Issue 23 • August 2001

at work

Information on workplace research from the Institute for Work & Health

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INSTITUTE FOR WORK & HEALTH
INSTITUT DE RECHERCHE SUR LE TRAVAIL ET LA SANTÉ

Research Excellence Advancing Employee Health

RSI: The injury and pain are real

Recent reports in the media have implied that Repetitive Stress Injury (RSI) is a form of hysteria and the pain that workers feel is "just in their heads." Scientists at the Institute for Work & Health in Toronto, strongly refute any statement that RSI is a mythical illness that will disappear with time. The pain and discomfort that workers experience in their necks, shoulders, and arms is not a trendy fad that will disappear just because it is difficult to diagnose, expensive to compensate, and hard to prevent.

Institute scientists have been studying what RSI is, what causes RSI, and how to prevent RSI for over 10 years. Scientists prefer to call RSI, or carpal tunnel syndrome, work-related musculoskeletal disorders of the upper limb (WMSDs). Scientists advocate the term WMSD since it more accurately implies that the disorder does not have a specific cause or pathology, such as repetition. The term work-related focuses on the fact that the pain is directly caused or aggravated by work, and thus direct causality does not need to be established.

A six-year study at a major Canadian newspaper, a cooperative effort of Institute scientists and collaborators, along with the newspaper's union and management, has researched the causes and prevention of WMSDs. A survey of over 1,000 newspaper workers has found that more than half of them have had

some neck or arm discomfort that is aggravated by work. Yet less than one-third took time off from work. People continue to work despite experiencing considerable pain.

Findings show that the causes of WMSDs are complex, including both physical and workplace organizational factors. "This pain is caused by a host of workplace factors," says Dr. Donald Cole, a senior scientist at the Institute. "Job design and relationships at work are as important as office equipment in causing upper extremity WMSDs." WMSD is associated with excessive amounts of time spent keyboarding, screens not placed in a good position, or uncomfortable workstations. WMSD is also implicated with work that is repetitive, requires physical force, or involves awkward postures or vibration.

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Web site update

Annual report available

The Institute's 2001 annual report is now accessible on the Web site (www.iwh.on.ca).

Research for the Working World highlights Institute research initiatives that have been applied to the working world. The report can be read online, or downloaded in Adobe's portable document format (PDF).

The report includes three feature articles: *Research that Works* reflects the Institute's success under former president Terrence Sullivan; *Partners in Change* describes an ergonomics project at an auto parts manufacturing plant; and *Practical Tools at Work* is a glimpse at the Lakeridge Health Corporation's use of the DASH Outcome Measure.

Also included in the report is a summary of current and upcoming projects for the Institute's research areas, as well as a brief focus on our strong links to the academic community.

To access this report from our Web site, go to the Institute's home page at www.iwh.on.ca, then click on the Research for the Working World link in the Spotlight section.

The Bottom Line

The next time you visit the Institute's Web site, you'll notice a new footer has been added to each web page to help you reach us.

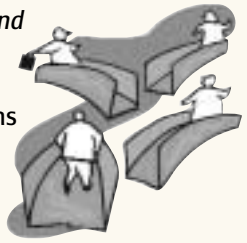
This section includes a contact e-mail address, so that you can send us your questions or comments, and a link to our web user survey. The survey gives you a chance to provide feedback that will help us continue developing the site. Also included is our copyright and disclaimer policy, which users should view on a regular basis.

Questions or comments about the Web site may be directed to Communications Associate Katherine Lukewich, at klukewich@iwh.on.ca.

IWH News

Report available

The report from the *Knowledge Transfer: Looking Beyond Health* conference held last October is now available. The objective of the conference was to provide participants with a better understanding of how organizations outside the health sector engage in knowledge transfer and how these ideas can be applied to health. Copies of the report are available by contacting Greer Palloo at the Institute (416-927-2027, ext. 2131 or info@iwh.on.ca).



Cochrane Colloquium

The 9th International Cochrane Colloquium is being held in Lyon, France in October. Two of the Institute's staff will be presenting at the conference. Emma Irvin and Chantelle Garritty are conducting workshops on handsearching healthcare literature and developing press releases.

New address reminder

Don't forget! The Institute has moved its office to 481 University Avenue, Suite 800 in Toronto. Please make sure you've updated your contact information. All our phone numbers and internet addresses are unchanged.

