

otwork

IN THIS ISSUE

2 / What researchers mean by... difference in differences

3 / New cases of mesothelioma and asbestos-related lung cancer in one year cost \$1.9B

4 / PREMUS 2016 brings together MSD prevention scientists and practitioners to share evidence

6 / Employers that focus on both operations and safety don't have to sacrifice either

7 / Disability leave duration rises with age, chronic conditions

Photo ©PeopleImages/iStockphoto.com

Key differences found in return-to-work process for MSD and psychological claims

Research comparing MSD and mental health compensation claims in Australia offers a picture of return-to-work challenges for psychological conditions

People who file workers' compensation claims for psychological injuries are less likely to be offered modified work and less likely to go back to work than those who file claims for musculoskeletal disorders (MSDs).

This is according to an Australian-based research project that includes on its team Dr. Peter Smith and Dr. Sheilah Hogg-Johnson, both senior scientists at the Institute for Work & Health.

Findings from the study, based in the Australian state of Victoria, demonstrate important differences in the post-injury experiences of workers who make workers' compensation claims for mental health injuries and those who make MSD-related claims. Namely, psychological claimants:

- are less sure about returning to their previous jobs;
- are less likely to be contacted by their workplace's return-to-work (RTW) coordinator;

- are less likely to be offered and to accept modified duties;
- face more negative reactions in response to the injury from supervisors and co-workers; and
- experience more stressful interactions with health-care providers, RTW coordinators and claims agents.

These findings came from an early analysis in the project, which is following a group of over 850 workers' compensation claimants over a 12-month period. The study is looking for differences in RTW outcomes between MSD and mental health claimants, as well as differences among claimants of different age groups.

"Almost all the cohort research that has been done about return to work has been based on groups of people with musculoskeletal conditions," says Smith, who shared the early findings in a plenary held at IWH, now available as a slidecast (www.iwh.on.ca/plenaries/2015-sep-29).

continued on page 8



IWH updates

2016 Nachemson to honour RTW pioneer

This fall, join a panel of distinguished guests from across Canada and beyond to celebrate **Wolfgang Zimmermann** and his contribution to improving the circumstances of people with disabilities in the working world. As the founder and executive director of the National Institute of Disability Management and Research (NIDMAR), Zimmermann has been a tireless advocate of labour-management workplace reintegration programs. Hear from **Andrew King**, formerly of the United Steelworkers Union of Canada, the German Social Accident Insurance's **Joachim Breuer**, and former Clerk of the Privy Council and Secretary to the Cabinet in Ottawa, **The Honourable Wayne G. Wouters, PC**. The annual Nachemson lecture, hosted by the Institute for Work & Health (IWH), is one of the most important networking events of the year in Ontario for policy-makers, researchers, professionals, advocates and other stakeholders in the field of work injury and disability prevention. This year's event takes place on Friday, October 14, at 11:30a.m. with lunch following. To sign up, go to: www.iwh.on.ca/nachemson-lecture.

CARWH 2016 takes place this fall in Toronto

On October 16-18, the Institute teams up with the Occupational Cancer Research Centre (OCRC) to co-host the 2016 Canadian Association for Research on Work and Health (CARWH) conference. Held about every two years since 2001, CARWH conferences seek to bridge important gaps in work and health research by promoting knowledge exchange, research partnerships, and translation of research into the prevention and management of work-related injury and illness. Sign up at: www.carwh2016.iwh.on.ca.

IWH senior scientist honoured with award

Congratulations to **Dr. Dorcas Beaton**, senior scientist at IWH. She recently received the 2016 Alumni Achievement Award from the University of Toronto's Physical Therapy and Occupational Therapy Alumni Association. The award, given out every year since 1996, acknowledges graduates who have made an exceptional contribution as a physical therapy or occupational therapy professional. Beaton is a member of IWH's measurement group and the lead researcher in the development of the DASH (Disabilities of the Arm, Hand and Shoulder) Outcome Measure. For more information about the award, go to: <https://ptotalumni.squarespace.com/alumni-awards/>.

Welcome to new associate scientist

IWH welcomes **Dr. Arif Jetha**, who has recently been named an associate scientist. Jetha, who first joined IWH in 2015 as a Mustard Post-Doctoral Fellow, focuses his research on preventing and managing work disability among workers with chronic conditions.

