In this special issue of *Occupational Medicine*

### Celebrating Occupational Medicine in Canada

This special issue of *Occupational Medicine* is dedicated to occupational medicine in Canada. *Occupational Medicine* has been for many years the adopted journal of the Occupational and Environmental Medical Association of Canada (OEMAC) and close collaboration between the journal and Canadian occupational physicians is encouraged. The papers in this issue describe various aspects of occupational medicine research and practice in Canada.

Several of the papers describe studies involving linkage of large databases to investigate workplace aetiology. In each Canadian province, residents are covered by a provincially administered health care plan and there is a single workers’ compensation board (WCB) that covers the majority of workers, which provide rich data sources for linkage. The study by Cherry *et al.* [1] demonstrates the utility of this type of data linkage to examine the relationship between occupation and new-onset physician-diagnosed mental ill-health. Information on occupation was obtained on all accepted WCB claims (irrespective of the type of injury or illness giving rise to the claim) during a 10-year period and was linked to administrative health records to obtain a diagnosis by a physician of new-onset mental ill-health (affective disorders, substance abuse, psychotic disorders), occurring within 12 months of the WCB claim. The results of their analysis suggest several areas for future study or intervention. For example substance use disorders were found to cluster mainly in physically demanding occupations often involving employment outside urban areas.

In a related data linkage study, Cherry *et al.* [2] investigated whether a history of mental ill-health obtained from administrative health records was associated with an increased risk of injury at work. Cox proportional hazards regression analysis of the factors affecting the time between the first and any second WCB claims demonstrated a small but statistically significant risk of a second WCB claim in those with a history of mental ill-health in the 48 months prior to the first WCB claim. This finding reinforces the need to include assessment and management of mental health problems when assisting individuals to return to work.

Smith *et al.* [3] carried out another data linkage study to investigate the relationship between the psychosocial work environment and the development of diabetes mellitus. They used data from Ontario respondents (35–60 years of age) to the 2000–01 Canadian Community Health Survey, which contains an abbreviated version of the Job Content Questionnaire of Karasek and Theorell, to measure psychosocial work variables. These data were linked to administrative health databases to obtain information on incident diabetes over a 9-year period. Their analysis suggested that some of these psychosocial work variables, such as low job control in men, might affect the risk of diabetes.

Although these data linkage studies may suggest interesting associations between occupational factors and health outcomes, they must be interpreted with caution. In particular selection bias may be present as well as misclassification of exposure and/or outcome variables in administrative databases created for purposes other than the association of interest in a particular epidemiologic study.

The other research papers in this issue include a case–control study of work-related shoulder pain, which highlights the importance of ergonomic causal factors, in particular lifting weights above shoulder level [4]; an evaluation of factors influencing physicians’ interpretation of workplace causation by using a questionnaire to assess physicians’ responses to various workplace scenarios [5]; an educational intervention for farmers in a community health centre in Ontario to improve occupational health and safety knowledge and exposure prevention practices [6]; an evaluation of the prevalence and effect on quality of life of upper respiratory symptoms in individuals referred to a tertiary occupational asthma clinic [7]; an evaluation of the prevalence of a combination of skin and lung symptoms in workers assessed for work-related skin or respiratory disease and risk factors for concurrent skin and respiratory symptoms [8]; and the first reported study to evaluate the results of the DASH Work Module questionnaire in workers with hand–arm vibration syndrome [9]. In addition Jerry Beach provides a candid discussion of the factors influencing why he became an occupational physician [10] and Mike McKiernan [11] gives us an interesting perspective on the Canadian art displayed in this journal by Maxwell Bates depicting manual workers at lunch hour and reveals its timeless relevance to working people and society.

An overview of the organization and practice of occupational medicine as well as research and education in this field in Canada was provided in a 2008 article in this journal [12]. Since then there have been some significant developments, particularly in the area of training of
physicians in occupational medicine at both the specialist and family physician levels.

