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The "watchful dose": Supporting doctors in the effort to reduce the harms of opioid prescribing

An associate scientist from the Institute for Work & Health (IWH) led the creation of the innovative and easy-to-use Opioid Manager. It is designed to help doctors facilitate safe opioid use among patients seeking relief from chronic non-cancer pain, including those recovering from work injuries.

Opioids are drugs, such as codeine, oxycodone, and synthetic narcotics like fentanyl, used to relieve pain. For doctors prescribing these drugs, safety is paramount. The fear of accidental overdose and the risk of addiction are omnipresent. Assistance, however, is on the way: the Opioid Manager.

This is a new resource for physicians prescribing these drugs to recovering workers and other patients with chronic non-cancer pain (CNCP), including post-surgery, post-trauma, back and arthritis pain. It is a user-friendly, double-sided, colour-coded chart that condenses key elements of the 200-page *Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-cancer Pain*, released in 2010.

IWH Associate Scientist Dr. Andrea Furlan led the development of the Opioid Manager. Her research has been focused in this area for many years. In fact, she headed the research team that developed



the Canadian guideline. After releasing the guideline, she started to think about next steps. She contracted the services of the Centre for Effective Practice (CEP) in Toronto and, together with Toronto Rehabilitation Institute, the CEP and the National Opioid Use Guideline Group (NOUGG), created the Opioid Manager.

Dr. Andrea Furlan

Canada has highest oxycodone consumption in the world

The need to guide prescribing doctors is great, Furlan emphasizes. And statistics from both the United States and Canada reinforce this idea.

In the U.S., poisoning (overdose) is the leading cause of injury death for those ages 35 to 54 and, since 2001, prescription opioids have continued on back page





Another successful SAC meeting

The Institute for Work & Health's Scientific Advisory Committee (SAC) met in downtown Toronto on May 16 and 17, 2011. This international group of scientists gathers each spring to evaluate the IWH's scientific program. The meeting was chaired by Dr. Barbara Silverstein, research director with the Safety and Health Assessment and Research for Prevention Program at the Washington State Department of Labor & Industries in Seattle.

IWH staff scientists presented their recent and ongoing research projects in the following themes: assessing system performance; developing and sharing best practices; vulnerable workers; developing leading indicators of system and firm-level performance and assessing best organizational practices; and return to work. The SAC provided thought-provoking and spirited feedback on IWH projects.

Hold the date: Nachemson Memorial Lecture coming this October



On October 27, 2011, at Toronto's Design Exchange, **Dr. Robert T. Reville**, senior economist at RAND Corporation, will give IWH's annual Nachemson Lecture. As the leader of a number of important

Dr. Robert T. Reville

studies of workers' compensation programs, he will show how research has informed policy within California's workers' compensation system in the areas of return to work, benefits adequacy and adjudication. For more information and to RSVP, go to: www.iwh.on.ca/ nachemson-lecture.

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WHAT RESEARCHERS MEAN BY...

Blinding

If you've done a taste test and selected 'Cola X' over 'Cola Y,' then you've already experienced what scientists call "blinding."

Blinding, in research, refers to a practice where study participants are prevented from knowing certain information that may somehow influence them—thereby tainting the results. Coke versus Pepsi taste trials are conducted in this way: Participants are, literally, blindfolded as they sample the two colas and indicate their preference.

Blinding (also called **masking**) is typically used in randomized controlled trials (RCTs). In RCTs, people are randomly assigned to two (or more) groups. One group receives the intervention, such as a new treatment, while the control group receives nothing, usual care or a placeboa fake treatment, an inactive substance like sugar, distilled water or saline solution - when the treatment is a new drug. The researchers then study what happens to each group. Any differences in outcome can then be linked to the intervention, not to the participants' knowledge of whether they were receiving a new treatment or their usual care.

To ensure to the highest degree possible that the intervention is responsible for any noted differences between the two groups, people involved in gathering or analyzing the data might also be blinded to knowing who is being given the treatment and who is not. This blinding can include clinicians, data collectors, outcome assessors and data analysts. However, certain groups sometimes cannot be blinded, such as surgeons or psychologists who provide active intervention.

