A quarterly publication of the Institute for Work & Health
Issue 61 Summer 2010

at work

IN THIS ISSUE

Probing the link between occupation and risk of suicide

Is it an urban myth that workers in certain occupations, such as dentists, are more likely to commit suicide, or not? It turns out that for most occupations, your job does not increase your risk of suicide.

However, suicide is one of the leading causes of death in developed countries. It can profoundly impact the lives of individuals – from family to friends, colleagues and others – and society as a whole. In Canada, about 70 per cent of all suicides occur in adults who are between the ages of 30 and 64. If workers in specific occupations were indeed at higher risk of suicide, then prevention efforts could be focused accordingly.

To date, in adults who are working, there has been no consistent evidence that specific occupations have a higher risk of death due to suicide. Yet, several theories still link certain aspects of jobs to the risk of suicide. One is that exposure to chemicals, such as pesticides, may cause mood or behaviour impairments increasing suicide risk. Another risk is having knowledge of or access to the ways by which a suicide may be accomplished, which would include healthcare workers. Finally, the demands of some occupations may lead to isolation, burnout or exposure to traumatic events, which can be risk factors for suicide.

An Institute for Work & Health (IWH) research team sought to explore whether there was a connection between occupation and risk of suicide among Canadian workers. Led by IWH President and Senior Scientist Dr. Cameron Mustard, the team published the study's results in the June 2010 issue of *The Canadian Journal of Psychiatry* (vol. 55, no. 6).

Limited associations

The researchers found that between 1991 and 2001, 1,932 working men and 428 working women committed suicide.

"We observed a limited number of associations between occupational groups and suicide risk in this study," says Mustard. "This suggests that, with few exceptions, the characteristics of specific occupations do not substantially influence the risk for suicide."

continued on back page

Scientific Advisory Committee meets

Each spring, an international group of scientists gathers in Toronto to evaluate the Institute for Work & Health's (IWH) scientific program. This group – called the Scientific Advisory Committee, or SAC – met in May to hear details about three proposed large-scale projects that IWH researchers may embark on in the next year. Chaired by Research Director of Safety and Health Assessment and Research for the Prevention Program of Washington State Department of Labor & Industries Dr. Barbara Silverstein, the SAC provided thought-provoking and spirited feedback on the three projects. Look for updates on the projects in an upcoming edition of *At Work*.

IWH names new associate scientist

Dr. David Tolusso has been appointed an associate scientist. Tolusso – who has been at IWH since September of 2008 – earned a PhD in statistics from the University of Waterloo. He is currently working on several initiatives including examining long-duration claims. In addition, Tolusso will be developing opportunities to apply advanced statistical models to work and health problems.

Register early for systematic review workshop

The Institute's popular systematic review workshop will be held on November 24 and 25 in Toronto. The workshop teaches participants how to plan, conduct and communicate the results of a systematic review. Space is limited so please register early. To express your interest in registering, please email srworkshops@iwh.on.ca or visit www.iwh.on.ca/srworkshops.

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WHAT RESEARCHERS MEAN BY...

Mean, Median and Mode

In golf, the number of shots taken by an opponent who is out of sight is equal to the square root of the sum of the number of curses heard plus the number of swishes.
~Michael Green, *The Art of Coarse Golf*, 1975.

Although the quote above uses a made-up mathematical equation, the game of golf can help to explain the often-misused terms of **mean**, **median** and **mode**.

Let's say you golfed nine holes. Each number below represents the number of swings it took you to sink the ball in the hole. If you're lucky and you have some golf skills, your score is the following:
8, 4, 10, 4, 4, 5, 4, 5, 6

You go back into the clubhouse and are quite pleased with your score. You run into your friend and he says that his mean score was 6, his median was 7 and his mode was 6. So what does that mean (no pun intended)? Did you score better than your friend? Well, let's find out.

