

At A Glance

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Monthly highlights of ICES research findings for stakeholders

Drug-coated heart stents found to be safe and effective in high-risk angioplasty patients

Tu J, Bowen J, Chiu M, Ko D, Austin P, He Y, Hopkins R, Tarride J-E, Blackhouse G, Lazzam Cohen E, Goeree R. Effectiveness and safety of drug-eluting stents in Ontario. *New Engl J Med.* 2007; 357 (14): 1393–1402.

Issue	The effectiveness and safety of drug-eluting stents (tiny mesh tubes placed in diseased arteries that slowly release a drug to prevent re-narrowing) has been the subject of worldwide debate.
Study	Identified 3,700 pairs of patients who received either a drug-eluting stent (DES) or a bare-metal stent (BMS) during a first percutaneous coronary intervention in Ontario between December 2003 and March 2005. Their rates of revascularization, myocardial infarction (MI) and mortality were examined.
Key Findings	The need for a second procedure was significantly lower in the DES group than in the BMS group (7.4% and 10.7% respectively). The three-year mortality rate was significantly lower in the DES group (5.5% vs 7.8%), while the two-year MI rate was similar for the two groups (DES, 5.7% vs. BMS, 5.2%). DESs were associated with significant reductions in the rate of revascularization among patients with two or three risk factors (i.e., the presence of diabetes, small vessels and long lesions), but not among lower-risk patients.
Implications	These findings will be helpful to clinicians, administrators and policy makers by confirming that using drug-eluting stents in high-risk patients is both effective and safe.

Flu vaccination rates have doubled in the past decade, yet still fall short of national targets

Kwong J, Rosella L, Johansen H. Trends in influenza vaccination in Canada, 1996/97 to 2005. *Health Rep.* 2007 October 2; Epub ahead of print.

Issue	In 2005, influenza vaccination target rates in Canada were raised from 70% to 80% for high-risk groups, including adults aged 65 years and older and people with chronic medical conditions, such as heart disease, diabetes and asthma. An examination of recent trends in rates of vaccination is warranted.
Study	Used data from the 1997 National Population Health Survey and the 2001, 2003 and 2005 Canadian Community Health Surveys to calculate the percentage of the population vaccinated for influenza by age group, presence of chronic conditions and province/territory of residence.
Key Findings	Nationally, vaccination rates rose from 15% in 1997 to 27% in 2001, stabilized between 2001 and 2003, and increased to 34% by 2005. Ontario had the highest rates at each of the four survey dates (rising from 18% to 42%), while Newfoundland and Labrador had the lowest (rising from 11% to 22%). Target rates for high-risk groups were not met in any province or territory; only 71% of adults aged 65 years and older and 42% of people aged 12 to 64 years with chronic illnesses were vaccinated in 2005.
Implications	While influenza vaccination rates more than doubled between 1997 and 2005, additional strategies and/or efforts will be needed to achieve further increases. The development of immunization registries could facilitate program monitoring and inform policy making.

Ontario study finds barriers to biopsy use in diagnosing breast cancer

Holloway C, Saskin R, Brackstone M, Paszat L. Variation in the use of percutaneous biopsy for diagnosis of breast abnormalities in Ontario. *Ann Surg Oncol.* 2007; 14 (10): 2932–2939.

Issue	Despite its many advantages, percutaneous (needle) biopsy has not been universally adopted for Ontario women requiring a breast tissue diagnosis.
Study	Identified 17,068 women without a previous cancer diagnosis who underwent breast tissue sampling by needle biopsy or surgery between April 2001 and December 2002, and compared these groups in terms of their age, residence (urban/rural/Local Health Integration Network[LHIN]), income level, diagnosis (benign/malignant), presence of a primary care provider and prior mammography.
Key Findings	A total of 10,459 women (61%) underwent needle biopsy. Of the 10,131 women who underwent surgery, 6,637 received a benign diagnosis and 3,494 had cancer, for a benign-to-malignant ratio of almost 2:1. Women with cancer were slightly more likely to undergo biopsy than women without (64.7% vs. 60.3%). There was wide variation among LHINs in the use of biopsy (range, 24% to 72%). Women with the highest incomes, urban residence, a primary care provider, or a history of a prior mammography were more likely to receive a biopsy.
Implications	Variations in the use of needle biopsy due to factors unrelated to reasons for having a biopsy indicate that strategies to identify and overcome barriers to its use are needed.

Improving quality of care in long-term care hospitals is not always more costly

Wodchis W, Teare G, Anderson G. Cost and quality: evidence from Ontario long-term care hospitals. *Med Care*. 2007; 45 (10): 981–988.

Issue	Although both quality and cost are important concerns for long-term care (LTC) facility management, the relationship between the two is poorly understood. The conclusions of previous studies relied on particular interventions that may not be generalizable.
Study	Examined the effect of seven MDS-based quality indicators – two process indicators (use of physical restraints and antipsychotic medications) and five outcome indicators (prevalence and worsening of skin ulcers, prevalence and worsening of incontinence, and pain prevalence) – on direct and indirect resident care costs in 99 LTC hospitals in Ontario from April 1998 to March 2002. The marginal costs associated with higher facility quality performance were calculated on a resident-day basis.
Key Findings	Increases in restraint use and incident skin ulcers were associated with lower per diem costs, whereas incontinence prevalence was associated with higher per diem costs.
Implications	LTC hospitals have a strong business case for improving quality in incontinence; however, policy makers may need to provide financial incentives to encourage reductions in restraint use and skin ulcers to defray the higher costs associated with improving quality in these areas.

Study examines the impact of obesity on chronic disease in Canadians

Ying Y, Chen Y, Manuel D, Morrison H, Mao Y, Obesity Working Group. Quantifying the impact of obesity category on major chronic diseases in Canada. *TheScientificWorld*. 2007; 7: 1211–1221.

Issue	There is limited national data on the association between categories of obesity and chronic diseases.
Study	Classified 110,200 Canadian Community Health Survey participants aged 18 years and older into four categories based on their body mass index (BMI): overweight (BMI 25.0-29.9), class I obesity (30.0-34.9), class II obesity (35.0-39.9) and class III obesity (≥ 40) to investigate the association between BMI and each of hypertension (high blood pressure), diabetes, heart disease, arthritis and asthma, as well as several sociodemographic characteristics (e.g., age, sex, race, education, income, tobacco use, physical activity).
Key Findings	<p>The results found that:</p> <ul style="list-style-type: none"> • The overall prevalence of obesity was 16.2% in men and 14.6% in women. • The prevalence of obesity III (clinical obesity) was 1.0% in men (compared to 1.5% in U.S. men) and 1.4% in women (2.8% in U.S. women). • Age, education level and physical activity were major risk factors across BMI levels in both sexes. • Among men, marital status, residential location (urban/rural), race and language spoken were associated, either positively or negatively, with overweight, obesity I and obesity II, but not obesity III. • Among women, marital status and alcohol consumption were not associated with obesity I or II, but with obesity III. • The residential location of women was associated with overweight and obesity I, but not with obesity II or III. • The prevalence of diabetes, hypertension, heart disease, arthritis and asthma increased with increasing BMI level, and the highest values appeared in participants at the obesity III level. • The greatest impact of clinical obesity (class III) was on hypertension and diabetes control.
Implications	These results suggest that the impact of obesity on Canadians' health should be studied and addressed by obesity level. The estimates produced may provide policy makers with baseline figures for developing and managing a nationwide obesity action plan.

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