

At A Glance

January 2009

Monthly highlights of ICES research findings for stakeholders

Study probes effectiveness of colonoscopy in identifying some colon cancers

Baxter N, Goldwasser M, Paszat L, Saskin R, Urbach D, Rabeneck L. Association of colonoscopy and death from colorectal cancer. *Ann Intern Med.* 2009; 150(1): 1–8.

Issue	What is the effectiveness of colonoscopy in reducing colorectal cancer (CRC) mortality?
Study	Reviewed the health records of 10,292 people aged 52–90 who received a CRC diagnosis in Ontario between 1996 and 2001 and who died of the disease by 2003. Five randomly selected controls who did not die of CRC were matched to each case patient. The number of people who had undergone either a screening or diagnostic colonoscopy was calculated for both patient and control groups.
Key Findings	Of the 719 case patients who had undergone colonoscopy, 73% had complete colonoscopy (to the top of the large intestine); of the 5,031 controls who had undergone colonoscopy, 81% had complete colonoscopy. An inverse association was found between colonoscopy and CRC mortality, but the association differed by site of primary CRC. The chance of dying of CRC was found to be lower in people who had colonoscopy if the cancer was in the left colon. The chance of dying of CRC arising in the right colon (where cancer is more difficult to detect) was the same in those who had colonoscopy as it was in those who did not.
Implications	Physicians should advise patients of the procedure's limitations while stressing its value as a screening tool, take steps to improve how colonoscopy works in the right colon, and explore what the differences are in cancer development between the right and left colon.

Residential environment has little effect on birthweight of children of recent immigrants

Urquia M, Frank J, Glazier R, Moineddin R, Matheson F, Gagnon A. Neighborhood context and infant birthweight among recent immigrant mothers: a multilevel analysis. *Am J Public Health.* 2009; 99(2): 285–293.

Issue	Which has the greater influence on the birthweight of infants born to recent immigrants in urban Ontario: residential environment or maternal country of origin?
Study	Linked census and immigration data to the delivery records of 22,189 infants born to women who immigrated to Ontario's 10 census metropolitan areas (CMAs) from January 1993 to March 1995. Each CMA was categorized by four neighbourhood characteristics, including material deprivation, residential instability, dependency (related to population age structure) and ethnic diversity.
Key Findings	Births were distributed across 1,396 neighbourhoods and 155 countries of origin. The data revealed significant differences in birthweight by world region and income level of the mother's country of origin. Material deprivation was the only neighbourhood characteristic associated with low birthweight.
Implications	These findings could help to facilitate local access to culturally sensitive prenatal care and translation services aimed at recently arrived women from higher-risk countries of origin.

Depression associated with significantly higher use of health services by heart attack survivors

Kurdyak P, Gnam W, Goering P, Chong A, Alter D. The relationship between depressive symptoms, health service consumption, and prognosis after acute myocardial infarction: a prospective cohort study. *BMC Health Serv Res.* 2008; 8: 200.

Issue	Evidence suggests that health services use is higher among patients with depression. What is the impact of depression on health services use and cardiovascular prognosis after acute myocardial infarction (AMI)?
Study	Analyzed 1,941 patients aged 19–101 hospitalized for AMI in Ontario and discharged between December 1999 and February 2003. Depression rating, cardiac illness severity and post-discharge use of cardiac and non-cardiac health care services were calculated from a self-administered baseline survey, a one-month follow-up telephone survey and a medical chart review, all linked to health administrative data.
Key Findings	Depressive symptoms at one month post-AMI were associated with a 24%, 9% and 43% increase in total, cardiac and non-cardiac hospitalization days, respectively in the 18 months post-AMI. This persisted after adjusting for coexisting diseases and cardiac illness severity. Depression-associated increases in cardiac health service consumption were significantly more pronounced among patients of lower than higher cardiac risk severity. Depression was not associated with increased mortality two years post-AMI.
Implications	The paradoxically higher cardiac health service consumption among lower-risk AMI patients may suggest that health-seeking behaviours are mediated more by psychosocial factors than by objective measures of cardiovascular risk or necessity.

Health care utilization in Ontario increases significantly among older age groups

Nie J, Wang L, Tracy C, Moineddin R, Upshur R. Health care service utilization among the elderly: findings from the Study to Understand the Chronic Condition Experience of the Elderly and the Disabled (SUCCEED project). *J Eval Clin Pract.* 2008; 14(6): 1044–1049.

Issue	Age-related change in health care utilization among the elderly is not well understood.
Study	Examined health care utilization rates of 1.6 million Ontario residents aged 65 and older who had at least one health insurance claim from April 2005 to March 2006. Nine utilization events were measured, including visits to family physicians, specialist physicians and emergency departments; inpatient admissions; drug and diagnostic laboratory claims; X-rays; and CT and MRI scans.
Key Findings	<ul style="list-style-type: none"> • The average number of utilization events for the one-year period was 70 (women: 76; men: 63). • Service utilization by those aged 85 and older (average: 125 events) was 2.5 times that for the 65–69 age group (49 events). • Utilization was significantly higher among women than men for every age group. • Drug claims and diagnostic laboratory tests accounted for the greatest proportion of events: 54% and 30%, respectively. • MRI scans and specialist visits were the only services used less by those aged 85 and older. • The overall difference between the 65–69 age group and the 85+ age group was 155%, or 76 more events per person in the older group.
Implications	The higher utilization rate among the oldest residents is likely associated with greater prevalence of chronic diseases and co-existing conditions. Long-term population health strategies should be devised to redesign health care systems toward chronic care and to enhance self-management programs for chronic disease.

Study identifies Canadians at greatest risk for colonoscopy complications

Rabeneck L, Paszat L, Hilsden R, Saskin R, Leddin D, Grunfeld E, Wai E, Goldwasser M, Sutradhar R, Stukel T. Bleeding and perforation after outpatient colonoscopy and their risk factors in usual clinical practice. *Gastroenterology.* 2008; 135(6): 1899–1906, 1906.e1.

Issue	No large-scale population-based studies have evaluated the effects of patient, endoscopist and setting on colonoscopy-related bleeding and perforation.
Study	Analyzed the health records of 97,091 persons aged 50–75 who underwent an outpatient colonoscopy between April 2002 and March 2003 in British Columbia, Alberta, Ontario or Nova Scotia. Data from these patients were linked with data on all individuals who were admitted to hospital with bleeding or perforation within 30 days following a colonoscopy.
Key Findings	<ul style="list-style-type: none"> • The pooled rate of colonoscopy-related bleeding among patients in the four provinces was 1.64 per 1,000 patients; the pooled rate of perforation was 0.85 per 1,000 patients. • The mortality rate following colonoscopy (calculated only for Ontario patients) was 0.074 deaths per 1,000 patients (or about one death per 14,000 patients). • Factors associated with colonoscopy-related bleeding or perforation were increased age, male sex and having a polypectomy (removal of suspicious polyps identified during the colonoscopy). • Patients treated by endoscopists who performed fewer than 300 procedures annually had three-fold higher odds of bleeding or perforation.
Implications	These findings have important implications for outpatient colonoscopy practice and health policy. Patients need to be informed of the risks of the procedure, including the risk of death. Endoscopists need to be especially careful in performing polypectomies and in performing colonoscopies in older men. People should seek referrals to a high-volume practitioner to perform their colonoscopies.