

## At A Glance

September 2010

### Monthly highlights of ICES research findings for stakeholders

#### Forty percent of women in Ontario's urban areas not getting Pap tests

Lofters A, Moineddin R, Hwang S, Glazier R. Low rates of cervical cancer screening among urban immigrants: a population-based study in Ontario, Canada. *Med Care*. 2010; 48(7):611–8.

<b>Issue</b>	The Pap test has proven to be a highly effective screening tool for cervical cancer. Are there differences in screening rates associated with different sociodemographic variables?
<b>Study</b>	Studied physician claims of 2,273,995 screening-eligible women aged 25–69 who resided in Ontario's metropolitan areas from 2003 to 2005 and determined which women had undergone a Pap test.
<b>Key Findings</b>	Appropriate cervical cancer screening occurred for 61% of the women. After adjusting for physician contact and pregnancy rates, screening was especially low among women aged 50–69, women living in low-income neighbourhoods, and women who had registered with the Ontario Health Insurance Program in the preceding 10 years, a group consisting largely of immigrant women. Women with all three characteristics had a screening rate of 31% compared to 70% among women with none of them.
<b>Implications</b>	Age, income and immigrant status all play significant roles in cervical cancer screening in Ontario's metropolitan areas, despite a universal health care system. Targeted interventions with particular focus on the immigrant composition of various health regions may be essential to closing the screening gap.

#### Several factors increase risk of fracture with androgen deprivation for prostate cancer

Alibhai S, Duong-Hua M, Cheung A, Sutradhar R, Warde P, Fleshner N, Paszat L. Fracture types and risk factors in men with prostate cancer on androgen deprivation therapy: a matched cohort study of 19,079 men. *J Urol*. 2010; 184(3):918–23.

<b>Issue</b>	Androgen deprivation therapy (ADT) is well-established for treating prostate cancer (PC) but is associated with bone loss and increased risk of fragility (low trauma) fractures of the spine, hip or wrist. Do other clinical factors independently increase the risk of fracture in men with PC?
<b>Study</b>	Matched 19,079 men aged 66 or older with PC with at least six months of continuous ADT, or who underwent orchiectomy, with men with PC who had never received ADT. They were matched according to age, medication, comorbidities and prior fractures. The primary outcome was fracture, stratified into fragility and non-fragility types, and by specific site. Patients were followed for an average of 6.5 years.
<b>Key Findings</b>	There were 3,387 (17.2%) fractures of any type among ADT users and 2,495 (12.7%) among non-users. The respective numbers of fragility fractures were 1,778 (9.0%) and 1,157 (5.9%). Independent predictors of fragility and any fracture were: increasing age, prior bone-thinning medications, chronic kidney disease, prior dementia, prior fragility fracture, and prior osteoporosis diagnosis or treatment.
<b>Implications</b>	Clinicians must discuss the bone-specific risks of ADT with patients and better target those at increased risk for fracture with ADT. Screening for osteoporosis and recommendations for calcium and vitamin D, and possibly bisphosphonates or denosumab, are particularly important in older men starting ADT and those with a history of prior fragility fracture or dementia.

#### Radiodiagnostic tests during pregnancy result in low childhood cancer risk

Ray J, Schull M, Urquia M, You J, Guttman A, Vermeulen M. Major radiodiagnostic imaging in pregnancy and the risk of childhood malignancy: a population-based cohort study in Ontario. *PLoS Med*. 2010; 7(9):e1000337.

