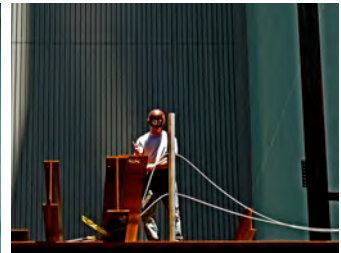




UBC CENTRE FOR
HEALTH SERVICES AND
POLICY RESEARCH

WorkSafeBC-CHSPR Research Partnership Annual Report: 2008-2009

November 2009



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THE UNIVERSITY OF BRITISH COLUMBIA

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About the WorkSafeBC-CHSPR Partnership

This research partnership between WorkSafeBC (BC's Workers' Compensation Board) and the Centre for Health Services and Policy Research (CHSPR) aims to address current and emerging issues of work-related health in British Columbia. The partnership has taken the lead in work-related health research by developing and promoting the use of routinely collected health and compensation data from multiple sources via our data partner, Population Data BC. The data allows us to conduct research on the entire working-age population over a 20-year period, providing a unique and comprehensive portrait of the health and well-being of British Columbia's workers.

For more information about the WorkSafeBC-CHSPR Partnership, please visit <http://www.chspr.ubc.ca/research/worksafebc>.

Population Data BC is BC's first pan-provincial population health data service, which holds population-level data on health services utilization, workers' compensation, education, and more. For more information, please visit <http://www.popdata.bc.ca>.



Executive summary



In the past year, the WorkSafeBC-CHSPR Partnership team has continued to develop cutting-edge and policy-relevant research on work-related health in British Columbia.

By combining WorkSafeBC data with the population-wide data available through Population Data BC, we are gaining important insights into the health, social, and economic effects of work-related illness and injury.

Our activities in the past year have focused primarily on three broad research areas: work-related lung disease, work-related injuries, and compensation policy.

In partnership with our colleagues, we have also continued to take a leadership role in the access, development, and linkage of work-related administrative data for research purposes.

Work-related lung disease

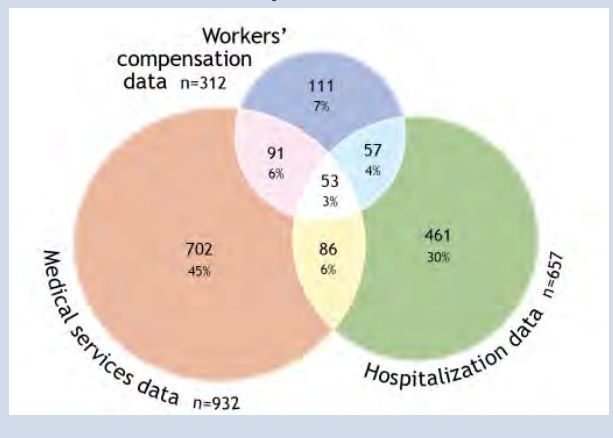
The Partnership is conducting a number of studies to investigate the prevalence, diagnosis, and surveillance of mesothelioma, and asbestosis, building on previously completed research on asthma. Our research in the last year has illuminated key findings around improving the surveillance and compensation of occupational lung health problems.

Improving surveillance of asbestosis

Our analysis of health databases in BC showed that single data sources are not sufficient to identify all new cases of asbestosis, and as a result, the true burden of the disease in BC is likely seriously underestimated. The findings were published in the peer-reviewed journal *Occupational and Environmental Medicine* in June 2009.

Figure 1 Data sources for identifying new cases of asbestosis, 2001-2004 (n=1,170)

Only 3% of new asbestosis cases were found in all three data sources included in our analysis.



Increasing awareness of mesothelioma as a compensable disease

Our evaluation of a notification system for physicians of newly diagnosed mesothelioma patients shows that raising awareness of mesothelioma as a compensable disease does help to increase compensation rates.

Our previous research showed that less than half of all mesothelioma cases sought compensation from WorkSafeBC, despite the large majority of cases being work-related.