Let's define the term "mean" as it's the most common term of the three and probably the easiest to explain. Basically, the **mean** – which is also called the average – is the sum of all numbers divided by the number of values in the list. In your golf score, you would add up all of the numbers (which equals to 50) then divide it by 9 (the number of values) and you get 5.5.

Now, let's examine median. Basically, the **median** is the number that separates the higher half of a sample from the lower half. To find the median, arrange the list from lowest value to highest value and pick the middle one. Using the golf scores, here is the list from lowest to highest. The bolded 5 is the median:
4, 4, 4, 4, **5**, 5, 6, 8, 10

When to use mean or median

Sometimes, you need to decide if calculating the mean or median is most appropriate for what you would like determine. Hospital length of stay can be an example of data that may be skewed if the wrong term is chosen (that is, when most of the data values fall to the left or right of the mean). Most people stay in a hospital for a few days. However, some patients have hospital stays for months on end. In this example, you would likely report the median length of hospital stay, which separates the higher half from the lower half. In general, however, most people report the mean unless you have a good reason for not doing so, such as to avoid skewing the data like in the hospital example above.

While not used as frequently as mean or median, mode does have a place in certain situations. **Mode** is the value that occurs most frequently in a set. If you look at your golf scores, 4 is the one that's most common so, for that set, 4 is the mode. Although mode may not frequently be used in statistics, mode is more often used when describing non-numerical things. For example, if you'd like to know the most popular newborn boy name in Ontario for 2008, you may go to the Government of Ontario's website and find out that Jacob was the most popular.

You can remember mode the following way: **MO**de is the value that is in the set **MO**st often.

So getting back to our golf scores example, it looks like that you likely shot a better golf score than your friend given that you had a better mean, median and mode.

Comparing the terms

Type	Description	Example	Result
Mean	Total sum divided by number of values	(8+4+10+4+4+5+4+5+6)/9	5.5
Median	Middle value that separates higher half from lower half	4, 4, 4, 4, 5, 5, 6, 8, 10	5
Mode	Most frequent number	4, 4, 4, 4, 5, 5, 6, 8, 10	4

Prevention team develops tool to measure LEADING INDICATORS

There may be a time in the near future where a simple tool may help predict a firm's future injury experience – and help to focus health and safety efforts.

Traditionally, an organization's injury and illness rates are used to help manage occupational health and safety performance. This is known as a trailing indicator because the injuries have already occurred. Recently, Ontario's prevention system tasked a team – which included Institute for Work & Health (IWH) Scientific Director Dr. Benjamin Amick – to develop a tool to measure leading indicators. A leading indicator provides a sense of an organization's ongoing health and safety initiatives, and its potential for injuries and illnesses before they occur.

Developing a tool to measure leading indicators can help predict workplace injury, notes Amick. "Ultimately, the tool could identify very tangible things that organizations can work on to improve occupational health and safety performance and prevent injuries and illness."

In the fall of 2008, a committee of representatives from Ontario's health and safety system began to develop an eight-item organizational performance metric, or OPM (see sidebar).

Chris McKean of the Infrastructure Health and Safety Association is part of the team. "Once the eight-item metric was developed, health and safety association (HSA) consultants were then trained in how to administer the survey to their membership," he says. In total, 808 questionnaires were completed by 642 firms, which represented eight HSAs and the Occupational Health Clinics for Ontario Workers (OHCOW). The firms spanned across Ontario and varied in size. All questionnaires were returned to IWH, which provided a secure repository for this data.

Initial results

Respondents from 642 firms were asked to answer the eight pilot questions. Once these questions were answered, they were returned to IWH researchers who then assigned values to the responses. This resulted in the development of the organizational performance metric score, which ranged from eight to 40. Subsequently, IWH staff were able to link each firm's OPM score to their past injury experience.

Results indicated that the lower the OPM score, the poorer the injury experience a firm had. "Our committee had hypothesized that this might occur, but we did not expect the results to be so clean," notes McKean. "This OPM is relevant to all firms, regardless of industry or size."

