

At A Glance

December 2012

Monthly highlights of ICES research findings for stakeholders

No elevated risk of heart disease for those who became ill during Walkerton *E. coli* outbreak

Hizo-Abes P, Clark WF, Sontrop JM, Young A, Huang A, Thiessen-Philbrook H, Austin PC, Garg AX, on behalf of the Walkerton Health Study Investigators. Cardiovascular disease after *Escherichia coli* O157:H7 gastroenteritis. *CMAJ*. 2012 Nov 19 (Epub ahead of print).

- Issue** In May 2000, Walkerton, Ontario experienced an outbreak of acute gastroenteritis caused by drinking water contaminated with *E. coli* O157:H7. What is the long-term risk of cardiovascular disease following such an outbreak?
- Study** Identified 898 individuals from the 2002–2008 Walkerton Health Study (153 with severe gastroenteritis, 414 with mild gastroenteritis and 331 with no gastroenteritis) and 11,263 unaffected residents from surrounding communities. Death or first major cardiovascular event (admission to hospital for acute myocardial infarction, stroke or congestive heart failure) was determined over a 7.4-year follow-up period.
- Key Findings** There were 1,174 deaths or major cardiovascular events during the study period. Compared with residents of surrounding communities, the risk of death or major cardiovascular event was not elevated among Walkerton residents with severe gastroenteritis during the outbreak and was significantly decreased among those with mild gastroenteritis.
- Implications** Close scrutiny by health care professionals, including active surveillance and treatment of conditions such as hypertension and kidney disease, may have contributed to preventing cardiovascular events.

Patients with mental illness have shorter ED wait times during crowded periods

Atzema CL, Schull MJ, Kurdyak P, Menezes NM, Wilton AS, Vermeulen MJ, Austin PC. Wait times in the emergency department for patients with mental illness. *CMAJ*. 2012; 184(18):E969-76.

- Issue** Are patients with mental illness given lower triage scores and made to wait longer for care than other patients in the emergency department (ED)?
- Study** Of adults seen in 155 Ontario EDs between April 2007 and March 2009, compared wait times and triage scores of 51,381 patients with mental illness (manic, depressive or psychotic disorders) with those of all other ED patients.
- Key Findings** Patients with mental illness received a higher triage score than other patients (a score of 3 out of triage levels 1–2, 3 or 4–5), regardless of crowding. Compared with other patients, patients with mental illness waited 10 minutes longer, on average, to see a physician during noncrowded periods, but they waited significantly less time than other patients as crowding increased: 14, 38 and 48 minutes less, respectively, in mild, moderate and severe crowding.
- Implications** Patients with mental illness were triaged appropriately in Ontario EDs. These patients waited less time than other patients to see a physician under crowded conditions, and only slightly longer under noncrowded conditions.

Study offers more complete picture of physician compensation in Ontario

Petch J, Dhalla IA, Henry DA, Schultz SE, Glazier RH, Bhatia S, Laupacis A. Public payments to physicians in Ontario adjusted for overhead costs. *Healthc Policy*. 2012; 8(2):30–6.

- Issue** Estimates of physician incomes are frequently misleading because they may not include the cost of operating a practice. What are the average net physician incomes from public payments in Ontario after adjusting for estimated overhead costs?
- Study** Combined data from the 2010 National Physician Survey (NPS) and the 2012 ICES report *Payments to Ontario Physicians from MOHLTC Sources, 1992/93 to 2009/10*. Subtracted the percentage of overhead costs reported in the NPS from average gross public payments per full-time equivalent physician to calculate average net income.
- Key Findings** Average self-reported overhead costs from the NPS ranged from 12.5% in emergency medicine to 42.5% in ophthalmology. Specialties with the highest average net incomes were diagnostic radiology, nephrology, vascular surgery, cardio/thoracic surgery and gastroenterology. Family physicians/general practitioners had an average net income of \$207,600. The average net income from public payments to all physicians after adjusting for overhead was \$240,400.
- Implications** These findings offer some insight into how public money is being spent in the Ontario health care system.