WHAT RESEARCHERS MEAN BY...

difference in differences

Method helps analyze effect of an intervention when intervention and control groups have meaningful differences

Experimental studies are typically designed so that researchers can learn about the impact of an intervention (a drug, a therapy or a program). They do this by looking for different outcomes between the group that received the intervention (the intervention group) and the group that did not (the control group).

But what if the people in both groups start out with important differences to begin with? That's when researchers use a method of analysis called **difference in differences** to identify the effect of the intervention.

In controlled settings such as a randomized controlled trial, study participants are randomly placed in either the intervention group or the control group. That step helps make sure that the groups start out relatively the same so that changes in the intervention group can be more easily attributed to the intervention. In natural experiments (or observational studies), researchers don't have this ability to randomly assign participants.

That's because, in natural experiments, the interventions happen naturally, as the name would suggest. For example, a study of a school board policy that requires all school students to be vaccinated, of a province's policy to cut a cheque to everyone who lives in it so no one lives below a certain level of income, or of a town council decision to make helmets mandatory for all cyclists would all be natural experiments.

When such policies or programs are offered in one school board, one province or one town but not others, they offer researchers a valuable opportunity to study the impact of the intervention. But in natural experiments such as these, participants may start out with important differences; i.e. the people in the school board, province or town subject to the policy or program may already be different in some meaningful way from those with whom they are being compared. To overcome this, researchers don't compare one group's outcomes to those of the other. Instead, they look for how much each group changes over

a period of time with respect to a certain outcome. Then they compare the extent of the change between the two groups.

Let's take the helmet bylaw as an example. If you as a researcher want to look at the effect of that bylaw—introduced by Town A, let's say—you might hypothesize that it reduces head injuries. As a result, you take a close look at stats from emergency rooms to see whether head injuries from cycling accidents have gone down. For a control group, you look at similar stats in a neighbouring town of the same size—Town B—where a mandatory helmet bylaw does not exist.

But you know there may be prior differences between Town A and Town B. They may differ in road and traffic conditions or in how willingly people wear helmets when cycling, whether required by law or not. As a result, you don't simply look at the two towns' post-intervention stats—the number of head injuries one year after the bylaw took effect, for example—and draw a conclusion based on those two numbers. Rather, you also look at head injury stats prior to the bylaw in both towns. If head injury stats in Town A go down by 25 per cent but only by 15 per cent in Town B, you attribute that 10-per-cent difference to the effect of the bylaw.

This approach has some limitations. One is the possibility that you might be seeing **regression to the mean**. That would be the case if pre-bylaw injury stats in Town A were extreme or exceptional to begin with. If so, there's a strong statistical likelihood that the extreme injury rates seen at that point in time would naturally decline towards a lower average.

Another caveat to this method is that it assumes injury trends for both towns would have been the same if not for the intervention. Even if you gathered data at multiple points in time to make sure that the trends were the same leading up to the new bylaw, you have to be alert to the possibility that something else might be taking place to change that trend during the period of your study.

New cases of mesothelioma and asbestos-related lung cancer in one year cost \$1.9B

First-ever estimate of costs of work-related exposure looks at newly diagnosed cases in Canada in 2011

One year's newly diagnosed cases of mesothelioma and lung cancer due to work-related asbestos exposures cost Canadians \$1.9 billion.

This is according to a recent study led by Institute for Work & Health (IWH) Senior Scientist Dr. Emile Tompa, a health economist who assessed the costs to Canadian society of newly diagnosed cases in 2011. The study is the first to estimate the costs to society of illnesses associated with work-related asbestos exposures, including secondhand or "para-occupational" exposures (e.g. a family member's exposure to fibres brought home on work clothing).

"Although it may seem cold to attach a dollar value to outcomes associated with workers and their families who have suffered asbestos-related mesothelioma and lung cancer, economic burden studies such as this one can help policy-makers better understand the costs to society, pointing them to areas needing more prevention efforts and helping them set priorities," says Tompa.

For example, advocates are pressing the federal government to ban the import and export of asbestos and asbestos-containing products. "Information on the economic

burden to society of illnesses associated with asbestos exposure can help inform these efforts," Tompa adds.