In order to increase awareness of compensation services, we worked with the BC Cancer Agency to send a letter to all physicians of newly-diagnosed mesothelioma patients. This letter campaign, which began in November 2004, has increased compensation rates by 15% for those patients whose physicians received a letter. Our evaluation has also uncovered some areas in which the letter writing campaign could be refined, and we are actively collaborating with the BC Cancer Agency to make these improvements.



Workplace injuries

Our analysis of work-related injury trends in BC has indicated a need for better understanding of the underlying causes of injury, and increased prevention among high-risk industries.

Sleep problems and injuries

Sleep problems such as insomnia are common among Canadians, and can increase the potential risk of work-related injuries. We found that workers who have trouble sleeping are at increased risk for work injuries. Females have a higher risk for injury associated with sleep problems compared to men, and they also have a higher risk for injury associated with work characteristics that can affect sleep, such as working night and rotating shifts.

Injuries and shiftwork

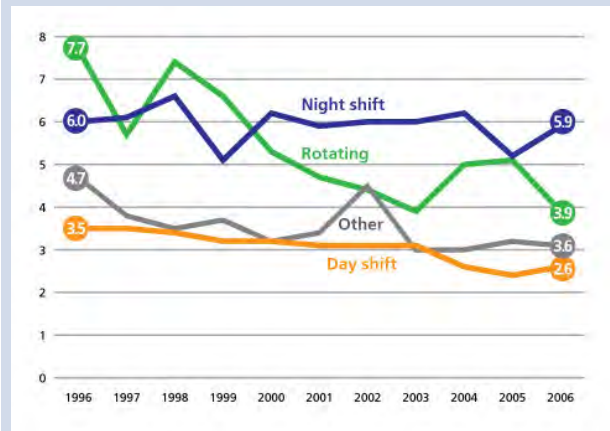
By investigating the relationship between shiftwork and injuries, we are able to learn more about the underlying causes of injury among workers whose sleep patterns may be disrupted by their work schedules. Our study examines the relationship between shiftwork and workers' compensation claims. Results show that night shiftwork is increasing in Canada, particularly among women. In addition, shiftwork appears to be associated with reporting a compensation claim for regular evening or graveyard shiftwork for men and for all forms of night shiftwork for women. Future work will focus on ongoing surveillance to help us understand the causes of injuries among shiftworkers, and interventions to help reduce these risks.



Partnership researchers Chris McLeod and Paul Demers.

Figure 2 Trends in compensation rates by shift type, 1996-2006

This graph shows the percentage of Canadian workers working various shifts who received compensation.

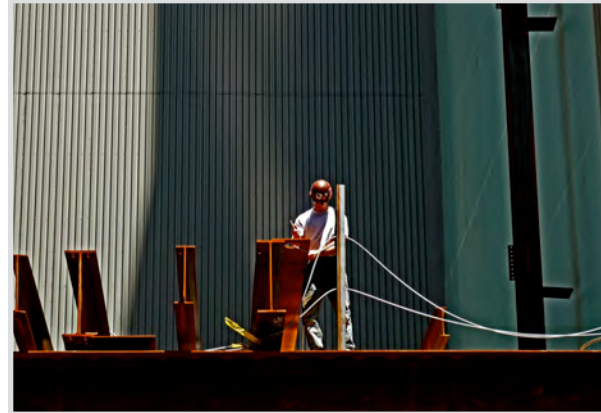


Compensation policy

We have been investigating the effectiveness of WorkSafeBC’s program to expedite some diagnostic and surgical procedures and to provide surgical procedures through private clinics.

