

At A Glance

March 2005

Monthly highlights of ICES research findings for stakeholders

Internationally trained doctors provide same level of heart attack care as Canadian physicians

Ko D, Austin C, Chan B, Tu J. Quality of care of international and Canadian medical graduates in acute myocardial infarction. *Arch Intern Med.* 2005; 165 (4): 458-463.

Issue	Some have concerns that international medical graduates (IMGs) may provide inferior care relative to locally trained medical graduates.
Study	Tracked over 127,000 Ontario heart attack patients admitted between 1992 and 2000 to acute care hospitals to compare mortality rates, use of secondary prevention medications, and use of invasive cardiac procedures for patients treated by IMGs versus Canadian medical graduates (CMGs).
Key Findings	The mortality rates of IMG- and CMG-treated patients were nearly identical at both 30 days (13.3% vs. 13.4%) and one year (21.8% vs. 21.9%) following their heart attack. Patients treated by both groups of physicians also had similar likelihoods of receiving secondary prevention medications at 90 days following hospital discharge, and invasive cardiac procedures at one year.
Implications	This information should reassure patients and policy makers about the ability of appropriately trained IMGs to deliver high quality heart attack care. Next steps should focus on confirming these results in different areas of medicine and in other jurisdictions.

U.S. cancer centers of excellence have lower surgical mortality, but same long-term survival rates

Birkmeyer N, Goodney P, Stukel T, Hillner B, Birkmeyer J. Do cancer centers designated by the National Cancer Institute have better surgical outcomes? *Cancer.* 2005; 103 (3): 435-441.

Issue	Although cancer centers designated as centers of excellence by the U.S. National Cancer Institute (NCI) often profile superior outcomes, the relative performance of these centers has not been examined.
Study	Assessed surgical mortality and five-year survival rates for over 63,000 U.S. Medicare patients undergoing major cancer surgery – resection for lung, esophageal, gastric, pancreatic, bladder, or colon cancer between 1994 and 1999. Patients treated at the 51 NCI cancer centers were compared with patients at 51 control hospitals with the highest volumes for each procedure.
Key Findings	NCI cancer centers had lower surgical mortality rates than control hospitals for four of the six procedures, including colectomy (5.4% vs. 6.7%), pulmonary resection (6.3% vs. 7.9%), gastrectomy (8.0% vs. 12.2%), and esophagectomy (7.9% vs. 10.9%). However, there were no significant differences in the subsequent five-year mortality rates between NCI cancer centers and control hospitals for any of the procedures studied.
Implications	Non-NCI designated hospitals should look to NCI cancer centers to identify best practices to reduce surgical mortality rates.

Diabetic patients with poor blood sugar control could be better managed

Shah B, Hux J, Laupacis A, Zinman B, vanWalraven C. Clinical inertia in response to inadequate glycemic control: do specialists differ from primary care physicians? *Diabetes Care.* 2005; 28 (3): 600-606.

Issue	Data suggest that specialist care results in better glycemic control for diabetic patients than primary care, but whether or not specialists demonstrate less 'clinical inertia' (failure to act despite recognition of a problem with a patient's management) than primary care physicians is unknown.
Study	All non-insulin requiring diabetic patients in eastern Ontario aged 65 years or older with poor glycemic control were tracked to examine drug intensification via the addition of a new oral drug, a dose increase of an existing oral drug, or the initiation of insulin, and the type of physician providing care (specialist or primary care physician).
Key Findings	Between 1999 and 2000, drug intensification occurred in only 37.4% of patients who were treated by a primary care physician and in only 45.1% of patients who were treated by a specialist.
Implications	Interventions that could assist patients and physicians to recognize and overcome poor glycemic control and clinical inertia should be utilized to improve diabetes care in the population.

Aging 'baby boomers' will increase need for life support in ICUs

Needham D, Bronskill S, Calinawan J, Sibbald W, Pronovost P, Laupacis A. Projected incidence of mechanical ventilation in Ontario to 2026: preparing for the aging baby boomers. *Crit Care Med.* 2005; 33 (3): 574-579.

Issue	No research has examined the impact of the aging 'baby boomer' population on the future need for critical care resources in Ontario.
Study	Estimated the number of Ontario adults who will require mechanical ventilation from 2006 to 2026 based on actual province-wide use of ventilators in 2000 and recent population projections for this 20-year period.
Key Findings	By 2026, almost 35,000 Ontario adults will require mechanical ventilation, an 80% increase from 2000. Even after considering the effect of population growth on these projections, the use of mechanical ventilation would still increase by more than 30% as a result of the aging baby boomer population. This increase represents an annually compounded growth rate of 2.3% over the study period, which is very similar to that experienced in the 1990s.
Implications	In the current environment where intensive care unit (ICU) resources are limited and ventilated patients already use a significant proportion of acute care resources, planning for this continued growth is essential. Existing evidence-based strategies that improve both the efficiency and efficacy of critical care services should be carefully evaluated for broad implementation.

Clinical trials of Alzheimer's drug do not adequately represent patients taking it

Gill S, Bronskill S, Mamdani M, Sykora K, Li P, Shulman K, Anderson G, Hillmer M, Wodchis W, Rochon P. Representation of patients with dementia in clinical trials of donepezil. *Can J Pharmacol.* 2004; 11 (2): e274-e285.

Issue	There are concerns as to whether the actual patient population taking the widely prescribed Alzheimer's disease drug, donepezil, has been adequately represented in randomized controlled trials (RCTs).
Study	Tracked older adults newly dispensed donepezil in Ontario between September 2001 and March 2002 and compared this group to clinical trial subjects identified in a systematic literature review of RCTs of donepezil. Discontinuation rates were examined for patients with and without potential contraindications to the drug.
Key Findings	Between 51% and 78% of older adults who were newly dispensed donepezil during the study period would have been ineligible for RCT enrollment. Overall, 27.8% of patients newly dispensed this medication stopped taking it within seven months of the initial prescription. Discontinuation rates were significantly higher for patients with a history of lung disease, active cardiovascular disease, or Parkinsonism.
Implications	Future clinical trials evaluating dementia therapies should attempt to adequately represent frail older adults. Until then, clinicians should carefully weigh the risks and benefits of dementia therapies in the frail elderly.

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