However, there were some limitations of the tool, most notably in how the survey data was collected. When the HSA consultant collected the information from the firm over the phone, the firm was more likely to score itself at the higher end of the OPM range. "Although we can't pinpoint why this is, we will be exploring this in future," says McKean.

THE EIGHT PILOT QUESTIONS

Respondents from 642 firms were asked to answer the eight pilot questions using one of five categories: (a) 80-100%; (b) 60-80%; (c) 40-60%; (d) 20-40%; (e) 0-20%. Each firm was then assigned a score within the range of eight to 40. The lower the score, the poorer the injury experience the firm had.

Tell us the amount of time your organization engaged in 8 practices:

- Formal safety audits at regular intervals are a normal part of our business.
- Everyone at this organization values ongoing safety improvement in this organization.
- This organization considers safety at least as important as production and quality in the way work is done.
- Workers and supervisors have the information they need to work safely.
- Employees are always involved in decisions affecting their health and safety.
- Those in charge of safety have the authority to make the changes they have identified as necessary.
- Those who act safely receive positive recognition.
- Everyone has the tools and/or equipment they need to complete their work safely.

And, although the results of this pilot study are encouraging, Amick cautions that the tool has not been validated – or in other words, it hasn't been shown that it works in the way that it's supposed to. Future work will also consider how well the tool predicts future injury experience.

In Brief

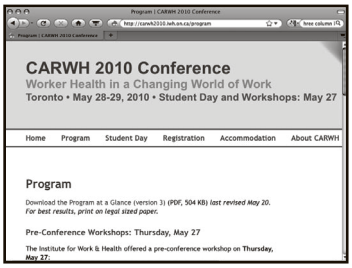
A tool to measure leading indicators is being developed by a team from Ontario's prevention system.

Research findings from CARWH conference now online

Workplace representatives, policy-makers and injured worker representatives shared the audience with researchers and students at the Canadian Association for Research on Work and Health (CARWH) conference held in Toronto in May.

Those who could not attend can still catch up on the research findings online. Abstracts of each presentation are available on the CARWH conference website, and in some cases, the presenter's slides are also posted online (see http://carwh2010.iwh.on.ca).

In addition, podcasts are being developed for several presentations, based on recommendations from the conference's closing panel, comprised of experts in workers' compensation, occupational disease, return to work and disability prevention.



Abstracts are available for more than 75 oral presentations and symposia. Different sessions, each with up to five presenters, included the following topics:

Protecting vulnerable workers — There were two sessions devoted to this topic, which included studies on Newfoundland youth, work and health; language literacy among immigrants; small businesses employing immigrants in Montreal; and cultural issues in return-to-work and disability prevention, among others.

Work-related musculoskeletal disorders (MSDs) — During the two sessions on MSDs, there were studies on hand-arm vibrations; social inequalities; work-role functioning; and two reviews on participatory ergonomics, in English and French.

Sustainable return to work (RTW) — Thirteen presentations on return to work were delivered at three sessions. Presenters spoke about the impact of an early RTW program for MSDs; a RTW program for contact dermatitis; predicting back pain recovery; and presenters delivered findings from two systematic reviews, one on workplace interventions for mental health and the other on work disability in rural health-care workers.

Work hazards and exposure measurement — In two sessions, there were studies ranging from broad research on trends in shift work and national exposure data, to research on specific groups such as police officers, truck drivers, office workers and wharf workers in Newfoundland and Labrador.

There were also sessions on prevention, knowledge exchange, occupational disease, economic incentives and regulation, workers' compensation, and education, training and health promotion, from far afield as France and Australia. Also of note were symposia organized around issues of particular interest: stigma and injured workers; asbestos; and research by the new Occupational Cancer Research Centre.