Since the inception of the specialty of occupational medicine in Canada there had been only two accredited programmes (the University of Toronto and University of Alberta) that have trained physicians to a specialist level in the field. In 2012 the Royal College of Physicians and Surgeons of Canada approved a third specialty training site at the Université de Montréal. This is a significant advancement in terms of the number of specialists that can be produced to service the needs of Canadian workers and workplaces. As well, training will now be available in both English and French, which is desirable in a country where approximately 25% of the population speak French as their first language.

The Royal College has also taken steps to increase the flexibility of basic training in those who subsequently wish to do specialist training in occupational medicine. The Royal College first recognized occupational medicine as a specialty in 1985 and the initial specialty training programmes were of 5 years duration following completion of medical school. The 5-year specialty training format worked well and programmes at the University of Toronto and University of Alberta trained a number of well qualified specialists in the field. However, about a decade ago the Royal College began to encourage smaller training programmes to become sub-specialties of larger core programmes and as a result occupational medicine became a sub-specialty of internal medicine in 2006. The duration of training in occupational medicine was reduced to 2 years after 3 years of training in core medicine. However, this new sub-specialty training programme has only attracted modest interest from trainees who are more inclined to sub-specialize in better established clinical fields in Canada like cardiology and respiratory medicine. As a consequence, in 2012 the Royal College approved a second route of entry into occupational medicine from public health and preventive medicine (formerly community medicine). The initial interest in occupational medicine shown by trainees in public health and preventive medicine is encouraging for the future of the sub-specialty of occupational medicine. As well, the Royal College plans to continue to evaluate other routes of entry to provide greater opportunity for interested physicians to enter the sub-specialty. However, regardless of the route of entry there are core skills and competencies that must be achieved by all trainees.

Despite these advances in the training of specialists in occupational medicine, the number of current specialists in Canada and the projected future numbers are insufficient to meet the needs of the country with a population of approximately 34 million in 2012. Many occupational medicine services are provided by family physicians and it is important that they also receive proper training and certification in the field. There have been some encouraging developments in this area as well.

In 2012 the College of Family Physicians of Canada approved the establishment of an Occupational Medicine Programme within the section of Special Interests or Focused Practices (SIFP). A committee has been established to develop a framework for the delivery of education, including continuing medical education and certification in occupational medicine under the aegis of the College of Family Physicians of Canada. This is a significant development because it will make family physicians, who comprise about 50% of all physicians in the country, more aware of occupational medicine and will help to incorporate occupational medicine knowledge and principles into routine clinical medicine.

Dovetailing with this new focus on occupational medicine by the College of Family Physicians of Canada is a new emphasis on occupational medicine in the Maritime Provinces (Nova Scotia, New Brunswick, and Prince Edward Island) by Dalhousie University in Halifax, Nova Scotia, and its distributed campus in Saint John, New Brunswick (Dalhousie Medicine New Brunswick, DMNB). Most of the physicians providing occupational medicine services in the Maritime Provinces are family physicians and the programmes will be largely directed at this group. The goal of DMNB is to enhance the delivery of occupational medicine throughout the continuum of care involving the delivery of clinical and consultation services, academic programmes, research and leadership in occupational medicine. The academic component will include curriculum and clinical training programme development at the undergraduate, postgraduate and continuing medical education levels. This is a major initiative in a part of Canada that previously did not have a significant occupational medicine presence.

In summary, Canada has made clear progress in the development of occupational medicine and the future for the field appears encouraging. However, the specialty is still relatively young in Canada and its long-term success will require vigilant stewardship. Occupational physicians in this country do seem ready for the task at hand and in typical Canadian fashion we are prepared ‘to stand on guard for thee’.

Ron House
Division of Occupational and Environmental Health, Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, Canada. Department of Occupational and Environmental Health, St Michael’s Hospital, Toronto, Ontario, Canada, 30 Bond St, Toronto, Ontario MSB 1W8, Canada.
e-mail: houser@smh.toronto.on.ca

Conflicts of interest
None declared.
References


Occupational Medicine is very grateful to all the contributing researchers and authors who have made this special issue possible. It is testimony to the vibrant research community in Canada that it has been able to respond in this way to the request to produce an entire issue dedicated to Canadian occupational medicine research.

In particular I would like to state our gratitude to the supreme efforts of issue editor Ron House for overseeing production of this special issue.

John Hobson
Honorary Editor