2,331 new cases in 2011

Tompa and his team looked at the estimated total lifetime costs of 427 newly diagnosed cases in 2011 of mesothelioma, as well as 1,904 newly diagnosed cases in the same year of lung cancer. These were all cases attributed to occupational and para-occupational exposures to asbestos, for a total of 2,331 new cases in 2011. They considered costs in three areas: direct costs (e.g. health-care and family/community caregiver costs), indirect costs (e.g. productivity and output losses associated with lost paid work time) and quality-of-life costs (e.g. loss of engagement in social roles such as being a parent or spouse, loss of community engagement and leisure, and loss of enjoyment of life due to pain, suffering and premature mortality).

According to the study, the estimated total cost of these cases to Canadian society (including costs to individuals, as well as their families, communities and employers) is \$1.9 billion, with an average cost of

\$816,000 per case (see sidebar). Eighty per cent of the costs are attributed to health-related quality-of-life losses. Health care and other direct costs account for 11 per cent; loss of productivity and other indirect costs account for the remaining nine per cent.

"Survival rates are poor for mesothelioma and lung cancer, so health-care costs are relatively low," says Tompa. "And most of the diagnosed cases in 2011—92 per cent—involved people 60 years of age or older, so lost labour-market output and productivity is also relatively low. It's the health-related quality of life loss that carries the biggest price tag."

Tompa notes that the cost estimates are conservative. They only include costs related to cases newly diagnosed in a single year, not cases diagnosed in preceding or subsequent years. They do not include costs related to other illnesses known to be caused by asbestos, such as asbestosis, or costs associated with non-occupational exposures to asbestos.

For more, see Tompa's June 2016 presentation to an EU-OSHA project on estimating work injury costs, or his November 2015 presentation to a stakeholder meeting of the Occupational Cancer Research Centre. (The former includes para-occupational costs, and the latter does not). Go to: www.iwh.on.ca/other-reports. ➤

ECONOMIC BURDEN OF ASBESTOS-RELATED CANCERS DUE TO WORK EXPOSURES

The tables here show the economic burden of mesothelioma due to occupational and para-occupational (i.e. secondhand) exposures to asbestos and of lung cancer due to occupational and para-occupational exposures to asbestos. The cases were diagnosed in 2011. All figures are in 2011 Canadian dollars.

Table 1: Mesothelioma (427 new cases in 2011)

	All cases (\$)	Per case (\$)
Health-care costs	19,542,452	45,794
Informal caregiving	5,665,353	13,276
Out-of-pocket costs	6,052,921	14,184
Workers' compensation administration	32,731,536	76,700
Lost productivity and output	30,212,135	70,796
Cost of replacing absent worker	2,324,633	5,447
Health-related quality of life	296,303,160	694,325
Total	392,832,191	920,521

Table 2: Lung cancer (1,904 new cases in 2011)

	All cases (\$)	Per case (\$)
Health-care costs	53,993,826	28,355
Informal caregiving	32,713,179	17,180
Out-of-pocket costs	35,539,487	18,664
Workers' compensation administration	26,134,338	13,725
Lost productivity and output	126,275,066	66,314
Cost of replacing absent worker	10,394,631	5,495
Health-related quality of life	1,224,370,103	642,986
Total	1,509,420,630	792,682

PREMUS 2016 brings together MSD prevention scientists and practitioners to share evidence

Keynotes discussed latest findings on carpal tunnel syndrome, construction safety culture, sitting and standing, and sex/gender lens in MSD research

Since 1992 when the first PREMUS conference was held, the scientific community specializing in work-related musculoskeletal disorders (MSDs) has made considerable progress. "If you think back to the 1990s, the proposition that exposures arising from work led to the onset of musculoskeletal disorders was frequently contested," said Institute for Work & Health (IWH) President Dr. Cam Mustard in his remarks welcoming delegates to the 9th International Scientific Conference on the Prevention of Work-Related Musculoskeletal Disorders. "That's not the case anymore."

Thanks in part to researchers around the world, many of whom meet every three years at PREMUS gatherings, there's now wide recognition that adverse work exposures will lead to the development of MSDs, added Mustard. He was addressing some 400 scientists and practitioners from about 30 countries who had come to Toronto June 20 to 23, 2016, to share the latest evidence on work-related MSDs.