The CARWH conference was supported by funding from the Canadian Institutes of Health Research, WorkSafeBC, the Ontario Ministry of Labour and the Workers' Compensation Board of Nova Scotia. The Institute for Work & Health hosted the conference.

Grant Round-up

Scientists typically need two key components to carry out research: a well-grounded research proposal and strong financial support. Recently several projects received funding awards from national and provincial agencies. Here is a scan of what's recently been given the green light.

Measuring guide's uptake in B.C.

Conducting research and creating user-friendly materials are the first steps in bringing evidence into practice. At IWH, a team conducted a systematic review on participatory ergonomic interventions. Then, led by Associate Scientist Dwayne Van Eerd, an evidence guide called *Reducing MSD hazards in the workplace: A guide to successful participatory ergonomics programs* was developed. The next step is the aim of a new WorkSafeBC grant awarded to Van Eerd. With this new grant, an IWH team will disseminate the guide to target audiences in British Columbia and measure its uptake.

Examining depression in the workplace

When workers are injured, being depressed and in poor physical health can increase the likelihood of disability. A team of researchers, led by Associate Scientist Dr. Andrea Furlan, will carry out a systematic review on depression in the workplace. Funded by the Canadian Institutes of Health Research (CIHR), the team will look at workplace-based programs that may prevent disability, manage depression or rehabilitate workers to promote stay at work or return to work. Several stakeholders and decision-makers – including staff from Ontario's Ministry of Health and Long-Term Care – will provide input in to the review process, and suggest how the results may be used.

The following projects received grants from the Workplace Safety and Insurance Board's (WSIB) Research Advisory Council:

Developing a tool for the health-care sector

A newly launched software tool, the Health & Safety Smart Planner, was developed with the support of several grants, led by Dr. Emile Tompa. The tool walks users through an economic evaluation to determine the benefits and costs of health and safety initiatives. Although it was designed for manufacturing and service workplaces in Ontario, it could be used for other sectors.

Evidence summary shows what works in TREATING NECK PAIN

Clinicians have tried various approaches to help workers with neck pain – but some have been proven ineffective in research.

Supervised exercise with strength training is one approach that is quite possibly helpful in alleviating neck pain in workers. However, what likely won't work are mandatory work breaks, stress management programs or exercise instruction alone.

These are just a few examples from a new *Neck Pain Evidence Summary*, which outlines helpful and unhelpful approaches to treating neck pain, including whiplash. The summary is based on a series of research reviews published in *Spine* (vol. 33, no. 4S).

The Institute for Work & Health (IWH) created this summary to share the evidence synthesis completed by the Bone and Joint Decade 2000-2010 Task Force on Neck Pain. IWH worked with the Canadian Memorial Chiropractic College (CMCC), the Ontario Chiropractic Association (OCA) and some members of the task force's executive committee to prepare the summary.

In February 2008, *Spine* published a special edition dedicated to the task force's reviews on the prevention, prognosis, diagnosis and management of neck pain. After publication, a network of Canadian chiropractic opinion leaders, coordinated by IWH, suggested distilling the evidence into a summary.

"It's exciting to see the chiropractic community take up the work of the task force this way," says Dr. Sheilah Hogg-Johnson, a task force member and IWH senior scientist. The task force executive was also involved in reviewing the guide. "The *Neck Pain Evidence Summary* provides a way for health-care professionals to review the evidence easily in their practice, and if they need further information, they can refer to the full research papers."

The task force recommends treatments or further assessments, based on how severe the neck pain is. They classified severity into four grades (see sidebar). In the *Neck Pain Evidence Summary*, a chart outlines the signs, symptoms and recommended assessments for each grade.

There is also some information on studies of neck pain in workers, but the treatments would also apply to any patient, based on the severity or grade.

Patient preference should also be considered, because there may be several helpful treatments for some grades of neck pain. For instance, any of these treatments may benefit those with Grade I or II neck pain, in cases with no traumatic accident: acupuncture, neck mobilization and manipulation, supervised exercise, low-level laser therapy and pain relievers.