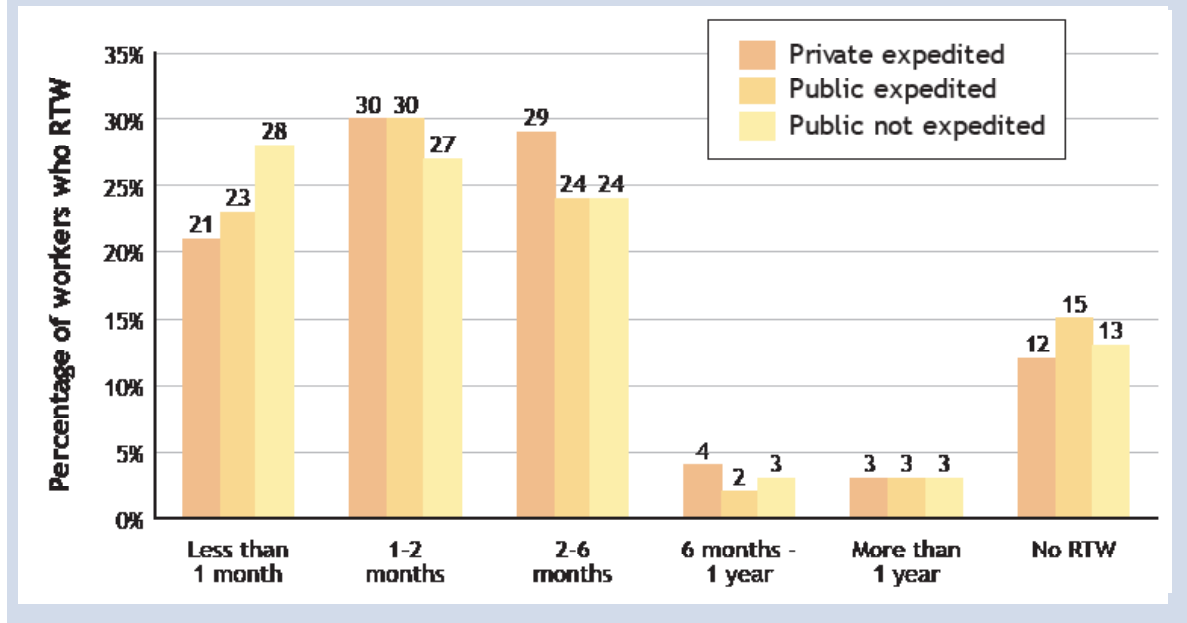
Does surgical setting or expedited status matter for injured workers?

This year, we completed our analyses for the first Canadian study to directly compare return-to-work outcomes among injured workers who underwent knee surgeries in public hospitals versus private clinics, and who had their surgical wait-time expedited versus non-expedited. We found that wait times were shorter for expedited surgeries, but that time to return-to-work after surgery was not influenced by surgical setting (private vs. public) or expedited status.



This research has also shown that demographic characteristics play a role in whether workers return to full or partial work duties after surgeries: females, middle income workers, and workers with a previous claims history were more likely to return to partial work duties.

Figure 3 : Time to return-to-work from surgery by surgical setting and expedited status





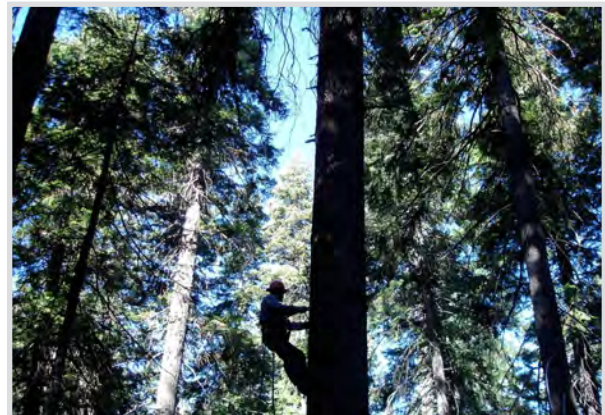
New research projects

Serious injuries and fatalities among BC workers

The goals of this project are to examine trends over time for serious injuries and fatalities among BC workers, and to investigate the impact of these injuries on firm-level claim rates. The project takes advantage of the new serious injury rate measure developed by WorkSafeBC that is based on a combination of the type of injury, claim duration and the degree of disability. The results of this study will help identify industries at high risk for serious injuries and fatalities, and provide insight into how firms react to these incidents.

Does certification reduce the risk of tree faller injuries?

Manual tree fallers have the highest serious injury rate in British Columbia. This project will evaluate the faller certification program implemented in 2002, that consists of classroom and on-the-job training. Our analyses will investigate whether certification reduced injury risk over time, and in comparison to other high risk occupations without certification programs. Findings from this research will have relevance to other high-risk industries such as construction and mining that may also be considering certification programs.