Clinical

Uptake of low-back pain guidelines focus of CPSO study

Every day, new information on best practices becomes available. In 1994, the US Agency for Healthcare Policy and Research (now the Agency for Healthcare Research and Quality) introduced new guidelines for the management of acute low-back pain. A recent Institute paper examines how those guidelines have been adopted within one group of clinicians.

The Institute and the College of Physicians and Surgeons of Ontario (CPSO), in conjunction with CPSO's mandatory peer assessment process, sampled selected physicians. To maintain the confidentiality of individuals involved in the study, all personal identifiers were removed prior to the data being forwarded to the Institute for analysis. Between November 1998 and December 1999, peer assessors completed assessment reports on physicians who met the inclusion criteria, using information obtained from the patient record and physician interview.

The cost of acute low-back pain to individuals and society is well documented. Integrating clinical practice guidelines into practice is an important component of evidence-based practice, thought to reduce practice variations and improve care.

The guidelines studied here recommend that on the first visit, physicians take a focused medical history and complete a physical examination to rule out the presence of red flags, which may mean a serious underlying condition. In the absence of these red flags, the physician should focus on reassuring the patient of the positive natural course of their low-back pain, help them develop coping strategies and encourage a graduated return to their normal activities—including work, rather than ordering bed rest, X-rays, lab tests, or specialist consultations.

The results of the pilot project were similar to those of other recent studies, suggesting that physicians were more likely to follow guidelines for the assessment of patients with acute low-back pain, than for the management of the complaint, and younger physicians and those who were certified by the College of Family Physicians of Canada were more likely to adhere to guidelines than were older, non-certificants. These trends imply that targeted strategies must be developed to encourage and support evidence-based practice.

Although the reported prevalence of low-back pain is high, only 60 per cent of the pilot study physicians had patients who presented with acute low-back pain, suggesting that primary care physicians see patients with all phases of low-back pain, rather then just acute. If this is the case, it seems more helpful to support and disseminate guidelines that help physicians manage all phases of low-back pain.

For more information on this research, contact Victoria Pennick, vpennick@iwh.on.ca. To order a copy of Occasional Paper 21: Integration of low-back pain guidelines into the College of Physicians and Surgeons of Ontario's Peer Assessment Program, *contact Greer Palloo at (416) 927-2027 ext. 2131 or info@iwh.on.ca. A full list of our publications is available on our Web site, www.iwh.on.ca.*

Fifth international forum focuses on low-back pain

The Institute is co-sponsoring an international round-table on issues related to low-back pain.

The International Forum V for Primary Care Research on Low-Back Pain, to be held in Montréal on September 21 and 22, will provide researchers, clinicians, and decision-makers with a forum to exchange views on issues related to the cost-effective care of patients with low-back pain.

Several workshops will be part of the conference. Topics include: sharing guidelines between primary health-care providers-physicians, physiotherapists, chiropractors and alternative medicine providers; workplace/workforce factors affecting return-to-work; and research on health policy issues. Manuscripts will be prepared to summarize the information being presented in the workshops.

Other co-sponsors include: University of Toronto, McGill University, Ontario Workplace Safety & Insurance Board, Institut de récherche Robert-Sauvé en santé et sécurité du travail, Regie régionale de la santé et des services sociaux, and Réseau provincial des récherche en adaption-réadaption.

Further information can be found on the forum's Web site: www.lbpforum.org

Workplace

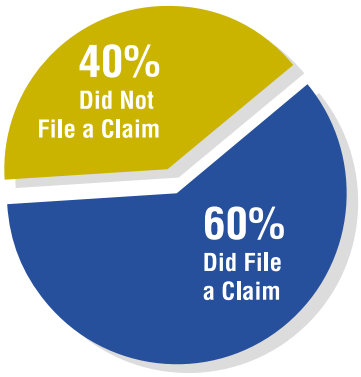
Some eligible workers don't file compensation claims

Forty per cent of workers who are eligible for workers' compensation claims do not submit a claim. This research was presented by Harry Shannon, Institute senior scientist, at the 2001 Congress of Epidemiology.

