

At A Glance

October 2004

Monthly highlights of ICES research findings for stakeholders

Study offers insights into seasonal patterns for influenza and pneumonia hospitalizations

Crighton E, Moineddin R, Mamdani M, Upshur R. Influenza and pneumonia hospitalizations in Ontario: a time-series analysis. *Epidemiol Infect.* Aug. 25, 2004: 1-8.

Issue	A comprehensive examination of gender and age-specific influenza and pneumonia hospitalization seasonality has not been undertaken in Ontario.
Study	Assessed hospitalization patterns for influenza and pneumonia among all Ontario residents between 1988 and 2002.
Key Findings	Of the 339,803 hospitalizations during the study period: <ul style="list-style-type: none">• Peak hospitalizations occurred in January at an average rate of 27/100,000; the lowest rate of hospitalization was seen in August at approximately 11/100,000.• The highest seasonal rate for both genders combined was seen among the youngest (0–4 years: 80/100,000) and oldest age groups (70–79 years: 109/100,000; 80+ years: 297/100,000).• Males were hospitalized at rates approximately 10% higher than females. This was most pronounced in the oldest age groups, where females aged 80+ years were hospitalized at an annualized peak rate of 250/100,000 compared to males at 400/100,000.
Implications	These findings can be used to develop population-specific prevention strategies such as influenza vaccination campaigns targeted at high-risk groups. As well, with a clearer understanding of seasonal and age-specific demands on resources, planning for peak periods of utilization may be enhanced.

Certain common medications can cause lithium toxicity in the elderly

Juurlink D, Mamdani M, Kopp A, Rochon P, Shulman K, Redelmeier D. Drug-induced lithium toxicity in the elderly: a population-based study. *J Am Geriatr Soc.* 2004; 52 (5): 794-798.

Issue	Medications that may lead to lithium toxicity (diuretics, ACE inhibitors, and NSAIDs) are among the most widely used medications in the elderly. However, no studies have quantified the risks of lithium toxicity following the use of these medications.
Study	Examined the association between hospital admission for lithium toxicity and the use of diuretics, ACE inhibitors, and NSAIDs between 1992 and 2001 in Ontario residents 65 years of age and older.
Key Findings	Of the 10,615 elderly patients continuously receiving lithium during the study period, 4% were admitted to hospital for lithium toxicity. Patients newly treated with loop diuretics faced an almost sixfold increase in the risk of hospital admission for lithium toxicity, and those started on ACE inhibitors had a fourfold higher risk. Thiazide diuretics and NSAIDs were not associated with a significantly increased risk of lithium toxicity.
Implications	Physicians who care for patients receiving lithium should be aware of the potential hazards of concurrent drug therapies. Patients should be monitored closely and instructed to seek medical attention if they experience increasing tremors, fatigue, or confusion.

Ontario wait times for arthritis-related joint surgeries increase by up to 9 weeks

Williams J, Shipton D, Badley E, Hawker G, Kreder H, DeBoer D, Guan J, Mahomed N. Surgical Services. In: Badley E, Glazier R, editors. *Arthritis and related conditions in Ontario: ICES research atlas. 2nd ed.* Toronto: Institute for Clinical Evaluative Sciences; 2004.

Issue	There is unmet need for total joint replacement (TJR) in Ontario. With the aging population and associated increases in arthritis, demand for surgery will continue to grow.
Study	Examined hospital services and trends for hip and knee replacement surgery between 1994 and 2002.
Key Findings	<ul style="list-style-type: none">• Average wait times for total knee replacement (TKR) increased from 20 to 29 weeks.• Average wait times for total hip replacement (THR) increased from 16 to 20 weeks.• 20% of patients with THRs and 29% of patients with TKRs waited more than one year for surgery.
Implications	Strategies to reduce wait times for surgery should be implemented, including increasing the recruitment and training of orthopaedic surgeons.

Beta-blocker therapy safe for certain heart failure patients

Ko D, Hebert P, Coffey C, Curtis J, Foody J, Sedrakyan A, Krumholz H. Adverse effects of β -blocker therapy for patients with heart failure. *Arch Intern Med.* 2004; 164 (13): 1389 -1394.

Issue	Beta-blockers substantially improve survival in patients with chronic heart failure (HF) with left ventricular systolic dysfunction, but concerns about cardiovascular adverse effects may deter physicians from prescribing this therapy.
Study	Conducted a review of randomized beta-blocker trials in patients with HF between 1996 and 2002.
Key Findings	Beta-blocker therapy was associated with a 27% relative reduction in mortality, and significant reductions in HF hospitalizations (40/1,000 patients) and worsening HF (52/1,000 patients). Although beta-blockers increased the risk of hypotension, dizziness and bradycardia, most patients did not experience these adverse effects, and the absolute risks were small.
Implications	These findings should alleviate the concerns of physicians who are reluctant to prescribe beta-blockers and support the use of this life-saving therapy in HF patients with left ventricular systolic dysfunction.

Study maps mammography use in large urban cities

Glazier R, Creatore M, Gozdyra P, Matheson F, Steele L, Boyle E, Moineddin R. Geographic methods for understanding and responding to disparities in mammography use in Toronto, Canada. *J Gen Intern Med.* 2004; 19 (9): 952-961.

Issue	Mammography use is known to be lower among recent immigrants and women of low socioeconomic status. However, geographic methods to better understand the underlying patient, provider, and system factors driving these disparities have not been well explored.
Study	Compared mammography rates in women 45 to 64 years of age, in four areas of Toronto (low income-high immigration, low income-low immigration, high income-high immigration, and high income-low immigration).
Key Findings	Of the more than 113,000 women in the study group, 80% had seen a physician and 24% had received a mammogram in 2000. However, the study found variation by area with 21% of women in the low income-high immigration group having had a mammogram, compared to 27% in the high income-low immigration group.
Implications	Areas with low mammography and low physician visit rates are appropriate for outreach and public education interventions. Areas with low mammography and high physician visit rates should focus on interventions targeted at physicians.

For more information contact:

Paula McColgan, Vice-President, Policy and External Relations, ICES
(416) 480-6190 or paula.mccolgan@ices.on.ca