewer: CIHR, WSIB RAC

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

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 –

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

Instructor: CHL5122H. Qualitative Research Practice. Dalla Lana School of Public Health, University of Toronto. Fall

Lecturer: CHL5004H. Introduction to Public Health Sciences. Dalla Lana School of Public Health, University of Toronto.

Instructor: WDP811. Quantitative and Qualitative Methodology in Work Disability Research, Work Disability Prevention Program, University of Sherbrooke.

Dissertation Committee member: Dana House, PhD Candidate, Dalla Lana School of Public Health, University of Toronto.

Supervisor: Liz Mansfield, Post-doctoral student, IWH

Mentor: Dörte Bernhard, PhD (Chair for Labour and Vocational Rehabilitation), University of Cologne, Germany. WDP-953: Long-term practicum. Topic: Rehabilitation Counsellors and Disability Managers and their professional competencies in Work Disability Prevention: a cross-cultural comparison of Germany and Canada, CIHR Work Disability Prevention Program, University of Sherbrooke.

Mentor: Asa Tjulin (PhD Candidate, Linköping University, Sweden) WDP-953: Long-term practicum.

Topic: "Supervisors', co-workers' and re-entered injured workers experiences of return to work: An exploratory study in Linköping, Sweden", CIHR Work Disability Prevention Program, University of Sherbrooke.

Mentor: Nicolette Carlan (PhD Candidate, University of Windsor) WDP 911 (Scientific Article) Topic: "Occupational health knowledge creation and diffusion in the Ontario auto sector." CIHR Work Disability Prevention Program, University of Sherbrooke.

Service Activities

Convenor, SSHRC Awards Workshop, Dalla Lana School of Public Health, University of Toronto.

MAHOOD, Quenby

Teaching/Educational Role

Instructor, Systematic Review Workshop

Tutorial, Literature Searching, College of Physicians and Surgeons of Ontario, Oct 2008

MUSTARD, Cam

Teaching/Educational Role

Professor: Dalla Lana School of Public Health, University of Toronto, July 2002 –
Member: School of Graduate Studies, University of Toronto
Member: Graduate Department of Rehabilitation Sciences, University of Toronto
Member: Clinical Epidemiology Program, Department of Health Policy, Management and Evaluation, University of Toronto
Instructor: CHL 5419: Empirical perspectives on social organization and health

Service Activities

Chair: Michael Smith Prize in Health Research Review Committee, CIHR
Reviewer: College of Reviewers, Canada Foundation for Innovation
Reviewer: 2008 Early Researcher Awards Program, Ontario Ministry of Research and Innovation
Review Panel Member: Comparative Program in Health and Society, Munk Centre for International Studies, University of Toronto
Member: Editorial Advisory Board, International Journal of Social Security and Workers Compensation, 2008 –
Member: Scientific and Policy Advisory Committee, McGill Institute for Health and Social Policy, Jan 2007 – Jun 2008
Member: Advisory Committee, Lancaster House Health and Safety Conference, 2008
Member: Health Reports Editorial Board, Statistics Canada, July 2007 –
PhD Thesis Supervisor: Jacob Etches, Sergio Rueda, Farah Mawani, Laura Rosella
Journal Referee: Journal of Epidemiology and Community Health; Health Services Research Journal; American Journal of Public Health; Social Science and Medicine; Injury Prevention; College of Reviewers: Canada Research Chairs Program

PENNICK, Victoria

Teaching/Educational Role

Mentor/Tutor: CHL5418 – Scientific Overviews in Epidemiology and Public Health, Public Health Sciences, University of Toronto.
Member: Thesis Committee, Chantelle Garrity, Public Health Sciences, University of Toronto
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 –
Lecturer, Dalla Lana School of Public Health, University of Toronto, 2005 –

Service Activities

Peer Reviewer: Cochrane Pain, Palliative and Supportive Care Review Group
Reviewer: Canadian Physiotherapy Association for Grants. 2007-2009
Member: Executive Committee, Review Group Co-ordinators, The Cochrane Collaboration
Mentor: Review Group Co-ordinators, The Cochrane Collaboration
Convenor: Elections Working Committee, The Cochrane Collaboration