<b>Issue</b>	Is there an association between fetal exposure to major radiodiagnostic (RD) testing—computed tomography (CT) and radionuclide imaging—and the subsequent risk of childhood cancer?
<b>Study</b>	Studied infants born live to 1,835,517 women between April 1992 and March 2008 in Ontario. Maternal exposure to radiation up to one day before delivery was linked to subsequent malignancy in the child.
<b>Key Findings</b>	Overall, 5,590 women were exposed to RD testing in pregnancy. The RD testing rate rose from 1.1 to 6.3 per 1,000 pregnancies over the study period; about 73% of tests were CT scans. After a follow-up of 8.9 years, the risk of childhood cancer in the two groups (women exposed to RD testing and women not exposed) was not statistically significantly different.
<b>Implications</b>	The study could not rule out potential harm although the absolute risk was low. Pregnancy testing should continue to be done in all potentially pregnant women before undergoing RD testing, and lead apron shielding used in women of reproductive age. When clinically appropriate, nonradiation-emitting testing, such as magnetic resonance imaging or ultrasonography, should be considered first.

## Ontario seniors' use of ambulatory care varies by age, sex and socioeconomic status

Nie J, Wang L, Tracy C, Moineddin R, Upshur R. A population-based cohort study of ambulatory care service utilization among older adults. *J Eval Clin Pract.* 2010; 16(4):825–31.

<b>Issue</b>	What patterns of ambulatory care service utilization (i.e., visits to family physicians (FPs), specialist physicians (SPs), and emergency departments (EDs)) can be observed among Ontario's seniors?
<b>Study</b>	Analyzed consultations, examinations and procedures from health insurance claims submitted between April 2005 and March 2006 for 1.6 million Ontarians aged 65 and older. Claims were grouped by age, sex and socioeconomic status (SES).
<b>Key Findings</b>	<ul style="list-style-type: none"><li>• The average number of FP visits per person was 6.3, with women averaging more visits than men (6.5 vs. 6.2). FP visits by women were highest in the 80–84 age group, and in the 85–89 age group in men.</li><li>• The average number of SP visits per person was 3.2. Men averaged more SP visits per person than women in all age groups. SP visit rates peaked in the 75–79 age group in women, and in the 80–84 age group in men.</li><li>• The average number of ER visits per person was 0.6, with men averaging significantly more ER visits in all age groups. ER visits by women peaked in the 90–94 age group, and in the 95–99 age group in men.</li><li>• High users of FP and ER services were more likely to be from lower SES neighbourhoods, while high users of SPs were associated with higher SES.</li></ul>
<b>Implications</b>	Further research is required to explain the reported differences in patient sex and socioeconomic status. Attention to remediating these unexplained differences could promote greater health equity.

## Preoperative medical consultations associated with increased mortality and hospital stay

Wijeyesundera D, Austin P, Beattie W, Hux J, Laupacis A. Outcomes and processes of care related to preoperative medical consultation. *Arch Intern Med.* 2010; 170(15):1365–74.

<b>Issue</b>	Preoperative medical consultations provide internal medicine specialists with an opportunity to evaluate patients' pre-existing medical problems, order specialized tests, start medications, and arrange for closer post-surgery follow-up. What effect do these consultations have on medical outcomes?
<b>Study</b>	Identified 269,866 people aged 40 or older who had major elective noncardiac surgery in Ontario between April 1994 and March 2004, and compared mortality and length of hospital stay in those who underwent preoperative consultation with those who did not.
<b>Key Findings</b>	<ul style="list-style-type: none"><li>• In total, 104,695 patients (38.8%) underwent preoperative medical consultation with a general internist or specialist. Of these consultations, 94.2% were performed in an outpatient setting. The average duration between consultation and surgery was 15 days.</li><li>• These patients were more likely to have specialized heart and lung tests before surgery and were also more likely to be started on beta blockers to reduce the risk of heart attack following surgery.</li><li>• Average hospital stay was longer in the consultation group (9.1 days vs. 8.4 days).</li><li>• Preoperative consultation was associated with a slightly higher risk of dying at 30 days after surgery. This risk constituted one extra death for every 516 people who had undergone a consultation.</li></ul>
<b>Implications</b>	These findings highlight the need to better understand mechanisms by which preoperative medical consultations influence outcomes and identify interventions to decrease peri-operative risk.