The report was based upon a survey, sponsored by the Canadian Policy Research Networks, of 2,500 Canadian workers. Respondents were asked if they had been injured at work in the past year, if the injury required medical aid or time off work and/or a change in job assignment, and whether they had filed a workers' compensation claim. These and other criteria were used to ensure eligibility for workers' compensation.

Just over 10 per cent of the respondents in this group had been injured. But 40 per cent of those eligible to claim had not done so: only 60 per cent had filed a claim if their injury required medical treatment, 70 per cent filed if they needed time off work, and 60 per cent filed if their injury meant they needed to change their work assignment.

The results will have implications for workplace and public policies. It is important to ensure that those workers who are entitled to receive benefits do so. In addition, if workers are not making claims, treatment costs are presumably being borne by the public health care system.



Workers who required medical attention and/or missed time from work and/or had a work assignment change due to injury.

RSI: the injury and pain are real

(Continued from page 1 ☛) There are work organizational factors that are also strongly associated with greater rates of WMSDs. These include high demands associated with deadlines, little control over how work is done, an intensified workload, monotonous work, or inadequate support from supervisors or coworkers. These are measurable, quantifiable psychosocial factors, and do not reflect hysteria, as suggested by some media reports.

Certain categories of illness and injury that are difficult to diagnose, such as WMSDs, have always been surrounded by issues of legitimacy, since there are always problems regarding accepting blame and financial responsibility.

To help ameliorate issues around legitimacy that affect workers' attitude towards recovery, return to work, and job security, a number of best practices that can reduce WMSD have been set out by national institutes of work and health in the US and Europe. These best practices are clear that no single therapy can cure WMSDs.

Multiple interventions are required to control WMSDs. At the physical level, interventions could include modifying workstations and taking more frequent breaks with exercise. At the workplace organizational level, interventions include involving workers in changes, changing work volume, improving the scheduling of work flow, assigning adequate staff, and providing support from coworkers and supervisors.

Workplace programs can reduce WMSDs, and ergonomic regulations can promote such workplace practices. WMSDs shouldn't be dismissed as a source of injury and pain. Efforts should be made to understand them better and do more about them.

Recently Published in the Institute's Working Paper series

Is position in the occupational hierarchy a determinant of decline in perceived health status? (#120) C A Mustard, M Vermeulen, J Lavis

Work organization and musculoskeletal injuries among a cohort of health care workers. (#126) M Koehoorn, P A Demers, C Hertzman, J Village, S M Kennedy

A comparison between the effort-reward imbalance and the demand control job strain models. (#130) A Ostry, M Barrotevena, R Hershler, K Tesche, P Demers, C A Mustard, C Hertzman

Examining the association between occupational position and the stability of sense of coherence in a Canadian working population. (#153). P Smith, F C Breslin, D E Beaton

Sense of coherence and emotional distress: Extent and type of construct overlap. (#155) FC Breslin, S Ibrahim, G Hepburn, D Cole

Policy

PROFILE: Australian values unique Canadian experiences

Peter Smith knew he wanted to do some of his studying abroad—he just wasn't too sure where in the world he wanted to go.

When the University of New South Wales Master's student discovered an exchange program with the University of Toronto, he flew from Down Under to the Great White North to continue with his studies.

"Canada and Australia have comparable health-care and social support systems. I knew I wanted to continue my studies in a country that had similar social policies and thought Canada would be the best fit for me," Smith says.

Smith began with the Institute as a student researcher in May 2000, and recently defended his Master of Public Health thesis. His research examined the relationship between occupational position and declines in perceived health status over a four year period. This work, which was completed under the guidance of the Institute's Scientific Director, Cameron Mustard, focused on how much of the relationship between occupational position and declines in health can be explained by individual approaches to health, such as health behaviors, work stress, and psychological resources.

As a follow-up to some of the findings from his thesis, Smith was lead author on a paper examining the association between occupational position and stability in Sense of Coherence, a psychological resource, which is thought to help explain movement along the health-disease continuum. This paper has since been submitted for publication in the *Journal of Organizational Behavior*, and was recently made a poster presentation at the International Epidemiology Congress held in Toronto.

"My work at the Institute will help further my career in research relating how policy decisions affect the workplace, both through the nature of work, and the availability of work" he said. "Because of my work here I'll be able to bring unique experiences back to Australia, and still maintain links with the Institute."