Ontario Minister of Labour Kevin Flynn also welcomed the attendees in his remarks delivered on the third day of the conference. Flynn noted that the provincial government has tackled MSDs since 2006 with the launch of a "pains and strains" campaign to increase awareness of ergonomic-related injuries, as well as ongoing inspection blitzes targeting MSD hazards across a variety of sectors. "We believe every person who works deserves to go home safe at the end of each day, and every person here today has a role to play in making this goal a reality," he added.

The conference, hosted by IWH, included about 360 oral presentations and 60 poster presentations. It also included four keynote presentations; the messages of the distinguished speakers are summarized here. Keynote lectures are also available as slidecasts at <http://premus2016.iwh.on.ca>.

Forceful repetition a carpal tunnel risk factor

Workers who often use their hands in forceful gripping and pinching motions face a higher risk of developing carpal tunnel syndrome (CTS), a painful condition that causes tingling, numbness and weakness in the hand and sometimes requires surgery.

Low-force repetitive hand motion and wrist posture, widely thought of as key risk factors, appear to be of lower importance than forceful pinching and gripping among workers doing hand-intensive tasks such as food processing and manufacturing work, said Dr. Bradley Evanoff, Richard A. and Elizabeth Henby Sutter Professor of Occupational and Environmental Medicine at the Washington University School of Medicine in St. Louis.

Evanoff shared findings from the U.S. National Institute for Occupational Safety and Health (NIOSH) Upper Limb Consortium project, which draws on data from more than 4,300 workers in over 50 workplaces to explore the role of both personal and work factors associated with CTS. The consortium studies showed:

- sex/gender is a risk factor, with women at 30 per cent greater risk of developing CTS than men;
 - age and body mass index are both risk factors, with the risk of CTS rising with each increase in age range up to 55 (the upper limit of the data available) and with each increase in BMI; and
 - co-morbid conditions such as diabetes, rheumatoid arthritis and thyroid conditions do not increase the risk of CTS.
- Evanoff also shared the following findings with respect to workplace factors:
- forceful hand exertion is a CTS risk factor;
 - wrist posture alone is not a risk factor;
 - hand repetition is a risk factor only when force is involved (hand repetition alone is not a risk factor);
 - some psychosocial factors such as decision latitude and social support have a protective effect; and
 - current thresholds for hand force and repetition recommended by the American Conference for Governmental Industrial Hygienists (ACGIH) are insufficiently protective.

Evanoff emphasized that the consortium project cannot speak to the role of a number of work-related factors because of lack of information, including vibration, task variability and extreme wrist extension or flexion for long periods.

8 safety leading indicators for the construction worksite

Although the number of workplace fatalities every year in the U.S. would clearly mark construction worksites as high-hazard environments, little research has been done on safety culture and safety climate in this sector.

That was what Dr. Linda M. Goldenhar and her team at CPWR – The Center for Construction Research and Training discovered a few years ago when they reviewed the literature on safety culture (i.e. the set of espoused beliefs, attitudes and values about safety in the workplace) and safety climate (i.e. employee perceptions about the extent to which espoused beliefs are practised).

In construction, safety culture is made complicated by the fact that "multiple safety climates come together on a jobsite, and each is influenced by local conditions," said Goldenhar, research director at CPWR, a world leader in construction safety and health research and the national construction centre for NIOSH. As such, leading indicators of safety climate, as well as interventions to change it, might be more effective when developed for individual worksites, she added.

Goldenhar listed eight leading indicators identified by construction industry stakeholders. In construction, worksites with a strong safety climate are those that:

- demonstrate management commitment;
- align and integrate safety as a value;
- ensure accountability at all levels;
- improve supervisory leadership;
- empower and involve employees;

- improve communication;
- train at all levels; and
- encourage owner/client involvement

In a recent study, Goldenhar found that popular stretch and flex programs conducted on many construction sites may actually be addressing some of these safety climate indicators. “I wondered why it is that contractors are still spending resources implementing jobsite stretch and flex programs to reduce MSDs despite the research evidence showing they don’t work,” she said.

To answer her question, Goldenhar conducted a mixed-methods study with jobsite safety directors, managers and supervisors. The findings revealed many benefits of these programs beyond improved MSD outcomes. Participants spoke of increased communication, familiarity and camaraderie between supervisors and workers, opportunities to assess workers’ physical and mental status and assign work accordingly, and team discussions about the tasks ahead and their hazards.