Why blinding is necessary

Blinding of one or more parties is done to prevent **observer bias**. This refers to the fact that most (if not all) researchers will have some expectations regarding the effectiveness of an intervention. Blinding of observers provides a strategy to minimize this form of bias. For example, a clinician who has established expertise in a certain procedure may believe that his or her approach is superior. If involved in a trial to explore this procedure, the clinician may tend to treat patients assigned to his or her procedure differently than patients assigned to the competing intervention.

Blinding is also done to address or control for the **placebo effect**, a phenomenon in which a simulated (and ineffective) treatment can sometimes improve a patient's condition, simply because the person has the expectation that it will be beneficial. Expectation is key in the placebo effect.

Landmark study: An example of blinding of patient

In 2002, a study published in the *New England Journal of Medicine* reported on a controlled trial of arthroscopic surgery for osteoarthritis of the knee. Arthroscopic surgery is the most commonly performed type of orthopedic surgery. In this study by Moseley et al., patients with osteoarthritis—defined as a group of mechanical abnormalities involving the degradation of joints—were divided into two groups: one receiving corrective surgery (arthroscopic debridement), and the other receiving fake or sham surgery.

The patients were blinded in the sense that they did not know whether they were receiving the real or sham surgery. The results were quite surprising: Both groups of patients improved equally well regardless of whether or not they received the real surgery. This is an excellent example of the placebo effect and the need for blinding, since it implies that belief of recovery alone can have an effect, even on a mechanical knee problem.

To see other columns, go to: www.iwh.on.ca/what-researchers-mean-by.

The quest for greater flexibility: Creative innovations for workers with arthritis

Arthritis is a leading cause of disability among adults, and it often affects them in the prime of their career. How it's approached in the workplace can make all the difference, according to a new study by an adjunct scientist at the Institute for Work & Health.

An accessible and supportive workplace is the litmus test as to whether a person with arthritis can continue working. This is the implication of a study led by Institute for Work & Health (IWH) Adjunct Scientist Dr. Monique Gignac, which explored the sometimes mercurial combination of arthritis and work.

Gignac and her team, including IWH Scientist Dr. Dorcas Beaton and Research Associate Ken Tang, completed a fouryear study examining workplace activity limitations related to arthritis and their relationship to job modification and outcomes. The study was published in the July 2011 issue of *Arthritis Care & Research* (Volume 63, Issue 7, pp. 953-962).

The researchers concluded that employers—who may be unaware of the problem—can do things to help. "Policies like flex time can have a huge impact," says Gignac, an associate professor at the University of Toronto.

Disability related to arthritis has been linked to work loss and lost productivity. However, health factors don't tell the whole story. They combine with other factors, such as the environment, interpersonal issues, including workplace support, and psychological factors like job stress, to predict a variety of work outcomes—absenteeism, reduced hours and job changes, for example.

People with arthritis highlight a number of difficulties working. These relate to managing symptoms; worries about remaining employed; decisions about whether to disclose one's condition; balancing work, health and family; and difficulties with the pace of work.

Many employers are unaware that workers are having such difficulties. That's because

those with arthritis sometimes hesitate to tell others about their chronic condition for fear of looking sick, being seen as a poor worker or having limitations placed on their positions.

Are job problems unavoidable?

Given this context, Gignac's study asked the question: Are job problems unavoidable for those with arthritis? In the study, individuals with osteoarthritis or inflammatory arthritis were interviewed four times, 18 months apart. Of the 490 participants, the majority were women; the study profiled 381 females and 109 males.

Findings of the study? Seventy-five per cent of participants reported occasional difficulty in the workplace, while only nine per cent faced consistently severe difficulties that would prevent them from doing their jobs or force them to reduce hours.



The study findings indicate that work problems were largely intermittent, and this suggests that such problems are not inevitable. In fact, the study found that many with arthritis have long periods of wellness interrupted by episodic flare-ups.