BRIEF DESCRIPTION OF NECK PAIN GRADES

Most neck pain is Grade I or II, and a variety of helpful treatments are available.

Grade I – no signs of major problems such as fracture, infection, dislocation, etc. – no or little interference with daily activities

Grade II – no signs of major problems such as fracture, infection, dislocation, etc. – interference with daily activities

Grade III – signs that suggest malfunctioning of spinal nerves or spinal cord

Grade IV – signs of major problems such as fractures, infection, cancer or other diseases

The guide will be useful to various health-care professionals who use these approaches, including chiropractors, doctors, physiotherapists and others.

The Bone and Joint Decade 2000-2010 Task Force on Neck Pain and Its Associated Disorders involved more than 50 people affiliated with eight universities and research institutes as well as 11 professional organizations.

The *Neck Pain Evidence Summary* is available online at www.iwh.on.ca/neck-pain-evidence-summary.

The health-care sector, however, is organized differently. This new grant will enable the research team to examine the need for economic evaluations in this sector in Ontario, and determine how they could be conducted by modifying the software or using other alternatives.

Reducing OHS risk among vulnerable workers

Ontario's workforce comprises many immigrant and low-literacy workers. Yet, many prevention initiatives are developed without considering workers' literacy levels or language competencies. To address this, a collaborative team with representatives from the WSIB, IWH and Ontario's health and safety associations will develop pictograms (or visual symbols) and related training to assist in identifying and controlling musculoskeletal disorder hazards in the service sector, specifically for hotel/motel workers.

Comparing two groups

Since 1998 in Ontario, the number of days of benefit payments to injured workers has been steadily increasing. Ongoing research shows that these increases coincide with a policy change in Ontario. A study, led by Senior Scientist Dr. Sheilah Hogg-Johnson, will compare two groups of injured workers receiving WSIB wage-replacement benefits: one group whose injury date was in 1993, while the other group's injury date was in 2005. The researchers will compare the health outcomes, claims outcomes and specific features of claims management. In particular, the researchers will investigate whether the characteristics (relating to the worker, injury, workplace or claims management) of claimants with prolonged duration are different between the groups.

Developing leading indicators

Sometimes an organization uses injury and illness rates to help keep track of health and safety performance. These rates are called trailing indicators. Other times, an organization looks at leading indicators, which can provide a sense of an organization's safety performance and its potential for injuries before they occur. Associate Scientist Dr. Lynda Robson is leading a research team that will look at whether data from OHS management instruments can be grouped together to form a leading indicator.

infocus

New Canadian guideline released on opioid use for chronic non-cancer pain

Joe (a pseudonym) worked at a pizza parlour for many years before he was injured. His employer assured the workers' compensation board that light work was available, but in practice Joe was simply told to go back to his regular job. Joe complied, not wanting to lose his job. He took increasing amounts of painkillers to manage his pain. By the time he was re-injured a third time, he was consuming eight Percocets daily and was addicted.

A true story, excerpted from *Red Flags, Green Lights: A Guide to Identifying and Solving Return- to-Work Problems.*

It's impossible to know how many injured "Joes" are out there, struggling to manage their pain at work and risking medication misuse.

And for all the Joes, there are people who may not be receiving narcotic painkillers such as Percocet to relieve their pain, because their doctors may be concerned about addiction and other safety issues. In one survey, one in three Canadian family physicians said they would never prescribe narcotics – also known as opioids – even for severe pain (In press, *Canadian Family Physician*).

Addressing these two issues – opioid misuse on the one hand, and undertreated pain on the other – was one intent behind the new evidence-based **Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-cancer pain,** which was released in May.