Partnerships and Knowledge Exchange

The WorkSafeBC-CHSPR Partnership team is committed to ensuring that the results of its research activities are relevant and available to researchers, practitioners, and occupational health policy makers. We are engaged in active collaborations with organizations whose missions are compatible with ours, such as the Institute for Work and Health, the Canadian Association for Health Services and Policy Research, the Workers' Compensation Research Working Group, Simon Fraser University's Faculty of Health Sciences, and the Occupational Health and Safety Agency for Healthcare in BC. In the past year, we have given presentations at numerous national and international conferences, and have been actively involved in publishing results in the peer-reviewed literature.

In addition, we are actively engaged with stakeholders in provincial agencies and non-profit organizations. We hold quarterly meetings with representatives of WorkSafeBC, meet frequently with partners at the BC Cancer Agency and the BC Lung Association, and participate in educational events such as the BC Lung Health Forum and the WorkSafeBC Research Day. We also provide training opportunities to students interested in pursuing research on policy-relevant occupational health issues.

A full list of our activities in the past year is found below.

Knowledge Exchange Activities

Accepted/Published

1. Gan W, Demers P, Koehoorn M. Population-based asbestosis surveillance in British Columbia. *Occupational and Environmental Medicine*. 2009;66:766-771. Available online at: <http://oem.bmj.com/cgi/reprint/66/11/766>.
2. Smith P, Stock S, McLeod C, Koehoorn M, Marchand A, Mustard C. Research opportunities using administrative databases and existing surveys for new knowledge in occupational health and safety in Canada, Quebec, Ontario and British Columbia. *Canadian Journal of Public Health* (accepted).
3. Koehoorn M, McLeod C, Fan J, Barer M, Côté P, Hogg-Johnson S, McGrail K. Investigating Outcomes for Musculoskeletal Surgeries Among Injured Workers in BC. Final report submitted to WorkSafeBC (July 2009). Peer-reviewed.

Submitted/Under Review

1. Fan J, McLeod C, Koehoorn M. Sociodemographic, clinical, and work characteristics associated with partial, full, or no return to work following work-related knee surgery. Submitted to the *Scandinavian Journal of Work, Environment & Health* (October 2009).
2. Kirkham T, Koehoorn M, McLeod C, Demers P. Surveillance of Mesothelioma and Workers' Compensation in British Columbia, Canada. Revised and resubmitted to *Occupational and Environmental Medicine*.
3. Kling R, McLeod C, Koehoorn M. Sleep problems and workplace injuries in Canada. Revised and resubmitted to *Sleep*.

In Preparation

1. McLeod C, Koehoorn M, Tamburic L, McGrail K, Demers P, Hertzman C, Kennedy S. Asthma in British Columbia 1991-2004: A retrospective cohort study using linked health data. In preparation to submit to the *International Journal of Epidemiology*.
2. Koehoorn M, Fan J, Barer M, McGrail K, Hogg-Johnson S, Côté P, McLeod C. Musculoskeletal Surgery Outcomes by Surgical Setting and Expedited Status in British Columbia. In preparation to submit to *Health Care Policy*.
3. Koehoorn, M Tamburic L, Lynd L, Kennedy S, McLeod, C. Population-based surveillance for work-related asthma using administrative data. In preparation to submit to the *Scandinavian Journal of Work, Environment & Health*.



4. Wong I, McLeod CB, Demers P. Shiftwork Trends and Risk for Injury Compensation Among Canadian Workers. In preparation to submit to the American Journal of Public Health.

Conference Presentations (oral)