It is equally important to note that these difficulties may not affect productivity, and simple workplace changes often help, the study indicates. For example, workers reported difficulties involving activities such as standing for long periods, but also said that they often took simple measures, such as finding a good chair, to make their work easier. The message for workers, employers, insurers and policy-makers

Gignac fears that many workers are silently suffering and "playing the wait-andsee game"—that is, waiting until symptoms are markedly severe before seeking any type of help. However, Gignac cautions that this may not be the best approach.

"Workers should consider whether or not by delaying [seeking help], they may be making their jobs more difficult or even have to give up work," she says, adding that avenues for assistance include human resources, family doctors or groups like The Arthritis Society.

Gignac also urges employers to be flexible and understanding, and to offer tools to make workplace tasks more manageable. And this doesn't need to be expensive, she emphasizes.

"Flex time is often helpful, since many sufferers of arthritis tend to have stiffness in the mornings," she says. "Furniture [equipment] and assistive devices like a stool under the desk can also make a difference. These things don't cost a lot, but they can greatly improve the worker's experiences. We're often not talking about a huge ergonomic reassessment of the workplace."

As for insurers, Gignac wants them to understand that "people with arthritis are not bad risks." And to policy-makers, she notes that "initiatives to date have tended to be top-down" and urges instead that it's time "to think more from a team perspective and involve people with disabilities, as well as their co-workers, in finding creative innovations."

Indeed, a change in mindset is the key message of this new study. It reminds all parties to avoid viewing individuals with arthritis as a permanent drain on workplace and health resources.

In Brief

Arthritis in the workplace is intermittent and, in many cases, remedied by equipment adjustments and flex time.

TAPPING THE TREE OF KNOWLEDGE:

How Jane Gibson bridged the research-to-action gap

After a decade of leadership, Jane Brenneman Gibson is retiring this summer. She championed the knowledge transfer and exchange department at the Institute for Work & Health from its infancy to its current state: a leader in the field.

Knowledge transfer and exchange (KTE) has radically changed how business is done at the Institute for Work & Health (IWH) and how IWH interacts with stakeholders. Jane Gibson, long-time director of



the Institute's KTE department, has been the driving force behind this transformation. She is retiring this August after more than a decade at the helm of

Jane Gibson dec this dynamic department.

IWH President and Senior Scientist Dr. Cam Mustard says, "I know I speak for all members of the Institute and our many valued partners in expressing gratitude to Jane for her dedicated, confident leadership and for the enthusiasm and joy she brought to the challenge of making research evidence available and accessible to professionals and policy-makers working to protect the health of Ontario workers."

The history and growing importance of KTE at IWH

KTE at the Institute is defined as a process by which relevant research information is made available and accessible through interactive engagement with stakeholders/ audiences for practice, planning and policy-making.

When Gibson arrived at IWH in 2000, KTE was in its start-up phase (see chart below). The Five Year Review in 1996 had specifically called for research transfer (RT) and, in 1999, Gibson's predecessors, John Lavis and Anne Larson, produced the key document: *Towards a New Research Transfer Strategy for the Institute for Work & Health.*

Lavis recommended the adoption of a new definition of research transfer and five RT principles, a new corporate structure and annual priority setting, new staff linked to research themes, a formal advisory mechanism, and the basic goals, structure and processes for RT.

The five original working principles from Lavis' research transfer framework were as follows:

- 1. Research messages must be delivered by a credible messenger.
- 2. Messages must be audience specific.
- 3. Messages need to be ideas related to a decision or set of decisions.
- 4. Interactive engagement is critical for successful KTE.
- 5. Performance measures must be linked to specific audiences.

Gibson effectively moved KTE from an RT strategy focused on dissemination to an integrated knowledge exchange strategy focused on engagement. "Jane built upon what was there... which was no mean feat," explains Rhoda Reardon, former KT associate at IWH and current manager of the Research and Evaluation Department at the College of Physicians and Surgeons of Ontario.

"Jane united KT and communications," continues Reardon. "She stayed focused on the scientific foundation of KTE, keeping faith with her IWH scientist colleagues."

"Jane is an early pioneer of the KTE movement," says Sonya Corkum, former chair of the KTE Advisory Committee and international KTE advisor. "Through her leadership, the program is the best example of a KTE initiative that perfectly straddles the research-to-action space."