"Opioids are effective, and people with pain have the right to be treated with them," says Dr. Andrea Furlan, an IWH associate scientist who led a systematic research review, which underpins the guideline's 24 recommendations. "But opioid use does present risks and potential harms, so prescribers and dispensers have to prevent these as much as they can."

An overview of the guideline was published in the *Canadian Medical Association Journal* (vol. 182, no. 13, pp. 923-930), and the full 200-page guideline is available at http://nationalpaincentre.mcmaster.ca/opioid.

Opioids are a class of chemicals that include morphine, codeine and oxycodone, among others. The hesitation to prescribe can arise because of concerns about their potential harms. Some patients may take their pills more often than prescribed to manage pain, or to experience the side effects of euphoria and energy, which can lead to addiction. Any opioid can be diverted to the illicit market, although in recent years, oxycodone (sold as OxyContin) frequently makes headlines in this regard. Opioids can also interact with other drugs such as benzodiazepines, resulting in serious complications including overdose and death.

Opioid use has been growing. Forty per cent more workers have been prescribed opioids compared to 10 years ago, the Ontario Workplace Safety and Insurance Board (WSIB) reports on its website. Over that same time period, the number of prescriptions to workers receiving claims has gone up by 100 per cent. Since 2006, the doses prescribed by physicians have also increased.

Several Canadian provincial workers' compensation boards, including Ontario, Newfoundland, Alberta and British Columbia, have established policies or guidelines for physicians concerning the initiation or continuation of opioid prescriptions.

Opioid prescribing is also increasing in the wider community. Between 1991 and 2007, oxycodone prescriptions jumped from 23 to 197 prescriptions per 1,000 individuals, according to a 2009 report in the *Canadian Medical Association Journal* (vol. 181, no. 12, pp. 891-896). There have also been increases in doses of long-acting oxycodone. Longer-acting versions require one or two pills a day, while patients using shorter-acting versions, such as Tylenol with codeine, may have to take five or six pills daily.

"There has been growing concern from both the public and health-care professionals about safe opioid use," says Rhoda Reardon, acting manager of research and evaluation at the College of Physicians and Surgeons of Ontario (CPSO). Among those taking opioids, there has also been a rise in serious injuries and overdose deaths.

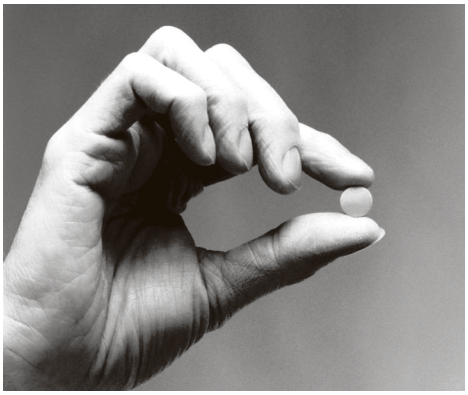
For clinical guidance on opioid prescription, the CPSO decided to update the opioid section of its chronic pain guidelines in 2007, says Reardon. All of the country's physician regulatory colleges agreed to participate in this update. Collectively, they formed the National Opioid Use Guideline Group (NOUGG), which is co-chaired by Reardon and Clarence Weppler, manager of physician prescribing practices at the College of Physicians & Surgeons of Alberta.

This group coordinated the development of the guideline and its implementation, involving almost 100 participants from across the country.

Furlan led the research team that looked at the effectiveness of opioids in treating chronic non-cancer pain, based on her previous meta-analysis from 2006. IWH provided systematic review methodological expertise for this review, and the research team also included physicians specializing in addictions and pain management.

To ensure the guideline was both relevant and useful, a national advisory panel with direct practice experience was formed. It consisted of 49 individuals representing family physicians, pain or addiction physicians, nurses, pharmacists, psychologists and patients. They reviewed recommendations in four rounds, provided feedback to the researchers, and came to consensus on the final recommendations.