International prescribing rates vary among elderly patients with inflammatory bowel disease

Benchimol EI, Cook SF, Erichsen R, Long MD, Bernstein CN, Wong J, Carroll CF, Frøslev T, Sampson T, Kappelman MD. International variation in medication prescription rates among elderly patients with inflammatory bowel disease. *J Crohns Colitis*. 2012 Sep 24 [Epub ahead of print].

Issue	The elderly represent a growing demographic of patients with inflammatory bowel disease (IBD), which includes Crohn's disease and ulcerative colitis. What are the prescribing patterns among elderly patients with IBD and how do they vary internationally?
Study	Identified patients aged 65 and older with prevalent IBD who had one or more prescriptions for an IBD-related medication in a given quarter between January 2004 and December 2009 in the United States, the United Kingdom, Denmark and Canada. Compared the countries' prescribing patterns for each of the 24 quarters in the study period.
Key Findings	<ul style="list-style-type: none"> • Quarterly, approximately 54.7–73.0% of U.S. patients, 43.2–47.7% of Canadian patients, 34.1–38.0% of Denmark patients, and 47.2–57.7% of U.K. patients had at least one IBD-related prescription. • In patients with Crohn's disease, Canada and the U.S. had higher prescription rates for oral 5-ASA (24/24 quarters) and infliximab (22/24), while the U.S. had higher rates of thiopurine usage (23/24). Canada had higher rates of methotrexate prescriptions (21/24). • In patients with ulcerative colitis, rates of oral steroid usage were lowest in the U.S. (22/24) and oral 5-ASA use was highest in the U.S. and Canada (24/24). • Canada and Denmark used more rectal therapy than the U.S. • Infliximab usage in ulcerative colitis was significantly higher in the U.S. and Canada after 2006.
Implications	Significant variation in medication prescription rates exists among countries. Future research should assess whether these differences are associated with disparities in outcomes and health care costs.

Concurrent mother–baby admission to ICU carries high mortality risk

Ray JG, Urquia ML, Berger H, Vermeulen MJ. Maternal and neonatal separation and mortality associated with concurrent admissions to intensive care units. *CMAJ* 2012; 184(18):E956–62.

Issue	Concurrent admission of a mother and her newborn to separate intensive care units (co-ICU admission), possibly in different centres, can magnify family discord and stress. What are the prevalence and predictors of mother–infant separation and mortality associated with co-ICU admissions?
Study	From 1,023,978 singleton live births in Ontario between April 2002 and March 2010, identified maternal–infant pairs that had co-ICU admission (n=1,216), maternal ICU admission only (n=897), neonatal ICU (NICU) admission only (n=123,236) or no ICU admission (n=898,629). Mother–infant separation because of inter-facility transfer was measured for each of the 3 ICU states.
Key Findings	<ul style="list-style-type: none"> • The prevalence of co-ICU admissions was 1.2 per 1,000 live births and was higher than maternal ICU admissions (0.9 per 1,000). • Maternal–newborn separation due to inter-facility transfer was 30.8 times more common in the co-ICU group than in the no-ICU group and exceeded the prevalence in the maternal ICU and NICU groups. • Short-term infant mortality (less than 28 days after birth) was higher in the co-ICU group (18.1 per 1,000) than in the NICU group (7.6 per 1,000), relative to 0.7 per 1,000 in the no-ICU group. • Short-term maternal mortality (less than 42 days after delivery) was also higher in the co-ICU group (15.6 per 1,000) than in the maternal ICU group (6.7 per 1,000) or the NICU group (0.2 per 1,000).
Implications	Coordination of care plans by ICU staff for mothers and babies in their respective ICUs, especially by trained social workers, as well as efforts to transfer mothers and babies to the same hospital, may help lessen the burden of maternal–newborn separation.

ICES is an independent, non-profit organization that conducts research on a broad range of topical issues to enhance the effectiveness of health care for Ontarians. Internationally recognized for its innovative use of population-based health information, ICES research provides evidence to support health policy development and changes to the organization and delivery of health care services.