Stakeholder engagement

Reciprocity is key to KTE. Gibson emphasizes, "KTE is not just about disseminating ideas to an audience or market. It involves getting stakeholders involved right from the start, exchanging ideas with them, getting them to provide research questions at the beginning of the process."

She sums up, "KTE at IWH follows the 'exchange model' not the 'push model."

Gibson has worked closely with IWH's Scientific Director Dr. Ben Amick and former Chief Scientist Dr. Tony Culyer to embed KTE in all aspects of IWH's scientific enterprise. "During Jane's tenure as KTE director, IWH has been transformed from a traditional academic research organization into a highly innovative and creative organization partnering with stakeholders to develop and provide evidence-based solutions to important work and health problems," says Amick.

Phases of development of knowledge transfer and exchange at the Institute for Work & Health



Culyer emphasizes how Gibson's tenure started at the very beginning of KT and helped it to grow into KTE by emphasizing the exchangeability (E) of knowledge. "Jane developed dozens of practical tools to turn talk into action," he says. "She was a great pioneer, an untiring teacher of researchers in making their results accessible to non-specialists, and an outstanding recruiter of intermediaries such as educational influentials. She is leaving the field infinitely richer for her contributions."

Success stories abound

Success stories are plentiful. For example, together with IWH researchers and staff from the Workplace Safety and Insurance Board, KTE staff helped to create the *Seven Principles for Successful Return to Work*, a guide that has been downloaded thousands of times and garnered praise for its usefulness.

Additionally, the Health and Safety Association Liaison Committee, chaired by Gibson, provides a quarterly forum for discussion and information sharing between IWH, the Centres for Research Expertise and Ontario's health and safety associations (HSAs). In particular, the committee helps the Institute to understand the research and information needs of the HSAs.

Also, IWH has been involved in establishing "educationally influential (EI)" networks for six different health-care disciplines across Ontario. These EI networks enable two-way exchanges of information. Researchers gain practical knowledge and opinions from the EIs, while KTE staff share pertinent, evidencebased findings with the EIs who can pass this information along to peers through their networks.

Others now look to IWH for KTE guidance. The Institute has information on how to do KTE on the website at: www. iwh.on.ca/knowledge-transfer-exchange. Additionally, since 2006, IWH has offered a KTE workshop, and participants have included staff from Cancer Care Ontario and the Seniors Health Research Transfer Network.

Most recently, IWH scientists and KTE professionals joined forces to conduct a systematic review of tools used to measure the effectiveness of KTE efforts (see boxed insert to the right).

Lessons learned

Gibson recently compiled a list of lessons learned during her time at the Institute. This list will no doubt help to guide future KTE ventures at IWH:

- 1. You need high quality relevant research to have successful KTE.
- 2. Early and meaningful stakeholder engagement is critical.
- 3. It takes time to build relationships and trust with stakeholders.
- 4. Context and timing are important.
- 5. Stakeholders are interested in evidence and its application.
- 6. When you work with smart, dedicated, cooperative people, you can accomplish a lot.

John Frank, director of the Scottish Collaboration for Public Health Research and Policy and founding director of research at IWH, sums up Gibson's contribution: "Jane has created at IWH perhaps the most effective and polished KTE unit in any research facility in North America. She has been able to forge exceptional links to IWH's diverse and dispersed stakeholder communities, and provide them with a steady flow of easily digestible research findings. Indeed, her IWH unit's novel conceptualization and actualization of KTE has led the field internationally."

SYSTEMATIC REVIEW LOOKS FOR KTE EVALUATION TOOLS

Few well-developed instruments are available to evaluate the implementation and impact of knowledge transfer and exchange (KTE) practices. However, some KTE evaluation instruments do hold promise. These are among the key messages stemming from a systematic review conducted by a multidisciplinary team led by Institute for Work & Health Associate Scientist Dwayne Van Eerd.

The systematic review was carried out because funders and policy-makers increasingly want to know that their research investments are making a difference. Yet the effectiveness of current KTE practices that aim to put relevant research into the hands of decision-makers and practitioners is not routinely or consistently evaluated—perhaps, in part, because valid and reliable tools for doing so are lacking.

