



Centre of Research Expertise for the
Prevention of Musculoskeletal Disorders



Centre for Research Expertise
in Occupational Disease



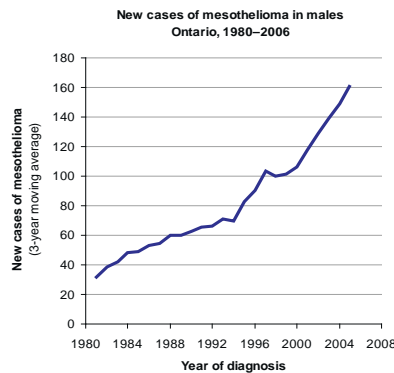
Mesothelioma continues to rise steadily in Ontario, but compensation filing is low

Cancers caused by occupational asbestos exposure

Occupational exposures may account for 20 to 30 per cent of the cancers among blue collar workers. It is estimated that 80 to 90 per cent of cases of mesothelioma are related to asbestos exposure at work. Mesothelioma is a rare but highly fatal cancer that most commonly occurs in the layer of tissue lining the chest cavity called the pleura. For each case of mesothelioma, there are at least two cases of occupational lung cancer, as well as smaller numbers of other cancers. For many occupation-related cancers, there is a long period between when the worker is exposed to a carcinogen and the onset of the disease, therefore these cancers are often not recognized, reported or compensated.

Mesothelioma increased in the past two decades

Between 1980 and 2006, the number of men in Ontario with mesothelioma rose steadily from about 30 to 177 (see graph). Over the same period, age-standardized incidence rates also increased from 0.7 per 100,000 people to 2.0 per 100,000 people. Symptoms of mesothelioma often do not appear until 20 to 40 years after asbestos exposure. Therefore, most individuals diagnosed with mesothelioma today were likely exposed to asbestos in the 1960s or 1970s, before efforts were made to drastically reduce its use and levels of exposure in Canada and before asbestos was added to the Hazardous Products Act (1985) or identified as a designated substance in the Occupational Health and Safety Act (1986). Despite current regulations, workers may still be exposed to asbestos through maintenance, renovation and demolition of buildings containing asbestos. Therefore, we don't know when mesothelioma incidence will begin to decline or how quickly it will decline in Ontario.



Source: Cancer Care Ontario (Ontario Cancer Registry, 2009)

Claims filed for less than half of mesothelioma patients

A high proportion of mesothelioma patients or dependants of deceased patients may be eligible to receive workers' compensation. However, claims were filed for only 35 per cent of mesothelioma patients diagnosed between 1980 and 2002 (1). Filing rates were highest in communities with a history of high asbestos exposure and community awareness of the link between this cancer and asbestos.

Occupational Cancer Research Centre mesothelioma studies

The Occupational Cancer Research Centre (OCRC), established in 2009, is jointly funded by Cancer Care Ontario, the Workplace Safety and Insurance Board and the Canadian Cancer Society, Ontario Division and was developed in collaboration with the United Steelworkers Union. Given

the increasing numbers of mesothelioma cases and the challenges of identifying patients who have cancers that are associated with occupational asbestos exposure, the OCRC is pursuing two related research projects. One project is predicting future trends in mesothelioma incidence while the other is looking at optimal methods of occupational history-taking and referral to help physicians make the link between asbestos exposure and respiratory disease and assist with reporting to workers' compensation authorities.

The goals of the mesothelioma projections study are to predict the number of male mesothelioma cases in Canada and Ontario to 2060 and to understand the year that will produce the highest number of cases. The results will assist compensation boards anticipate future filing rates and plan for programs to increase the filing rate among those who are exposed in the workplace. This work will also provide information that will help estimate the overall burden of asbestos-related disease in Ontario and Canada in the future.

The occupational history-taking development project, done in collaboration with CREOD, will inform an intervention study that will focus on improving the recognition and reporting of asbestos-related lung cancer and mesothelioma, are under-recognized and under-reported. Physicians often do not take an occupational history because of lack of time and knowledge. The development study will identify optimal methods of occupational history-taking and referral to ensure that interventions are feasible and practical. Participating patients with mesothelioma and their physicians will receive educational materials about the link between asbestos exposure and mesothelioma and information about compensation. Patients will complete a questionnaire about workplace exposures and those who are interested in follow-up will be assessed at an occupational health clinic. Patients will be interviewed afterward to ascertain how the process worked. A similar process will be undertaken with lung cancer patients at a lung clinic in Ontario.

References

Payne J and Pichora E. Filing for workers compensation among Ontario cases of mesothelioma. *Canadian Respiratory Journal* 2009;Sep-Oct;16(5):148-52.

This article is based on **Cancer Fact: Continued rise in new cases of mesothelioma**. September 2009. www.cancercare.on.ca/ocs/csuvr/ont-cancer-facts/.

Visit the OCRC website at <http://occupationalcancer.ca>.

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Benchmarking MSD hazards in Ontario workplaces

Researchers, labour representatives and ergonomists have come together to pilot a workplace-level musculoskeletal disorder (MSD) hazard assessment tool in 60 workplaces. The Centre of Research Expertise for the Prevention of Musculoskeletal Disorders, Occupational Health Clinics for Ontario Workers, Institute for Work & Health and five unions have created the tool and are conducting the research together.