That is, they were referring to activities that directly address one or more of the eight leading indicators of a strong jobsite safety climate.



Top: Ontario Minister of Labour Kevin Flynn addresses delegates at PREMUS 2016. Bottom: Delegates socialize and debate during and between presentations. Photos: Gary Beechey, BDS Studios

‘Too much standing hurts, too’

It might be a common perception that prolonged sitting is linked to increased pain or injury, but the evidence indicates that too much standing is also a risk factor, said Dr. Jack Callaghan. “From a musculoskeletal perspective, we’re at direct odds with the health community that’s saying standing is really good for you. I’m going to say sitting is also good for you in some ways,” he added.

Callaghan, a professor of kinesiology at University of Waterloo and Canada Research Chair in Spine Biomechanics and Injury Prevention, does not dispute the research on the negative health consequences of prolonged sitting—including research linking sitting time and early mortality from cardiovascular disease and cancer. However, he cautioned workers against switching from sitting all day to standing all day.

Based on his research, Callaghan offered the following take-home messages:

- standing in constrained conditions can accelerate low-back pain for some;
- a one-to-one ratio of sitting and standing may be ideal, but no single ratio between sitting and standing time will work for all individuals;
- sit-stand rotation alone does not reduce low-back pain;
- once pain is initiated, it’s residual or cumulative—that is, if people wait to feel pain before changing postures, it’s already too late; and
- interventions that encourage exercise or induce movement early and often may be a promising way forward.

Understanding MSDs with sex/gender lens

Women who do the same tasks as men often face a higher risk of MSDs in their neck and upper limbs. That higher risk may be due to both biological (sex) differences as well as differences in social roles, activities and

behaviours (gender). It’s important that these differences be examined and understood in order to develop effective injury prevention approaches, said Dr. Julie Côté, associate professor of kinesiology at McGill University.

“The question we need to ask may not be ‘Are men and women different?’ but ‘How much so?’” said Côté, who also holds a Canadian Institutes of Health Research (CIHR) Chair in Gender, Work & Health. “How much of that difference is cultural and how much is truly genetic?”

Women report pain, discomfort and other symptoms of musculoskeletal disorders in the neck and upper limbs about twice as often as men, whereas men are more likely to experience low-back injuries. Sex/gender differences may be the reasons why.

For example, women have a higher proportion of what’s called type 1 muscle fibres than men, fibres that give women higher endurance but may also make them more vulnerable to low-load repetitive motion. Also, to compensate for their weaker strength, women may be engaging muscles at levels close to their maximum capacity.

Other factors at play include different responses to fatigue, lower pain threshold in women, and lower motor variability among women (men make more minute adjustments when repeating a motion than women). All these factors comprise a model that Côté has developed to guide her ongoing research into why neck and shoulder MSDs are more prevalent in women.

Côté appealed to other researchers to investigate sex/gender differences in their research projects. She pointed to a free online training module offered by the CIHR’s Institute of Gender and Health to help scientists consider sex and gender in biomedical research, in primary data collection and in data analysis. ❖



Employers that focus on both operations and safety don't have to sacrifice either

Research project supports an approach that integrates operations and safety management

One argument sometimes raised when employers are urged to pay attention to occupational health and safety (OHS) within their organizations is that an OHS focus takes away from operational effectiveness. It's the "trade-off" argument, which says organizations can choose to excel at operations or OHS, but not both.

An alternative view is that operations and OHS can be complementary—even synergistic. Supporters of this perspective argue that many of the best practices in quality management are also best practices in safety management. Thus, organizations that implement these practices can achieve excellence on both the operational and OHS fronts.

A team of researchers that included Institute for Work & Health (IWH) Senior Scientist Dr. Emile Tompa and Scientist Dr. Lynda Robson recently addressed this debate in a study involving nearly 200 manufacturing organizations in Ontario.

The team found no evidence of a trade-off. But neither did it see evidence of a synergistic relationship. Rather, the findings suggest a complementary relationship. The project found organizations that focus on both operations and OHS through "joint management system" (JMS) practices achieve:

- the same operational outcomes (i.e. better cost, quality, delivery and flexibility outcomes) as organizations that emphasize operations over safety; and
- many of the same OHS outcomes (e.g. fewer lost-time claims) as organizations that emphasize safety over operations.

