

At A Glance

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Monthly highlights of ICES research findings for stakeholders

Antipsychotic drugs prescribed for elderly patients with dementia may be dangerous

Rochon P, Normand S-L, Gomes T, Gill S, Anderson G, Melo M, Sykora K, Lipscombe L, Bell C, Gurwitz J. Antipsychotic therapy and short-term serious events in older adults with dementia. *Arch Intern Med.* 2008; 168(10):1090–1096.

Issue	Antipsychotic drugs are widely used to treat behavioural problems in older adults with dementia. No studies have used population-based data to determine the risk of developing any serious adverse event.
Study	Included 20,682 Ontarians aged 66 and older with dementia living in the community and 20,559 matched individuals living in a nursing home between April 1997 and March 2004. Each group was divided into 3 sub-groups: those not receiving any antipsychotics, those taking newer atypical antipsychotics and those taking older conventional antipsychotics. All patients were followed for 30 days to determine their risk of developing a serious event (i.e., hospital admission or death).
Key Findings	Compared to those who received no antipsychotic therapy, community-dwelling older adults newly dispensed an atypical antipsychotic drug were 3.2 times more likely to be hospitalized or die within the follow-up period. Those who received a conventional antipsychotic drug were 3.8 times more likely to be hospitalized or die. The pattern was similar but less pronounced among older adults living in a nursing home.
Implications	Serious events, as indicated by a hospital admission or death, are frequent following the short-term use of antipsychotic drugs in older adults with dementia. These drugs should be prescribed with caution even for short-term therapy.

Earlier predictions seriously underestimate the prevalence of hypertension by 2025

Tu K, Chen Z, Lipscombe L. Prevalence and incidence of hypertension from 1995 to 2005: a population-based study. *CMAJ.* 2008; 178(11):1429–1435.

Issue	Researchers have predicted that the prevalence of hypertension will increase by 24% in developed countries from 2000 to 2025. Given that obesity and sedentary lifestyles—major risk factors for hypertension—are rising at an unprecedented rate, could the prevalence of hypertension be rising faster than predicted?
Study	Analyzed health administrative databases to calculate prevalence rates of hypertension in Ontarians aged 20 years and older, from April 1994 to March 2005. Incidence rates were calculated for 1997 to 2004.
Key Findings	The number of adults with hypertension more than doubled from 1995 to 2005. Age- and sex-adjusted prevalence of hypertension increased by 60.0% (from 153.1 per 1,000 in 1995 to 244.8 per 1,000 in 2005). Age- and sex-adjusted incidence of hypertension increased by 25.7% (from 25.5 per 1,000 in 1997 to 32.1 per 1,000 in 2004).
Implications	The rise in hypertension prevalence will likely far exceed the predicted prevalence for 2025. Public health strategies to prevent and manage hypertension and related adverse conditions are urgently needed.

Women with gestational diabetes at increased risk for cardiovascular disease after pregnancy

Shah B, Retnakaran R, Booth G. Increased risk of cardiovascular disease in young women following gestational diabetes. *Diabetes Care.* 2008 May 16; [Epub ahead of print].

Issue	Do women with gestational diabetes (GDM) have an increased risk of cardiovascular disease (CVD) following pregnancy?
Study	Identified women aged 20 to 49 years with live births between April 1994 and March 1997 in Ontario. Women with GDM were matched with up to 10 women without GDM and followed for CVD.
Key Findings	Of 351,685 women, 2.3% (8,194) had GDM during pregnancy. These women were matched with 81,262 women without GDM. The median follow-up time was 11.5 years. Diabetes developed during follow-up in 27.0% of the women with GDM and 3.2% of the women without GDM. Women with GDM had a substantially increased risk for CVD compared to women without GDM, with much of this risk attributable to the subsequent development of type 2 diabetes.
Implications	These findings reinforce the vital need for diabetes prevention strategies in this high-risk population.

Distinct age and sex differences evident in medicinal self-poisonings

Rhodes A, Bethell J, Spence J, Links P, Streiner D, Jaakkimainen L. Age-sex differences in medicinal self-poisonings: a population-based study of deliberate intent and medical severity. *Soc Psychiatry Psychiatr Epidemiol.* 2008 May 29; [Epub ahead of print].

Issue	While older age and male sex are known risk factors for suicide, it is unclear how these factors are related to the nature and severity of self-poisoning (SP) with medicinal agents.
Study	Analyzed hospital admission records of 18,383 Ontarians aged 12 years and older who presented to an emergency department for medicinal SP between April 2001 and March 2002. Patients were characterized by the medicinal agents taken, identification of deliberate intent and medical severity.
Key Findings	<ul style="list-style-type: none"> • Distinct age-sex differences were found in the nature and severity of medicinal SP. Overall, 63.7% of patients were female, 13.7% were aged 12–17 years and 11.3% were aged 65 years or older. Alcohol involvement was evident in 7.1% of the patients. • Half of the study group (9,173 patients) had engaged in deliberate self-harm. • In youths aged 12–17, about 40% of presentations involved analgesics, typically not prescribed and most often acetaminophen preparations. • Among those aged 12–64, self-poisonings in females were identified as deliberate more often than in males, and this pattern occurred in most agent-groups, even among those who took antidepressants. • Acetaminophen preparations were most consistently associated with medical severity, and this effect was strongest among female youths. • Although medicinal SP was less frequent in the elderly, these presentations tended to be more medically serious and less often identified as deliberate.
Implications	Despite a higher risk for suicide, males and the elderly may not have their deliberate intent detected in cases of self-poisoning. Greater consideration should be given to strategies that emphasize identifying and treating mental illness, such as more comprehensive patient assessments and follow-up in the emergency department, and preventive and educational roles, such as enhanced controls on access to medicinal agents and alcohol.

Study finds further opportunities to prevent hospital deaths following CABG surgery

Guru V, Tu J, Etchells E, Anderson G, Naylor D, Novick R, Feindel C, Rubens F, Teoh K, Mathur A, Hamilton A, Bonneau D, Cutrara C, Austin P, Fremes S. The relationship between preventability of death after CABG surgery and all cause risk-adjusted mortality rates. *Circulation.* 2008; 117(23):2969–2976.

Issue	The relationship between all-cause in-hospital mortality after coronary artery bypass graft (CABG) surgery and the proportion of preventable in-hospital deaths merits investigation as a measure of quality of care at an institutional level.
Study	Arranged for two experienced cardiac surgeons to review chart summaries of 347 randomly selected in-hospital deaths following CABG surgery at nine Ontario institutions from 1998 to 2003 (the summaries were blinded to patient, surgeon and hospital). Rates of preventable deaths were estimated for each hospital and compared to all-cause mortality rates. An adverse event audit completed by each surgeon reviewer was used to identify quality improvement opportunities for the preventable deaths.
Key Findings	A total of 111 CABG deaths (32%) were judged preventable despite low mortality rates (1–3%) across all hospitals. A large proportion of these deaths were related to problems in the operating room (86%) and the intensive care unit (61%). Many deaths were associated with deviations in perioperative care (32% based on the concurrence of two reviewers). There was no significant correlation between all-cause, risk-adjusted in-hospital mortality rates and the proportion of preventable deaths at the hospital level.
Implications	Approximately one-third of in-hospital CABG deaths were judged preventable by surgeon-reviewers. All-cause risk-adjusted mortality rates are convenient measures of institutional quality of care, but were not correlated with preventable mortality in this jurisdiction. Healthcare providers should conduct detailed adverse event audits to compel meaningful improvements in quality.