Although no well-developed tools were found in this review, some tools show signs of being reliable, valid and able to measure changes in knowledge, attitudes and behaviours among decision-makers and others being asked to implement research evidence. Van Eerd says, "The review team strongly encourages KTE practitioners and researchers to work together to develop instruments to evaluate KTE activities, with a focus on establishing sound measurement properties."

Van Eerd looks to the future. "There are opportunities for us to explore instruments to measure the success of KTE within the Institute," he states. "I can say that we're looking into it."

The full report, as well as a summary that includes the list of promising KTE evaluation tools, is available at: www.iwh.on.ca/ sys-reviews/kte-evaluation-tools.

HOW WORKPLACE POLICIES AFFECT RETURN TO WORK

Organizational policies and practices play a role in whether or not injured workers will return to work and if they will perform well once back at work. A new study from the Institute for Work & Health not only demonstrates this, but also helps explain why.

Organizational policies and practices (OPPs) matter when it comes to return to work. They predict the likelihood of injured workers returning and, more importantly, if these workers will function well once back in their jobs. This is the finding of a recent analysis of the Readiness for Return-to-Work Cohort from the Institute for Work & Health (IWH), co-led by Scientific Director Dr. Ben Amick and Senior Scientist Dr. Sheilah Hogg-Johnson. "Organizational policies and practices are critical in predicting return to work (RTW) and successful work-role functioning at six and 12 months," Amick says. "They are important after taking into consideration an injured worker's health, psychological status and job characteristics, showing just how multi-faceted and complex the return-to-work process is. There is certainly no magic bullet."

The Readiness for Return-To-Work Cohort followed a group of some 630 workers who filed musculoskeletal-related claims with the Workplace Safety and Insurance Board. At six and 12 months post-injury, these workers were asked if they had returned to work and, if so, if they were able to meet the demands of their job, given their physical and mental health status. Injured workers were also asked about their organization's policies and practices, their ability

THE EFFECT OF ORGANIZATIONAL POLICIES AND PRACTICES ON RETURN TO WORK AND WORK-ROLE FUNCTIONING

The chart below illustrates the study's findings about whether or not each of the following policy areas had an effect on (1) RTW at six and 12 months post-injury and (2) RTW and functioning well at six and 12 months. If the policy area had an effect, the chart also indicates the study's findings as to how—by either affecting the offer and acceptance of work accommodations or by affecting worker self-efficacy in terms of coping with pain.

Policy and practice area*	RTW at 6 months?	RTW at 12 months?	RTW and function at 6 months?	RTW and function at 12 months?
 People-oriented culture The workplace involves employees in plans and decisions. Workers have trust in the workplace. Communication is open, and employees feel free to voice concerns and to make suggestions. Working relationships are cooperative. 	No	No	Yes (self-efficacy)	No
 Safety Top management is actively involved in the safety program. The workplace spends time and money on improving safety. The workplace considers safety equally with production and quality in the way work is done. Unsafe working conditions are identified and improved promptly. Equipment is well-maintained. Action is taken when safety rules are broken. Employees are provided training in safe work practices for the job hazards they will encounter. 	No	No	Yes (work accommodation and self-efficacy)	Yes (work accommodation and self-efficacy)
Ergonomics Jobs are designed to reduce heavy lifting. Jobs are designed to reduce repetitive movement. 	No	Yes (work accommodation and self-efficacy)	No	Yes (self-efficacy)
 Disability management Someone from the workplace contacts the worker shortly after an injury or illness to express concern and offer assistance. The workplace works with the treating physician to develop a plan for RTW. The workplace makes accommodations such as special equipment, flexible hours or modified job duties to allow injured workers to return to work. After the injured worker returns to work, the workplace follows up to adjust the work situation as needed. When injured workers cannot return to work, the workplace provides retraining. Labour and management work as partners in returning injured workers to work. 	Yes (work accommodation)	Yes (work accommodation)	Yes (work accommodation and self-efficacy)	Yes (work accommodation and self-efficacy)

THE POWER OF POSITIVE THINKING: More evidence on patient expectations and return to work

to cope with pain in the return-to-work process, and if accommodated work had been offered and accepted.