In essence, employers that adopt the JMS approach, which allows for the coordinated management of both operations and safety, do significantly better across the board compared to those that don't.

"The research provides empirical evidence supporting the integration of safety into operations, an idea that has been promoted

by some OHS professionals based on their first-hand experience," says Robson. The study was published in the March 2016 issue of the *Journal of Occupational and Environmental Medicine* (doi:10.1097/JOM.0000000000000616).

Two phases of research

The findings arise from the second phase of a two-phase research project that included scientists from Oregon State University, Ivey Business School at Western University and Schulich School of Business at York University. The project was led by Dr. Mark Pagell, a professor of sustainable supply chain management at the Smurfit Graduate Business School at University College Dublin.

The first phase was a qualitative study involving 10 workplaces in manufacturing and distribution, both unionized and non-unionized. The interviews conducted at these workplaces revealed two distinct types of employers. They differed in culture, management practices and organizational outcomes.

One type of employer had a workplace culture that was committed to safety, exercised discipline in how work was done, embraced employee participation and focused on prevention. These employers used certain JMS practices that supported both operations and safety: they focused on processes and adhered to rules; held everyone accountable for safety; explicitly considered safety in the design of work; supported frequent communication from managers about the importance of safe work; and

incorporated safety considerations into the HR processes of performance appraisals and promotions. In addition, these employers showed superior performance in both operations and safety.

In contrast, the other type of employer had a "day-to-day" approach that emphasized meeting daily production goals. Employers of this type were relatively undisciplined and reactive in focus; they were not committed to safety and not encouraging of employee participation. And this second group showed low to moderate performance in both operations and safety.



Dr. Lynda Robson

For more results of this first phase of the project, watch the slidecast of the 2012 IWH plenary on this research (www.iwh.on.ca/plenaries/2012-mar-06) or read the article in the June 2013 issue of *Safety Science* (doi:10.1016/j.ssci.2012.12.008).

For the second phase of the project, the team recruited 198 manufacturers in Ontario that employed at least 100 full-time workers or equivalent to take part in the study. They asked both operational and safety managers at each participating organization to complete a questionnaire aimed at measuring specific JMS practices, including: clearly defining job tasks, identifying and controlling risks to operations and safety, monitoring both operations and safety, and communicating frequently about safety.

The combined answers were used to categorize organizations into one of four groups:

- Group 1—"JMS present": those given a high JMS score by both managers;
- Group 2—"safety-weak": those given a high JMS score by the operations manager, but not the safety manager;
- Group 3—"operations-weak": those given a high JMS score by the safety manager, but not the operations manager; and



Dr. Emile Tompa

Disability leave duration rises with age, chronic conditions

- Group 4—“JMS absent”: those given a low JMS score by both managers.

The survey included questions about how the organizations were seen to perform compared to their competitors in terms of cost, quality, delivery and flexibility. The team looked at how this varied among the four groups. The team also examined injury claims rates from the Workplace Safety and Insurance Board (compared to the average in their sector) to assess how organizations in Groups 1 through 4 performed in terms of claim outcomes.

Four groups compared

In operational performance, Group 1 (“JMS present”) performed better than either of Groups 3 or 4, in which the operations manager assigned low scores for JMS. Yet the operational performance of Group 1 was also indistinguishable from that of Group 2 (“safety-weak”). This result suggests there was no additional benefit to operational outcomes in having a “safety-weak” JMS.

When it came to safety performance, the researchers saw an analogous pattern. Group 1 (“JMS present”) performed better (e.g. lower standardized lost-time claim rate) than either of Groups 2 and 4, in which the safety manager assigned low scores for JMS. And safety performance for Group 3 (“operations-weak”) was no better than that of Group 1, suggesting there was no additional benefit to safety outcomes in having an “operations-weak” JMS.

The findings support the idea that organizations with JMS practices can be competitive and, possibly, even leaders in both operations and OHS performance, says Tompa.

“The overall findings suggest there’s no trade-off between safety and operations,” he adds. “Rather, organizations that focus on both operations and safety can do well on both fronts.”