The long-term goal is to have a tool that can be used to assess all workplaces in Ontario for MSD biomechanical hazards and have a benchmark with which to compare and learn. The team will be exploring whether knowledgeable people in a workplace (in this case the two co-chairs of a joint health and safety committee, or JHSC) can use a survey tool to accurately estimate physical loads within a workplace.

The letter that is being sent out by the unions and which is being posted on their websites to recruit workplaces reads:

“In your workplace does anyone bend, push, pull, pinch, grip, lift, reposition people, perform repetitive movement, hold a fixed position, use a keyboard, sit, drive, reach up or down, or carry anything at work for long or short periods? If so, then get your JHSC to participate in this important ergonomic research project about physical loads in the workplace.

Ergonomic injuries are painful, can often last a lifetime, and seriously detract from the quality of life. Where JHSCs agree to participate, the two co-chairs will each fill out a short 20 min questionnaire and then meet together and gain consensus on a third copy of the questionnaire. That's all. Then an ergonomist will attend various (not all) workplaces using the same survey. Workplaces receiving an ergonomist visit will get a copy of the physical loads report. All survey participants will receive a follow-up call to provide feedback about the survey tool.”

We are distributing the questionnaires with the help of the union team members' Internet resources and links to health and safety committees. OHCOW ergonomists are asking firms that have used their services before. We will likely surpass our goal of 60 companies, and have enough data to create a questionnaire that can be used across Ontario.

The project idea emerged organically out of a secondment agreement between the Communications, Energy and Paperworkers Union (Keith McMillan, national health and safety representative) and CRE-MSD (Richard Wells, Desre Kramer, Phil Bigelow and Niki Carlan). It emerged out of discussions with Alec Farquhar (OHCOW managing director) and Syed Naqvi (OHCOW ergonomist). IWH researchers Ivan Steenstra and Lynda Robson will provide expertise in questionnaire design and data analysis.

With the help of McMillan, other unions got involved. Terri Aversa from the Ontario Public Service Employees Union (OPSEU), Nancy Hutchinson from the United Steelworkers of America (USA), Jim Wright and Sue Yates from the United Food and Commercial Workers (UFCW), and Sari Sairanen from the Canadian Auto Workers' union (CAW) are all vital and passionate members of this project.

The project's results should be available in 2011. This team is bounded together on a common mission to find a way to benchmark MSD hazards in workplaces so that employers will have a good starting point for future ergonomic interventions.

For more information, about this project contact Niki Carlan, Project Coordinator at ncarlan@uwaterloo.ca.

Determining how nurses use facial protective devices

One of the program themes of the Centre for Research Expertise in Occupational Disease is biological hazards. Kathryn Nichol, a Program Specialist at the Public Services Health & Safety Association, and colleagues at the Centre have been focused on prevention of exposure to biological hazards, particularly in the health-care sector. Although communicable respiratory illnesses have been around for a long time, SARS highlighted the vulnerability of our health workforce to this type of occupational hazard. Research has shown that one key reason for occupational transmission of communicable respiratory illness to workers is failure to implement appropriate barrier precautions. Facial protective equipment, including surgical masks, respirators and eye/face protection, is the least adhered-to type of personal protective equipment used by health-care workers, yet it is an important barrier precaution against communicable respiratory illness.

Following an initial pilot study in 2006-2007, CREOD researchers conducted a two-phase study funded by the WSIB RAC to pursue the question of nurses adherence to the recommended use of facial protective equipment and the barriers and facilitators to its use in the acute health-care sector.

Over 1000 nurses from six hospitals answered the survey in the study's first phase. Only 44 per cent reported adherence to recommended use of facial protective equipment. Analysis of the barriers and facilitators to using facial protective equipment showed that organizational and environmental supports were critical to adherence. Nurses who reported facial protective equipment was readily available on their unit, had received training and fit testing within the last two years, perceived good communication strategies were in place, and felt the organization supported worker health and safety were more likely to report adherence with facial protective equipment.

Following the survey, 98 nurses in 14 intensive and critical care units were observed putting on, using, taking off and disposing of a N95 respirator for a patient on airborne precautions. Only 44 per cent exhibited competence and carried out at least five of the six critical steps to follow for safe practice. The most common steps that were missed included failure to conduct a seal check and touching the potentially contaminated face piece during use, respirator removal or disposal. Further analysis of the facilitators of competence showed that nurses with knowledge of proper respirator use were more likely to demonstrate competence.

Despite the SARS experience in Toronto and the resulting investment in our public health system, nurses' adherence to recommended use of facial protective equipment and competence in effective use of N95 respirators remains suboptimal. The results showed that to improve adherence, hospital and unit administrators should focus on enhancing the organizational and environmental supports including equipment availability, training and fit testing, organizational support for health and safety, and positive communication. To improve competence in effective use of N95 respirators, strategies to increase knowledge should be implemented. These efforts should assist to reduce occupational transmission of communicable respiratory illness and foster a healthier and safer working environment for nurses.

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