Now that the guideline is complete, a national faculty is involved in disseminating it and fostering collaboration among different groups. This faculty includes provincial partners and representatives from national bodies such as the Canadian Medical Association, Canadian Hospital Pharmacist Association, Canadian Pain Society and the Canadian Council on Substance Abuse, among others.



An overview of the guideline

The overall goal of the guideline is to reduce pain and improve functioning in patients, with fewer side effects, complications or deaths. "Another purpose is to help physicians who are uncomfortable with prescribing opioids," says Furlan. "Physicians can take steps to assess the risks. If they follow the guidelines, they can be confident that they are not causing harm to their patients."

Opioids should only be prescribed after other treatment options have been tried and failed. The guideline also notes that medication alone is often not enough to manage pain, and other effective approaches should be considered as well. The guideline is organized into five "clusters." While the guideline is intended for all patients with chronic non-cancer pain, the practical guidance in each cluster also naturally applies to injured workers.

Cluster 1 concerns the decision to initiate opioids. The recommendations in this cluster provide information on assessing the patient and addiction risk screening. "Can the pain be treated? Do you know the person well? Do they have a history of addiction or psychiatric problems?" are among the questions addressed at this stage, Furlan says. This cluster also describes risks, side effects and the tapering of sedatives (benzodiazepines) to avoid drug interactions. In addition, it introduces the practice of urine screening. This practice may help the physician to manage risks of drug interactions, and to make sure that the correct doses are being taken. Some research suggests that having a signed treatment agreement with a patient, as well as the use of urine screens, may reduce opioid misuse, Furlan says.

Cluster 2 provides guidance for how to proceed with the prescription. The guideline's approach is to start with a trial of "stepped" selection and dosing, to determine the optimal dose. The "optimal dose" is based on a balance of three factors: effective pain relief and improved functioning, minimal benefits from a dose increase, and manageable side effects or complications. Within this cluster the concept of a "watchful dose" is also introduced. It asserts that most chronic non-cancer patients can be managed effectively with a dose at or below 200 mg of morphine or equivalent per day. (Because there are so many forms and doses of opioids, they are converted to an equivalent dose to morphine).

Longer-term opioid use is addressed in **cluster 3**. At this point, discontinuing opioids or switching to other forms of pain relief may be considered. The final two clusters deal with patients who might require particular attention. **Cluster 4** concerns opioid prescription in the elderly, in adolescents, in pregnant women or with patients with psychiatric issues. Finally, **cluster 5** has guidance on situations where a patient has addiction, shows unacceptable behaviour or there are issues of fraud. It also includes information on prescribing in acute-care settings such as emergency departments or walk-in clinics.

Furlan points out that the guideline can be used for first-time prescriptions, or to reassess when a patient has been taking an opioid for a while. "Go back to square one [with these patients] and reassess the necessity. Is it helping patients achieve functioning? There's a perception that you can't stop taking opioids, but you can."

Research underpinnings

The starting point for the guideline was the meta-analysis. Following the usual steps of a systematic review, the updated analysis yielded 62 randomized controlled trials (RCTs) of opioid use. RCTs compare a set of patients randomly assigned to receive the treatment with a group receiving a placebo. They are considered the most rigorous type of study. The reviewers found that 90 per cent of the studies they included were high quality.

Overall, opioids were shown to have a moderate effect on reducing pain and a small effect on improving functioning. In cases where information from RCTs wasn't available to inform guideline recommendations, they were based on observational studies. The team included 122 observational studies to support guideline recommendations. Failing that, expert consensus was reached through the national advisory panel, says Furlan.

One drawback in the research literature is that most of the trials ended at six weeks, so there was little evidence on opioids' long-term effectiveness. Based on the observational studies, Furlan noted that there may be long-term complications related to sleep apnea (which in turn is an important risk factor for heart attack or stroke), fertility issues in women and impotence in men.