The analysis found that workers who gave their organizations high marks in terms of their OPPs were 1.9 times more likely to be back at work at six months, and 2.3 times more likely at 12 months than those who gave their organizations low marks. Similarly, workers who gave high marks were 2.3 times more likely to be back at work and functioning well at six months, and 2.2 times more likely at 12 months than those who gave their organizations low marks.

What made this research novel was its ability to use the Readiness for Return-To-Work Cohort to show two ways in which policies and practices may be affecting return-to-work outcomes (see table to the left). "This research offers the first evidence on how OPPs support RTW and functioning well in the job—through influencing work accommodation offers and the selfefficacy of workers in dealing with pain in the RTW process," says Amick.

This means that OPPs that support workers can improve RTW sustainability by helping workers not only return to work, but also function well in their jobs, Amick adds. Therefore, workplaces should be supported in building and improving their practices for offering accommodated work to injured workers, and in exploring ways to improve the self-efficacy of injured workers, perhaps by looking at success stories in chronic disease management.

This research lends support to the Ontario prevention system's focus on developing leading organizational indicators, says Amick. Leading indicators are measures that describe the effectiveness of workplace practices before injuries, illnesses and disability occur.

For more information, see the plenary presentation at: www.iwh. on.ca/plenaries/2011-jan-18.

Recent research from the Institute for Work & Health reinforces evidence that patients who are optimistic about recovery following an injury will actually recover and return to work faster than patients who are less optimistic— a finding that should be recognized in case management decisions.

It has long been understood that patients' expectations of recovery influence their outcomes. When comparing people with similar degrees of functional impairment, workers with optimistic expectations recover more quickly than those with less optimistic expectations.



Institute for Work & Health (IWH) Scientist Dr. Jason Busse has recently completed a study that reinforces this evidence and is reported in a paper accepted for publication by the *Journal of Orthopaedic Trauma*. As he explains, "Our goal was to develop a predictive instrument that allows identification of individuals more or less likely to do well after surgery."

A team of investigators led by Busse developed the Somatic Pre-occupation and Coping (SPOC) questionnaire to survey patients with broken shin bones—clinically known as tibial shaft fractures—about their ex-

Dr. Jason Busse shin bones—clinically known as tibial shaft fractures—about their experiences with symptoms, coping abilities and recovery beliefs. Tibial fractures were selected because they are the most common type of long bone fracture and they tend to disproportionately affect young people in the workforce.

Six weeks after surgery, researchers administered the 27-item SPOC questionnaire to 359 patients. Items fell into four categories: physical symptoms, coping, energy and optimism. (Interestingly, the questions were not injury-specific. The table below offers examples of the questions.) Then, one year post-surgery—when it was revealed that 64 per cent of patients had returned to work and one third (36 per cent) had not—researchers linked the questionnaire scores to the patients' outcomes.

Scores predict recovery

The researchers found that the sixweek SPOC scores were a more powerful predictor of recovery and return to work than age, gender, fracture type, smoking status or the presence of multiple injuries.

According to Busse, two questions are central: Can we modify patients' beliefs? And will such changes result in improved outcomes? "If we can do these two things, then we have something very exciting," he says. "This study provides strong evidence that there's more to people's experience of recovery from injury than simply tissue repair."

Four categories in SPOC questionnaire	Examples of items in each category
Physical symptoms	Experienced pain in the last week Experienced problems with sleep in the past week
Coping	Lost sleep over worry in the past week Thinking of yourself as worthless person in the past week
Energy	Difficulty concentrating Feeling low in energy or slowed down in the past week
Optimism	My treatment will be effective in curing my injury There is a lot that I can do to con- trol my injury-related symptoms

Application to other populations holds promise. "I would like to examine disability due to sciatica," says Busse. Sciatica refers to pain and numbress in the leg due to injury to, or compression of, the sciatic nerve, which starts in the spine and runs down the back of each leg. Disc herniation is one of its causes.