That may not happen anytime soon. Smith was recently hired as a Research Associate in the Institute's Population/ Workforce Studies area. He's currently working on a research methodology to assist in predicting injury rates, by calculating Ontario labour force estimates across industry sectors. Other planned projects include studies on youth injury rates and contingent work.

Peter Smith

NEIGHBOURHOOD SOCIO-ECONOMIC LEVEL HAS LITTLE EFFECT ON HEALTH STATUS

The social and economic characteristics of individuals are widely accepted as having an impact on their health, so it would not be surprising if the average socio-economic level of neighbourhoods was associated with the average level of health or disability. But researchers in the US and the UK have recently been investigating the hypothesis that the social and economic characteristics of neighbourhoods affect the health of neighbourhood residents separately from the well-known individual-level effect.

They propose that through local services, culture, safety, and physical environment, neighbourhood socio-economic characteristics may play important a role in determining health, perhaps affecting some socio-economic groups more than others. No published research has examined these effects on adult health in Canada.

Jacob Etches

Jacob Etches, a researcher at the Institute, chose to investigate this topic. This study, Etches' Master's thesis, used data from the 1990 Ontario Health Survey and the 1986 Census to test these hypotheses. Enumeration areas, which are the smallest geographical unit in the Census (typically 600 persons), were used as the definition of neighbourhood.

The study did not find an effect of neighbourhood socio-economic level on the health of Ontario residents, regardless of their individual socio-economic status. The measures of health analyzed were the number of reported chronic conditions, and two measures of disability.

While this study is not definitive, it offers some evidence that the common finding in the US of a small impact on health of neighbourhood socio-economic characteristics is due to structures of American society that differ from those in Canada. For example, unlike the US, Canadian provinces have a number of mechanisms to equalize the extent and quality of publicly funded services across different geographic regions.

This work was supported in part by the Canadian Population Health Initiative.

For more information on this research, contact Jacob Etches by e-mail: jetches@iwh.on.ca.

Research

Israeli researcher to be visiting scientist

Dov Zohar, Program Chair from the Faculty of Industrial Engineering and Management at the Israeli Institute of Technology, Haifa, Israel, will be a Visiting Scientist at the Institute later this year. He will be collaborating with Institute scientists on a number of international workplace studies projects.

Dr. Zohar wrote a seminal paper in the 1980s on workplace safety climate, and demonstrated how safety climates correlate with safety program effectiveness. He created and validated a 40-item measure of organizational safety climate, looking at issues such as top management involvement, the status of the safety specialist and joint health and safety committee, the emphasis on safety training, the level of open communication between workers and management, the frequency of safety inspections, good housekeeping, the age and turnover of the workforce, and the presence of a people-oriented management philosophy.

His work on workplace safety climate has continued with intervention studies in various industries including refineries, metal-processing, food and aviation, and a large-scale implementation project with the Israeli army field units and paratroopers' brigades. He has been looking at safety climate from the perspective of leadership, supervisor discretion, and safety training at the organizational and work group level.

Last year he published a paper that examined the effect of safety micro-climates at the supervisor level on the number of reported incidents of first-aid. He found that individual supervisors could be implementing company safety policies in very different ways. Individual practices, such as disregarding certain safety procedures whenever production falls behind schedule, can create very different perceptions of the safety climate at the group level.

Dr. Zohar has another growing body of research that overlaps with that of the Institute's scientists. He has been researching the health of health care workers, examining stress and burnout among nursing staff in long-term care hospitals and among hospital doctors.

Institute study confirms positive thinking influences a patient's health outcome

A patient who has positive thoughts about his/her expected outcome will be motivated to achieve a better outcome. This conclusion is based on a systematic review conducted by Institute Senior Scientist Donald Cole.

"We were particularly interested if this theory might hold true and, based on the literature review, we determined that when patients expect to do well, they usually do," says Cole.

Sixteen studies, which ranged over a time span of 15 years, were used for this review. The finding is consistent with evidence that feelings and perceptions may profoundly affect biological disease process.

This study has implications for future research and development of effective methods for clinicians to foster more positive recovery expectations, ultimately improving patient health outcomes.

The results were published in the July 24, 2001 edition of the *Canadian Medical Association Journal*.

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Issue #23 August 2001 *ISSN # 1261-5148*

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

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