Robson will discuss the findings at the 2016 Canadian Association for Research on Work and Health conference on October 16-18. For details, go to: www.carwh2016.iwh.on.ca. +

Older workers with arthritis, depression and cancer tend to be off work the longest, STD/LTD data suggest

As workers with chronic conditions grow older, their time off on disability tends to grow longer. The longest duration of work absence is seen among people with arthritis, depression and cancer, a study by an Institute for Work & Health (IWH) associate scientist has found.

The study, conducted by Dr. Arif Jetha and a research team at the Hopkinton, Mass.-based Liberty Mutual Research Institute for Safety (LMRIS), examined short-term disability (STD) and long-term disability (LTD) claims to understand patterns of leave duration for workers with one of eight different chronic conditions.

On average, duration of disability leave was 76.6 days for people with arthritis, 63.2 for depression and 64.9 for cancer—the longest durations among the eight conditions studied. Hypertension was linked to the shortest disability duration at 41.5 days on average. The study was published in the May 2016 issue of the *Journal of Occupational and Environmental Medicine* (doi:

10.1097/JOM.0000000000000702).

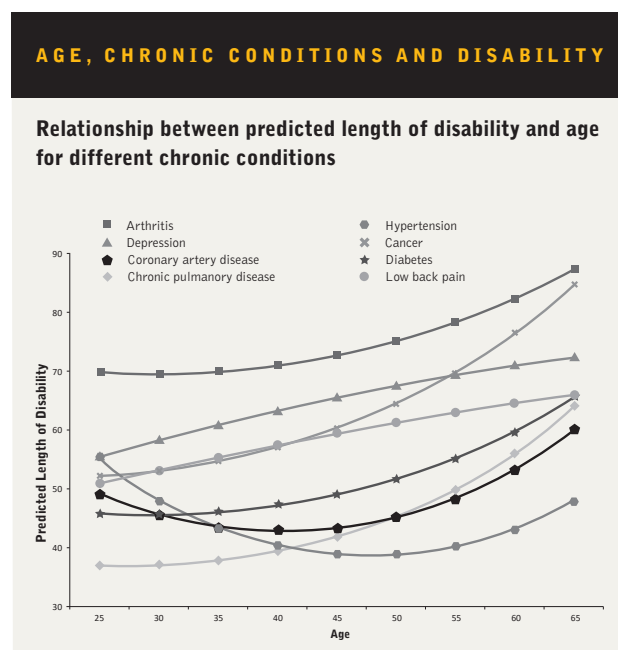
Although arthritis, cancer and depression are different clinically, they can share factors in common, including pain, fatigue and activity limitations, notes Jetha. “These conditions could also be characterized as invisible—they don’t have easily identifiable signs or symptoms—and that makes early disclosure and accessing job accommodation challenging.”

The study found that, for most chronic conditions, the relationship between age and the number of days on leave tends to be linear: the older the workers, the longer they are off on disability leave when they have a chronic condition. The two exceptions to that linear relationship are found for cancer and hypertension.

With cancer, the length of disability increases little from ages 25 to 45, but after 45, it increases at a sharper rate. With hypertension, there’s a gentle U-shape relationship. That means disability leaves are longer among the youngest workers,

shorter as workers approach middle age, then longer again as workers approach the age of 65. “For young adults and older adults, hypertension may have severe underlying causes such as kidney, endocrine or heart disease, which are challenging to manage,” Jetha says.

The team analyzed data from a large U.S. insurance provider that offers disability coverage to workers in a wide range of industries. About 40,000 STD and LTD (non-work-related) claims from 2008 to 2012 were tracked until claims were closed, up to a maximum of one year. +



AT WORK

At Work is published by:

Institute for Work & Health

Editor: Uyen Vu

Communications Manager: Cindy Moser

Director, KTE: Ron Saunders

President: Cameron Mustard

Issue #85 / Summer 2016 / ISSN # 1261-5148

© Copyright 2016

INSTITUTE FOR WORK & HEALTH

481 University Avenue, Suite 800

Toronto, Ontario M5G 2E9

Phone: 416.927.2027 Fax: 416.927.4167

E-mail: atwork@iwh.on.ca

MISSION

The Institute for Work & Health promotes, protects and improves the safety and health of working people by conducting actionable research that is valued by employers, workers and policy-makers.