Busse notes that the rate of disc herniation as a cause of Workplace Safety and Insurance Board lost-time claims more than doubled from 1999 to 2008. As well, elective surgery to address disc herniation causing sciatica only benefits some patients.

"Back surgeons may be able to use SPOC scores to identify patients who are unlikely to experience successful recoveries," Busse explains, adding that the SPOC is easy to use.

AT WORK

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The "watchful dose"... continued from front page

been the leading cause of unintentional overdose deaths—far surpassing cocaine and heroin. Since 1999, in the U.S., poisoning death rates linked to prescription opioids have more than tripled, from 4,000 to 13,800 deaths.

North of the 49th parallel, there are similar problems. In 2008, Canada had the highest rate per capita consumption of oxycodone in the world, surpassing even the U.S., according to the International Narcotics Control Board. In Ontario, opioid-related deaths have climbed to 33.3 deaths per million people per year in 2006, up from 19.4 in 2000.

Injured workers, many of whom experience significant pain in the course of recovery, are at risk of the consequences of liberal prescribing standards. Over the last decade, the number of opioid prescriptions to workers receiving workers' compensation benefits has gone up by 100 per cent. According to the Workplace Safety and Insurance Board (WSIB), 40 per cent more workers have been prescribed these drugs compared to 10 years ago.

When asked why workers' prescriptions have increased so dramatically, Furlan describes the 'perfect storm.' First, there are the marketing practices of the pharmaceutical industry. Second, influential educational leaders have promoted opioid use, arguing that pain is a dehumanizing experience that should be controllable in the 21st century. Third, patients hear about these medications and want to try them. Furlan sums up the doctors' dilemma: "It takes five minutes to prescribe an opioid, but 30 minutes *not* to prescribe—that is, to think of alternatives."

KEY MESSAGES FOR DOCTORS

The Opioid Manager offers important suggestions for physicians:

- start with a comprehensive assessment and set effectiveness goals with the patient;
- initiate with a low dose and "watchful dose," which refers to how doctors should track the daily dose, in morphine equivalents per day (200 mg/day), as a flag to reassess dosing, prevent rapid dosing increases and control the risk of overdose;
- watch for any complications to prevent unwanted outcomes like addiction; and
- stop opioid therapy if it is not effective or the risks outweigh the benefits.

The Opioid Manager also provides important clinical questions for doctors, such as: What should I consider before writing a prescription? When do I decrease or stop opioids?

Success: Approaching 1,500 downloads

Like the guideline before it, the Opioid Manager has been very well received. Over 1,480 users have downloaded it from the website since May 2010.

What's next? Furlan outlines her ambitious plans: "We are talking to providers about incorporating the Opioid Manager into Electronic Medical Records (ERMs). We are translating it into French, Spanish, Portuguese and Farsi. We are developing a patients' version. And we are creating on-line teaching modules—continuing education for physicians, pharmacists, etc." Additionally, IWH Research Associate Nancy Carnide is leading a systematic review of studies conducted on opioid use among workers. The results are expected later this year.

The Opioid Manager is housed at McMaster University and available for download at: www.nationalpaincentre.mcmaster.ca/ opioidmanager.

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

Two new reports on immigrant health and safety are now available. *Delicate dances: Immigrant workers' experiences of injury reporting and claim filing* examines the experiences of recent immigrants who are injured on the job. The *Review of safety resources for recent immigrants entering the Canadian workforce* is a national scan that looks at some of the services, programs and resources on occupational health and safety and workers' compensation that are available to recent immigrants to Canada: **www.iwh.on.ca/other-reports** IWH scientists and KTE professionals joined forces to conduct a systematic review of tools used to measure the effectiveness of KTE efforts. *Report on Knowledge Transfer and Exchange Practices: A systematic review of the quality and types of instruments used to assess KTE implementation and impact* is now available, along with a *Sharing Best Evidence*—a summary of the findings:

www.iwh.on.ca/sys-reviews/kte-evaluation-tools

The next systematic review workshop is set for November 16 to 18, 2011. Online registration is now open: **www.iwh.on.ca/workshops/systematic-review**