ROBSON, Lynda

Service Activities

Member: System Measurement Subcommittee, Ontario Health and Safety Council of Ontario
Grant Reviewer: WorkSafe BC
Journal Referee: Arthritis Care & Research

SAUNDERS, Ron

Service Activities

External Reviewer: Canadian Policy Research Networks.
Book Referee (ad hoc): 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

SINCLAIR, Sandra

Teaching/Educational Role

Assistant Professor: McMaster University, School of Rehabilitation Sciences, 2002 –

Service Activities

Member: IWH Joint Health & Safety Committee
Journal Referee: American Journal of Industrial Medicine
External Reviewer: WSIB Research Advisory Committee

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/Educational Role

Assistant Professor – Dalla Lana School of Public Health, University of Toronto,
Course Coordinator: Measurement in Clinical Research Course, Health Policy, Management and
Evaluation, University of Toronto. Winter-term
Mentor: CARWH Student Day. CARWH, Montreal, Quebec, June 2008.

Service Activities

Reviewer: Public Health Nursing, Journal of Epidemiology and Community Health, Social Science and
Medicine, Social Forces, Critical Public Health, and Preventing Chronic Disease.
Reviewer: National Collaborating Centre Determinants of Health research paper
Abstract reviewer: Public Health Association of Australia Conference, Industrial Accident and Prevention
Association conference.

TOMPA, Emile

Teaching/Educational Role

Adjunct Assistant Professor: Dalla Lana School of Public Health, University of Toronto. May 2004 –
Adjunct Assistant Professor: Economics, McMaster University: 2001 –

Lecturer: Work Disability Prevention Course. University of Sherbrooke, Montreal, Quebec, June 2008.
Guest Lecturer: Theory and Practice of Programme Evaluation Graduate Course, CHL 5110. University of Toronto, Dalla Lana School of Public Health Oct 2008.
Course Co-instructor: Advanced Topics in Health Economics (ECON 791) Winter, 2008
Guest Speaker: CHL5110 Theory and Practice of Programme Evaluation, Public Health Sciences, University of Toronto, Fall 2008
Member: Post-doctoral Selection Committee for the Research Action Alliance on the Consequence of Work Injury

Service Activities

Editorial Board, Journal of Occupational Rehabilitation
Journal/Book Reviewer: Journal of Occupational Rehabilitation, Applied Ergonomics, Occupational and Environmental Medicine, Creative Wellness Solutions, International Journal of Workplace Health Management, Oxford University Press

Planning meeting for Economic Dimensions of Occupational Safety and Health (ECOSH). EU funded workshops on economic evaluation of occupational safety and health directed at policymakers, practitioners and researchers.

VAN DER VELDE, Gabrielle

Teaching/Educational Role

Tutor - Clinical Decision Making and Cost-effectiveness Analysis (HAD 5304H) - September - December 2008

Service Activities

Editorial Board Member: Journal of the Canadian Chiropractic Association
Journal Referee: Advances in Physiotherapy; Arthritis Care and Research; Journal of the Canadian Chiropractic Association; Quality of Life Research; Lancet.
External Grant Referee: Foundation for Chiropractic Education and Research

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. 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 and Safety Agency for Healthcare in British Columbia

Renée-Louise Franche is director of disability prevention at the Occupational Health and Safety Agency for Healthcare in British Columbia. 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 Guzman – 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.

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

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.

Dr. Dov Zohar – Professor, Faculty of Management, Technion Institute of Technology, Israel (since 2005)

Dov Zohar is a professor at the William Davidson Faculty of Industrial Engineering and Management at the Israel Institute of Technology in Technion City. He has a background in industrial and organizational psychology and has worked for over two decades on behavioural and managerial factors influencing occupational safety. His research focuses on the concept of safety climate, which he developed in 1980. Safety climate is a term used to describe the sum of employee's perceptions regarding overall safety within their organization.

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
	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
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
	OHCOW	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)
	SIS	Single Item Staging Scale
	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
	UNITE	Union of Needle Trades, Industrial & Textile Employees
	USWA	United Steelworkers of America
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