BOARD OF DIRECTORS

CHAIR

Kevin Wilson

Former Assistant Deputy Minister, Policy
Ontario Ministry of Labour

VICE-CHAIR

Lisa McCaskell

Senior Health and Safety Officer
Ontario Public Service Employees Union

DIRECTORS

Melissa Barton

Director, Organizational Development
& Healthy Workplace, Sinai Health System

David Clements

Director, Communications, Office of the Minister of
Health, Government of Canada

Mark Dreschel

Vice-President, Health, Safety & Environment
Bird Construction

Lewis Gottheil

Former Director, Legal Department, Unifor

Kelly Jennings

Senior Consultant, Korn Ferry Hay Group

Melody Kratsios

Director, Business Development, KSH Solutions Inc.

Louise Lemieux-Charles

Professor Emeritus, Institute of Health Policy,
Management & Evaluation, University of Toronto

Cameron Mustard

President & Senior Scientist
Institute for Work & Health

Norman Rees

Former Chief Financial Officer, Public Health Ontario

Emily A. Spieler

Chair, IWH Scientific Advisory Committee
Former Dean and Edwin Hadley Professor of Law
Northeastern University School of Law (Boston)

Michael Wolfson

Canada Research Chair, Population Health Modelling
University of Ottawa



The Institute for Work & Health operates with the support of the Province of Ontario. The views expressed in this publication are those of the Institute and do not necessarily reflect those of the Province of Ontario.

Findings suggest success factors for RTW may differ for mental health

continued from page 1

“We know from jurisdictions in Australia that cover broad psychological injuries that psychological claims result in longer durations of wage replacement and larger direct costs than other types of claims,” he adds.

Those differences can be substantial. Mental health claims in Victoria, Australia, have a median duration of wage replacement of six weeks, compared to a median of less than one week for all claims. They cost \$12,000 compared to a median of less than \$1,500 for all claims.

One key distinction of Victoria’s workers’ compensation system is that it allows for psychological injury claims that are sustained as a result of chronic stress in the course of claimants’ employment. While a few Canadian jurisdictions also cover psychological injuries, some—such as Ontario—currently cover only psychological injuries that result from acute reactions to unexpected traumatic events.

However, that is starting to change, notes Smith. British Columbia, for example, has broadened its definition of work-related stress disorders. In Ontario, an appeals tribunal has agreed with a claimant that the Workplace Safety and Insurance Board’s restrictions on coverage of mental health conditions infringe the claimant’s rights under the Canadian Charter of Rights and Freedoms.

“There is a growing consensus that work conditions can play a role in the development and exacerbation of mental health issues. Regardless of the system they are compensated under, we need to start thinking about whether we need different return-to-work strategies for psychological injuries,” says Smith.

“The early findings we’re getting suggest people with mental health conditions are not being offered accommodations. And when they’re offered accommodations, they don’t find them meaningful or useful,” he adds. “What that tells us is that many workplaces really don’t know what to do when someone has a mental health injury.”

This study builds on some earlier work by Smith, also in Victoria, Australia. It used

administrative data from the state’s workers’ compensation agency to determine if the factors associated with days of absence after a work injury are similar for mental health and MSD conditions. This study sample included about 10,000 MSD cases and 3,000 mental health cases collected over three years (2005 through 2007). The study, published in the March 2014 issue of the *Journal of Occupational Rehabilitation* (doi: 10.1007/s10926-013-9455-8), found:

- for MSD claims, a longer average duration of days on wage replacement in sectors such as agriculture, forestry, fishing and mining, as well as longer average durations of wage replacement among employees of small organizations;
- for mental health claims, longer average durations of wage replacement among workers in sectors such as public administration and safety, and education and training, as well as longer durations of wage replacement among workers in jobs with greater time pressures.

The study also found that industry groups with the longest average disability duration following a mental health injury are those where the ratios of mental health claims to MSD claims are highest. These include public administration and safety, as well as education and training. “These findings suggest that industries where the nature of work may lead to mental health injuries, as opposed to MSDs, may also be the industries where accommodations for mental injuries are harder to put in place, or are less effective,” says Smith.

In addition, workplace size is not related to claims duration in the same way for mental health claims as for physical injury claims. “We usually think that larger firms have better RTW programs in place, and have more options in terms of accommodation,” says Smith. “However, we don’t see this same advantage for mental health claims. And this may suggest that the current practices, or ways of thinking about accommodation, don’t work as well with mental health claims.” ■