1. McLeod C, Koehoorn M, Fan J, Barer M, Côté P, Hogg-Johnson S, McGrail K. Investigating Outcomes for Musculoskeletal Surgeries Among Injured Workers in British Columbia, Canada. Workers' Compensation Research Working Group. Boston MA, 5-6 November 2009 (accepted).
2. Wong I, McLeod CB, Demers P. Shiftwork Trends and Risk for Injury Compensation Among Canadian Workers. 19th International Symposium on Shiftwork and Working Time: Health and well-being in the 24-h society. Venice, Italy 2-6 August 2009. Available at http://www.shiftwork2009.it/documents/13Oral_Session_8.zip (see 6-Wong.pdf)
3. Koehoorn M, McLeod C, Fan J, Barer M, Côté P, Hogg-Johnson S, McGrail K. Musculoskeletal Surgery Outcome by Surgical Setting and Expedited Status in British Columbia. Canadian Association for Health Services and Policy Research, 2009 Annual Conference. Calgary, Alberta 11-14 May 2009. Available at <http://www.f2fe.com/CAHSPR/2009/docs/G6/g6b Mieke Koehoorn.pdf>
4. Demers P. Assessing the Full Burden of Asbestos-Related Disease. BC Lung Health Forum, March 26, 2009 (sponsored by the BC Lung Association and the UBC Centre for Lung Health).
5. McLeod CB, McCloskey E. The power in partnerships. Population Data BC Spring Conference. Vancouver, BC, March 17-18, 2009.
6. McLeod CB, Fan JK, Koehoorn MW. Musculoskeletal surgeries: Outcomes by surgical setting and expedited status. 21st Annual Occupational and Environmental Health Conference. Semiahmoo, WA, January 8-9, 2009. Available online at: <http://www.chspr.ubc.ca/files/publications/2009/wsbcs/Surgical%20Outcomes%20Semiahmoo%202009.ppt>.
7. Demers P. What's New in Occupational Disease at the Association of Workers' Compensation Boards of Canada Annual Policy Meeting. Vancouver, BC, October 26th, 2008.
8. Mustard C, Koehoorn M, McLeod C, Tompa E. Measuring the impact of policy or program reform in workers' compensation: Three case studies. 2008 Association for Workers' Compensation Boards of Canada-Policy Section Conference. Vancouver, BC, October 26-27, 2008.

Conference Presentations (poster)

1. Fan JK, McLeod CB, Koehoorn M. Sociodemographic, clinical, and work characteristics associated with partial, full, or no return to work following work-related knee surgery. BC Environmental & Occupational Health Research Network Scientific Exchange and AGM. Vancouver, BC, November 20, 2009 (accepted).
2. Fan JK, McLeod CB, Koehoorn M. Return to work following knee surgery: The role of sociodemographic, work and clinical characteristics. Population Data BC Spring Conference, Vancouver, BC, March 17-18, 2009 (2nd prize poster competition).
3. Kirkham TL, Demers PA, McLeod C, Tamburic L, Koehoorn M. Factors related to seeking compensation for mesothelioma in British Columbia. Population Data BC Spring Conference, Vancouver, BC, March 17-18, 2009 (1st prize poster competition). Available online at: <http://www.chspr.ubc.ca/files/publications/2009/wsbcs/mesothelioma-epicoh.pdf>.

4. Tamburic L, McLeod CB, Xu F, Demers P, Kennedy S, Lynd L, Koehoorn M. Investigating asthma among BC workers: A pilot surveillance project using new occupational research capacity in the BC Linked Health Database. BC Environmental & Occupational Health Research Network AGM and Scientific Exchange. Vancouver, BC, November 7, 2008. Available online at: <http://www.chspr.ubc.ca/files/publications/2009/wsb/Asthma%20poster%20from%20CARWH%2008.pdf>.
5. Gan W, Xu F, Demers P, McLeod CB, Koehoorn M. Asbestosis surveillance in British Columbia (1991-2004). BC Environmental & Occupational Health Research Network AGM and Scientific Exchange. Vancouver, BC, November 7, 2008. Available online at: <http://www.chspr.ubc.ca/files/publications/2009/wsb/Asbestosis%20poster%20from%20CARWH%2008.pdf>.

Invited Talks

1. Demers PA. “Occupational cancer and Carcinogen Surveillance in Canada” at the Curso Internacional de Cancer Occupational y Ambiental (at the launch of a national occupational control plan). Bogota, Colombia, August 2009.
2. McLeod CB. Asthma in BC Workers: Using linked health data for occupational disease surveillance at Occupational Health and Safety Agency for Health Care Research In Progress. Vancouver, BC, July 13, 2009.
3. Demers PA. “New Paradigms in Epidemiologic Research” at Cohorts and Consortia: from Biotechnology to Populations. Banff, Alberta, June 2009.



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