Ongoing activities

To help further inform this issue, IWH Research Associate Nancy Carnide is currently leading a systematic review of studies conducted on opioid use among workers. Specifically, the team is looking at early opioid use among workers and future work disability. The results are expected to be available later this year.

In the United States, an opioid guideline for chronic non-cancer pain was published in early 2009, in the *Journal of Pain* (vol. 181, pp. 891-896). Furlan noted that there are very few differences between the U.S and Canadian versions. One key difference is that there are many activities aimed at

AT WORK
At Work is published by:
Institute for Work & Health
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Editor: Katherine Russo
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Issue #61 / Summer 2010 / ISSN # 1261-5148

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The Institute for Work & Health operates with the support of the Ontario Workplace Safety and Insurance Board.

WSIB Workplace Safety & Insurance Board
CSPAAT Commission de la sécurité professionnelle et de l'assurance contre les accidents du travail

Probing the link between occupation and risk of suicide... continued from front page

However, the researchers did find notable differences between men and women.

The rate for suicide for men was four times more than the rate for women. For this study, the researchers calculated the age-standardized mortality rates for suicide. For men, this rate was 20.1 per 100,000 person years; in women the rate was 5.3 per 100,000 person years.

Some higher rates

For specific occupational groups, the researchers found higher rates of suicide for men in nine groups: nursing, therapy or assisting-related work; farm, horticulture or animal husbandry; forestry or logging; clay or stone processing; excavating or paving; other services; water and motor transport operating; and library, museum or archival sciences. (There are 80 minor occupational groups listed in the 1980 Standard Occupational Classification).

In women, elevated rates of suicide were seen in four groups including office machine operating; other services; physical sciences; and metal machining. This study's results support findings from similar studies conducted elsewhere. Given this, the authors note, "Suicide prevention strategies in occupational settings should continue to emphasize efforts to restrict and limit access to lethal means, one of the few suicide prevention policies with proven effectiveness."

Researchers linked data

The researchers used a unique study design to explore the association between occupation and risk for suicide. IWH researchers – with staff from Statistics Canada and the Direction de la Santé publique de Montréal-Centre – collaborated to create a database.

The database linked a 15 per cent sample of Canadians who completed the long form of the 1991 Canadian Census to the Canadian Mortality Database for the years 1991 to 2001. The Census provides self-reported information on income, labour force participation and disability. The Canadian Mortality Database contains copies of death registrations documented by provincial vital statistics registrars of death. In total, this study cohort contained record linkages for more than two million Canadians.

New Canadian guideline released on opioid use... continued from page 7

bringing the Canadian guideline to practice. To that end, a variety of events, guides and tools have been planned.

For physicians, there is an Opioid Manager, a clinical support tool to record patient information, reminders about the risk assessment, starting doses, and what kinds of behaviours to look for that indicate addiction. In Ontario, a variety of community workshops are being planned with physicians, pharmacists and local medical officers of health.

The aim of some of these efforts is to foster collaboration among relevant professionals. In the return-to-work (RTW) process, collaboration has been identified as a helpful practice in preventing RTW complications.

Perhaps, in the case of the worker Joe, a physician following the guideline may have been able to realize that Joe was not following his treatment agreement, or may have seen some unusual drug-related behaviours. The physician could have consulted with a pain physician or the pharmacists and compensation board decision-maker, which may have helped prevent Joe's slide into addiction.

What's new at www.iwh.on.ca

A free, user-friendly tool that helps workplaces calculate the benefits and costs of health and safety programs is now online.

Developed by IWH staff, the **Health & Safety Smart Planner** includes the following features:

- A step-by-step approach
- Pre-planning information to help you get organized before you begin
- Pop-up buttons that explain each field as you enter your data
- A database to store and update your company's information

Although this first version is designed for most types of workplaces in Ontario, other iterations — including one for the health-care sector — will be available soon.

Users are being asked to sign in first to download it so we can let you know when new versions become available. Download the tool from: **www.iwh.on.ca/smart-planner**.