

At A Glance

January 2013

Monthly highlights of ICES research findings for stakeholders

Postmenopausal survivors of breast cancer more likely to develop diabetes

Lipscombe LL, Chan WW, Yun L, Austin PC, Anderson GM, Rochon PA. Incidence of diabetes among postmenopausal breast cancer survivors. *Diabetologia*. 2012 Dec 13 [Epub ahead of print].

Issue	There is a growing body of evidence showing an association between breast cancer and diabetes. Do postmenopausal women who develop breast cancer have a higher incidence of diabetes than those who do not?
Study	Identified 24,976 Ontario women aged 55 and older diagnosed with early-stage breast cancer from April 1996 to March 2008 and 124,880 age-matched women without breast cancer. All women were followed for a diagnosis of type 2 diabetes to March 31, 2008 (an average of 5.8 years).
Key Findings	Overall, 14,576 women (almost 10%) were diagnosed with diabetes during the follow-up. Compared to women without breast cancer, the risk of diabetes among breast cancer survivors began to increase 2 years after diagnosis—a 7% increased risk that rose to 21% after 10 years. In a subgroup of 4,404 women with breast cancer who received adjuvant chemotherapy, diabetes risk was highest in the first two years after cancer diagnosis (a 24% increased risk) and then declined.
Implications	More intensive diabetes screening and prevention strategies may be warranted for breast cancer survivors.

Fewer Ontarians with diabetes getting necessary eye exams despite public funding

Kiran T, Kopp A, Moineddin R, Victor JC, Campbell RJ, Shah BR, Glazier RH. Unintended consequences of delisting routine eye exams on retinopathy screening for people with diabetes in Ontario, Canada. *CMAJ*. 2013 Jan 7 [Epub ahead of print].

Issue	Routine eye examinations for healthy adults aged 20 to 64 were delisted from the Ontario Health Insurance Plan in 2004, but they continue to be insured for people with diabetes regardless of age. Has delisting had the unintended consequence of decreasing retinopathy screening for adults with diabetes?
Study	Examined publicly-funded eye examination data for Ontarians with diabetes aged 40 to 64 and 65 and older in each two-year period from 1998 to 2010 and assessed the change in trend before and after 2004.
Key Findings	For people with diabetes aged 40 to 64, eye examination rates remained steady at 69.2% from 1998 to 2004 but declined after delisting to 61.1% in 2006 and 57.3% in 2010. For people with diabetes aged 65 and older, eye examination rates rose gradually from 73.4% in 1998 to 78.8% in 2010, with no substantial change from 2004 to 2006.
Implications	More research is needed to determine if people with diabetes are being charged for an insured service or to what degree misunderstanding has prevented them from seeking care.

Younger adults at greater risk of recurrent gall bladder inflammation than elderly

de Mestral C, Rotstein OD, Laupacis A, Hoch JS, Zagorski B, Nathens AB. A population-based analysis of the clinical course of 10,304 patients with acute cholecystitis, discharged without cholecystectomy. *J Trauma Acute Care Surg*. 2013; 74(1):26–31.

Issue	Randomized trials and expert opinion support laparoscopic cholecystectomy (surgical removal of the gallbladder) within 7 days of symptom onset for most patients with acute cholecystitis (sudden inflammation of the gallbladder causing severe abdominal pain). However, delayed surgery remains a common practice. What is the clinical course of patients with acute cholecystitis who are discharged without cholecystectomy?
Study	Identified 25,397 patients aged 18 or older who had a first emergency admission for acute cholecystitis in Ontario between April 2004 and March 2011 and were discharged without cholecystectomy. Explored the association of patient characteristics with time to first gallstone-related event after discharge.
Key Findings	Overall, 10,304 patients (41%) did not undergo cholecystectomy on first admission. During follow-up, 2,479 patients (24%) had a gallstone-related ED visit or admission. The probability of a recurring event by 6 weeks, 12 weeks and 1 year after discharge was 14%, 19% and 29% respectively. Of these events, 30% were for biliary tract obstruction or pancreatitis, which carry significant potential for morbidity. When controlling for sex, income and comorbidity, the risk of a preventable gallstone-related event by 12 weeks was 30% for patients aged 18 to 35 compared to 14% in those aged 80 and older.
Implications	The higher risk of a gallstone-related ED visit or hospital admission in younger patients and the lower risk in those older than 80 years can inform decision making about the benefits and risks of early cholecystectomy in these patients.

Initiatives needed to improve outcomes, decrease costs for children with medical complexity

Cohen E, Berry JG, Camacho X, Anderson G, Wodchis W, Guttmann A. Patterns and costs of health care use of children with medical complexity. *Pediatrics*. 2012; 130(6):e1463–70.

Issue	Children with medical complexity (CMC) are defined as those with a congenital or acquired multi-system disease, a severe neurological condition with functional impairment, and/or a dependence on technology for activities of daily living. To what extent do CMC use health care services?
Study	From the discharge records of 340,786 children aged newborn to 16 years who were hospitalized in Ontario between April 2005 and March 2007, identified those who were classified as CMC. Analyzed their health system use and costs over the subsequent two years.
Key Findings	<ul style="list-style-type: none"> • In total, 15,771 children (4.6%) were CMC, representing 0.67% of all children in Ontario. • CMC saw a median of 13 outpatient physicians and 6 distinct subspecialists. • CMC accounted for almost one-third of child health care spending. • Rehospitalization of CMC accounted for the largest proportion of subsequent costs (27.2%), followed by home care (11.3%) and physician services (6.0%). • Thirty-six percent of CMC received home care services.
Implications	Because children with medical complexity make multiple transitions among care providers and settings, initiatives to improve their health outcomes and decrease costs should focus on better coordination across the entire continuum of care.

Health costs associated with obesity modest in isolation but significant with other risk factors

Alter DA, Wijeyesundera HC, Franklin B, Austin PC, Chong A, Oh PI, Tu JV, Stukel TA. Obesity, lifestyle risk-factors, and health service outcomes among healthy middle-aged adults in Canada. *BMC Health Serv Res*. 2012; 12:238.

Issue	To what extent is obesity among an otherwise healthy middle-aged population associated with higher health care expenditures over time?
Study	From the 1994–1996 National Population Health Survey, identified 9,398 Ontario participants who were younger than 65 years and had a body mass index of 18.5 or higher and followed them for 11.5 years to determine health service utilization costs. Their obesity and exposure to other risk factors (smoking, physical inactivity, stress) were compared with those of healthy, normal-weight matched controls.
Key Findings	Obesity as an isolated risk factor was not associated with significantly higher health care costs when compared with normal-weight controls (\$8,295 vs. \$7,324). Obesity in combination with the three additional risk factors was associated with significantly higher cumulative expenditures when compared with normal-weight controls not exposed to the risk factors (\$14,187 vs. \$7,029).
Implications	These findings have relevance to the selection, prioritization and cost-effective targeting of therapeutic lifestyle interventions for policy-makers and health system planners.

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.