

At A Glance

March 2013

Monthly highlights of ICES research findings for stakeholders

Seniors with rheumatoid arthritis at increased risk of serious infections

Widdifield J, Bernatsky S, Paterson JM, Gunraj N, Thorne JC, Pope J, Cividino A, Bombardier C. Serious infections in a population-based cohort of 86,039 seniors with rheumatoid arthritis. *Arthritis Care Res (Hoboken)*. 2013; 65(3):353–61.

Issue	Patients with rheumatoid arthritis have an increased risk of infection compared with the general population. What factors contribute to the risk of serious infection in seniors with rheumatoid arthritis?
Study	Identified 86,039 patients with rheumatoid arthritis aged 66 or older who had an emergency department visit or hospitalization with a primary diagnosis of infection in Ontario from April 1992 to March 2010. Assessed the effects of antirheumatic drug use, demographics, other chronic health problems, and markers of rheumatoid arthritis severity (such as joint replacement) on the risk of infection.
Key Findings	The most common infections per 1,000 patient-years were respiratory infections (23.5 events), shingles (8.5 events) and skin or soft tissue infections (8.1 events). The strongest predictors of increased risk of infection were immune-suppressing drug therapies, particularly glucocorticoids at high doses, and comorbidities, including lung disease and kidney disease.
Implications	Seniors with rheumatoid arthritis have significant morbidity related to serious infections and require enhanced vigilance in their pharmacotherapy and management of their comorbidities.

Only 1 in 5 Ontarians with newly diagnosed diabetes attends a diabetes education program

Cauch-Dudek K, Victor JC, Sigmond M, Shah BR. Disparities in attendance at diabetes self-management education programs after diagnosis in Ontario, Canada: a cohort study. *BMC Public Health*. 2013; 13(1):85.

Issue	Patients newly diagnosed with diabetes benefit from education programs to help them understand and manage their disease. What factors predict attendance at these programs?
Study	Identified 46,553 patients aged 18 and older diagnosed with non-gestational diabetes in Ontario between January and June 2006 and followed them for 6 months. Compared the demographic and clinical characteristics of patients who attended publicly funded diabetes self-management education programs with those of non-attendees.
Key Findings	One in 5 adults (20.6%) attended a program within 6 months of diagnosis. Attendance was lower among older and poorer individuals, recent immigrants and those with mental health conditions or other comorbidities. Patients living in rural areas were markedly more likely to attend.
Implications	Strategies are needed to help disadvantaged patients, who are at increased risk of diabetes complications. These might include placing programs in poorer neighbourhoods or offering evening and weekend opening hours for lower income patients and multilingual, culturally sensitive programming for recent immigrants. Better coordination of patient referral processes might also increase utilization rates.

Low job control linked to increased incidence of hypertension in men

Smith PM, Mustard CA, Lu H, Glazier RH. Comparing the risk associated with psychosocial work conditions and health behaviours on incident hypertension over a nine-year period in Ontario, Canada. *Can J Public Health*. 2013; 104(1):e82–6.

Issue	Hypertension is an increasingly important health concern in Canada. What is the relationship between psychosocial work environment and health behaviours on the risk of hypertension?
Study	Used the 2000–2001 Canadian Community Health Survey to identify 6,611 labour market participants aged 35 to 60 not previously diagnosed with hypertension, not self-employed, and working more than 10 hours per week for more than 20 weeks in the previous 12 months. Assessed their psychosocial working conditions (job control, psychological demands, social supports) and health behaviours (smoking, physical activity, alcohol and fruit/vegetable consumption) and followed them for 9 years to determine incidence of hypertension.
Key Findings	In total, 19% of the group developed hypertension. Low job control (low ability to make decisions about the way work is done or skills are used) was associated with an increased risk of hypertension among men but not women. Among men reporting low job control, 27% were diagnosed with hypertension compared to 18% of men with high job control. The proportion of hypertension cases among men that could be attributed to low job control was 12%, second only to obesity at 26%.
Implications	Primary prevention programs to reduce hypertension are largely aimed at changing health behaviours. Attention should be given to the impact of the working environment on the development of hypertension.

One in 4 Ontario hospital visits made by people with chronic lung disease

Gershon AS, Guan J, Victor JC, Goldstein R, To T. Quantifying health services use for chronic obstructive pulmonary disease. *Am J Respir Crit Care Med.* 2013; 187(6):596–601.

Issue	People with chronic obstructive pulmonary disease (COPD), a respiratory disease commonly linked to smoking, use significant amounts of health services. What is the extent of their use in Ontario?
Study	Identified all Ontarians aged 35 and older with physician-diagnosed COPD on April 1, 2008, and followed them for 3 years. Proportions of all hospital, emergency department and physician visits, long-term care and home care made or used by people with COPD were determined and compared to those of people without COPD.
Key Findings	A total of 853,438 people with COPD (12% of the population aged 35 and older) were responsible for 24% of hospitalizations, 24% of ED visits and 21% of physician visits; they filled 35% of long-term care places and used 30% of homecare services. People with COPD had rates of hospital, ED and doctor visits that were, respectively, 63%, 85% and 48% higher than the rest of the population. Their rates of long-term care and home care use were 56% and 59% higher, respectively.
Implications	These findings should help health care providers anticipate the needs of their patients with COPD and plan accordingly, provide decision makers with a complete description of COPD burden on which to base health care planning, and educate the general population about the societal impact of this highly prevalent but often underrecognized disease.

Political factors can shape prescription drug funding decisions

Gill SS, Gupta N, Bell CM, Rochon PA, Austin PC, Laupacis A. The timing of drug funding announcements relative to elections: a case study involving dementia medications. *PLoS One.* 2013; 8(2):e56921.

Issue	Many factors influence provincial health systems when they decide whether to add new prescription drugs to their formularies. What role do pending elections play in the timing of these decisions?
Study	Compared the dates of provincial formulary listings for cholinesterase inhibitors (a class of drugs used to treat Alzheimer's disease and related dementias) to the dates of provincial elections in Canada. Calculated the probability of a drug funding announcement in the 60-day interval preceding an election to be approximately 1 in 20 by chance alone.
Key Findings	Decisions to fund cholinesterase inhibitors were made over a 9-year period from 1999 to 2007 in the 10 provinces. Funding announcements in 4 of 10 provinces were made between 2 and 47 days prior to elections. This observed proportion was significantly greater than that expected by chance.
Implications	Despite an established structure for evidence-based decision making, drug funding decisions remain open to influence from many sources, including media reporting, lobbying efforts by pharmaceutical manufacturers and patient advocacy groups, and competing priorities unique to each province. Concise and relevant summaries of scientific research, transparency of policy decision-making, and close contact between scientists and policymakers can facilitate the effective use of best evidence in health care.

ICES is an independent, non-profit organization that conducts research on a broad range of topical issues to enhance the effectiveness of health care for Ontarians. Internationally recognized for its innovative use of population-based health information, ICES research provides evidence to support health policy development and changes to the organization and delivery of health care services.