

At A Glance

July/August 2005

Monthly highlights of ICES research findings for stakeholders

Trauma injury risk is higher in summer for pregnant women

Redelmeier D, Drucker A, Venkatesh V. Major trauma in pregnant women during the summer. *J Trauma*. 2005; 59 (1): 111-115.

Issue	It is not clear whether the widespread surge in major trauma for the general population in the summer is caused by alcohol, recklessness and/or extreme sports.
Study	Examined all data for pregnant women admitted to Canadian hospitals between 1994 and 2001 to determine whether major trauma is still clustered in the summer despite this patient population's aversion to alcohol, recklessness, and extreme sports.
Key Findings	A total of 2,618 pregnant women sustained major trauma. The incidence of major trauma in pregnant women was 12% higher in the summer than in the winter.
Implications	These findings suggest that injuries relate to lifestyle because individuals fail to recognize risks and take precautions, which underscores the need for injury prevention as a way of reducing harm. Pregnant women need to be mindful that normal lifestyle choices can contribute to an increased risk of major trauma and merit greater awareness throughout the year.

Population-based study demonstrates striking seasonality of croup hospitalizations in Ontario

Segal A, Crighton E, Moineddin R, Mamdani M, Upshur R. Croup hospitalizations in Ontario: a 14-year time-series analysis. *Pediatrics*. 2005; 116 (1): 51-55.

Issue	Though several studies have examined the seasonality of croup hospitalizations, study periods have generally been relatively short and sample sizes small.
Study	Examined seasonal and temporal patterns of croup hospitalizations between 1988 and 2002 among all Ontario infants and children to age 4 (44,820 children).
Key Findings	There was strong evidence of croup hospitalization seasonality, with a mid-autumn peak every two years, and an annual summer trough. Males were hospitalized twice as often as females, and rates of croup hospitalization were slightly lower for children aged 1 to 4 years than for children under a year old. A marked decrease in croup hospitalizations was observed following the winter of 1993/1994, likely due to the introduction of the widespread use of steroids in the treatment of croup, and the decline continued for the remainder of the study period.
Implications	These findings may contribute to the further development of treatment protocols for croup, as well as to the potential for vaccines for the human parainfluenza viruses, which have been found to be the most frequent causes of croup.

Osteoporosis diagnosis and testing improvements reducing fracture rates in the elderly

Jaglal S, Weller I, Mamdani M, Hawker G, Kreder H, Jaakkimainen L, Adachi J. Population trends in BMD testing, treatment, and hip and wrist fracture rates: are the hip fracture projections wrong? *J Bone Miner Res*. 2005; 20 (6): 898-905.

Issue	Despite predictions of a worldwide epidemic of hip fractures due to an aging population, it is unknown whether increases in diagnosis and effective treatments have translated into increased prevention and stable or reduced rates of osteoporotic fractures.
Study	Examined time trends in bone mineral density (BMD) testing, prescriptions for bone-sparing medications, hip and wrist fracture rates, and population projections of fracture rates in Ontario to 2005.
Key Findings	From 1992 to 2001, the number of BMD tests increased 10-fold. There has been a steady increase in the number of persons filling prescriptions for bone-sparing medications (12,298 in 1996 to 225,580 in 2003). The rates of wrist and hip fractures have decreased and, based on population projections, this decrease is expected to continue.
Implications	This study demonstrates that fracture rates are declining. There is a need to continue with present efforts to improve the detection and treatment of osteoporosis to reduce the human and economic burden caused by fractures.

Stroke-on-awakening and stroke-while-awake patients have similar outcomes

Nadeau J, Fang J, Kapral M, Silver F, Hill M. Outcome after stroke-upon-awakening. *Can J Neurol Sci.* 2005; 32 (2): 232-236.

Issue	Differences in outcomes between patients who wake up with stroke (stroke-on-awakening) versus those who are awake at the onset of a stroke (stroke-while-awake) have not been previously examined.
Study	Using data from Phases 1 and 2 of the Registry of the Canadian Stroke Network (RCSN), compared demographics, clinical data and six-month outcomes between patients with stroke-on-awakening versus stroke-while-awake.
Key Findings	Among 2,585 stroke patients, 349 patients (13.5%) had a stroke-on-awakening, while 2,236 patients (86.5%) were awake at the onset of the stroke. Patients with stroke-on-awakening were more likely to have higher blood pressure and to suffer ischemic stroke, but stroke severity, measured by level of consciousness, did not differ significantly between the two groups. There was also no significant difference between the two groups in terms of mortality at discharge and at six-month follow-up. However, patients with stroke-on-awakening had greater disability at six months.
Implications	Patients with stroke-on-awakening represent a minority of stroke patients. The lack of substantial clinical differences at presentation and outcomes between patients with stroke-on-awakening compared to stroke-while-awake means that further studies of intervention, such as thrombolysis, among patients with stroke-on-awakening is warranted.

Valproate and lithium cause equally small rate of delirium in older adults with mood disorders

Shulman K, Sykora K, Gill S, Mamdani M, Bronskill S, Wodchis W, Anderson G, Rochon P. Incidence of delirium in older adults newly prescribed lithium or valproate: a population-based cohort study. *J Clin Psychiatry.* 2005; 66 (4): 424-427.

Issue	The use of lithium carbonate has decreased in favour of valproate for the management of mood disorders in the elderly, despite a lack of data to support this shift in clinical practice.
Study	Between 1993 and 2001, tracked mood disorder patients aged 66 years and older who were newly dispensed lithium (2,422 patients) or valproate (2,918 patients) to examine the incidence of hospitalizations with delirium, which is one clear manifestation of neurotoxicity in old age.
Key Findings	There was no statistically significant difference in the incidence of hospitalizations with delirium between lithium (2.8 per 100 person-years) and valproate (4.1 per 100 person-years).
Implications	These findings suggest that the shift away from lithium carbonate use to manage mood disorders in older adults, based on neurotoxicity concerns, is not justified, which should help to alleviate some prescribing concerns.

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