

At A Glance

January 2007

Monthly highlights of ICES research findings for stakeholders

Study demonstrates need for comprehensive influenza immunization registry in Ontario

Kwong J, Manuel D. Using OHIP physician billing claims to ascertain individual influenza vaccination status. *Vaccine*. 2006 Oct. 19; [Epub ahead of print].

- Issue** In 2000, the Ontario government introduced the world's first large-scale Universal Influenza Immunization Program (UIIP) to provide free influenza vaccines to the entire provincial population, six months of age and older. However, there are no routinely collected data that identify who was vaccinated in all settings and age groups.
- Study** Compared self-reported flu vaccination from the Canadian Community Health Survey (CCHS) in 2001 to Ontario Health Insurance Plan (OHIP) physician billing claims.
- Key Findings** There was moderate agreement between self-reported immunization status and OHIP physician billing claims. OHIP claims were accurate but incomplete because approximately one-third of people received their flu shot outside of a physician's office.
- Implications** Development of an immunization registry that is accurate, comprehensive and timely would be the best solution for determining vaccine coverage, efficacy and safety when evaluating vaccination programs.

ICU patients have increased risk of discontinuing medications for chronic conditions

Bell C, Rahimi-Darabad P, Omer A. Discontinuity of chronic medications in patients discharged from the intensive care unit. *J Gen Intern Med*. 2006; 21 (9): 937-941.

- Issue** Patients admitted to the intensive care unit (ICU) may be at higher risk of unintentionally discontinuing medications for chronic conditions, during their hospitalization and after discharge. There is a need to determine the proportion of patients who experience this adverse outcome and to identify possible predictive factors.
- Study** Reviewed the hospital records of ICU patients at one academic and two community hospitals in Toronto during 2002. ICU patients who were prescribed at least one of six medications to treat chronic conditions before hospitalization were tracked to assess the proportion of patients whose medications were unintentionally discontinued upon discharge from hospital.
- Key Findings** Of the 1,402 ICU patients, 834 had prescriptions for at least one of the six medications to treat chronic conditions. Thirty-three per cent of patients had one or more of their medications omitted at hospital discharge. Patients in the academic hospital and those with medical/non-surgical diagnoses had a decreased risk of their medication being discontinued.
- Implications** Careful review of medication lists at ICU discharge could avoid potential adverse outcomes related to unintentional discontinuation of medications to treat chronic conditions.

Study examines differences in statin prescriptions between Ontario and BC

Paterson M, Carney G, Anderson G, Bassett K, Naglie G, Laupacis A. Case selection for statins was similar in two Canadian provinces: BC and Ontario. *J Clin Epidemiol*. 2007; 60 (1): 73-78.

- Issue** Though statins are fully reimbursed by public drug programs for seniors in British Columbia (BC) and Ontario, population-based rates of statin prescriptions are markedly higher in Ontario. However, it is unknown if new statin users in BC and Ontario differ in terms of their risk of future coronary heart disease (CHD).
- Study** Collected information on demographics, outpatient prescriptions, physician visits, hospital admissions, and vital status of new statin users aged 66 years and older, in BC and Ontario between 1998 and 2001. Compared the proportions of people who had an acute coronary syndrome (ACS), CHD, diabetes, or none of the above.
- Key Findings** Approximately 15% and 20% of BC and Ontario seniors, respectively, had filled a statin prescription by 2001. Among new statin users in the two provinces, virtually identical proportions had evidence of ACS (8%), CHD (25%) and diabetes (14%).
- Implications** Poorer case selection is unlikely to explain the relatively higher rates of statin prescribing in Ontario. In both provinces, roughly two-thirds of new statin users had no evidence of CHD. This suggests a need to look more closely at strategies to help target statins to those who benefit most.

EDs that treat more heart attack patients are less likely to miss the diagnosis

Schull M, Vermeulen M, Stukel T. The risk of missed diagnosis of acute myocardial infarction associated with emergency department volume. *Ann Emerg Med.* 2006; 48 (6): 647-655.

- Issue** Missed diagnosis of acute myocardial infarction (AMI) is associated with adverse clinical outcomes and more dollars recovered in malpractice suits than any other condition. While patient factors can help to predict the risk of missed AMIs in patients who come to the emergency department (ED), physician and hospital characteristics may also be important.
- Study** Linked the records of all AMI patients admitted to an Ontario hospital between April 1, 2002 and March 31, 2003 to their ED visit records, in the seven days preceding admission, to examine whether the annual volume of admitted AMI patients seen in the ED was associated with missed heart attack diagnoses, adjusting for age, sex, teaching hospital status, and AMI severity. Also assessed whether hospital characteristics explained any ED volume association and if missed AMIs were associated with increased mortality.
- Key Findings** The rate of missed AMIs was 2.1% and varied from 0% to 29% across EDs. After adjusting for patient differences, lower volume EDs had up to two-fold higher odds of missed AMI diagnosis compared with very high volume EDs. Lower volume EDs were also more likely to assign lower urgency triage scores to AMI patients, were less likely to have diagnostic tests available around-the-clock, and were less likely to have specialist consultation available in the ED. However, missed AMIs were not associated with an increased risk of mortality at 30 days or one year following hospital admission for an AMI.
- Implications** Since most of the EDs in Ontario are lower volume sites, these results have broad implications for reducing overall rates of missed heart attacks and improving cardiac care. The focus should be on finding solutions suitable for these lower volume institutions. Such measures could include appropriately timed and sensitive diagnostic tests, as well as easier access to specialist consultation through the use of telemedicine links.

Nurse-performed screening program for colorectal cancer can be safe and effective

Shapero T, Hoover J, Paszat L, Burgis E, Hsieh E, Rothwell D, Rabeneck L. Colorectal cancer screening with nurse-performed flexible sigmoidoscopy: results from a Canadian community-based program. *Gastrointest Endosc.* 2006 Dec. 13; [Epub ahead of print].

- Issue** Despite highest-quality evidence that early detection of colorectal cancer (CRC) can lead to reduced mortality, no organized screening programs exist in Canada.
- Study** Reported on the safety, feasibility, and detection rate for the first Canadian community-based nurse-performed flexible sigmoidoscopy (FS) screening program for CRC, established in 1999. Data collected from a prospective study of FS done by nurses and colonoscopy for persons with abnormalities done by an experienced gastroenterologist from March 1999 to November 2002 was used to provide an estimate of differences between men and women in FS. Participants included asymptomatic men and women 50 years of age and older, with no previous history of CRC.
- Key Findings** A total of 1,818 individuals underwent nurse-performed FS without complications. Results of the FS were abnormal for 240 (13.2%) of the participants, and 231 (12.7%) underwent colonoscopy. Cancer was detected in five of the participants screened and high-grade dysplasia was detected in an additional five, which is comparable with that previously reported for FS done by physicians.
- Implications** These results demonstrate that FS done by nurses is a safe, feasible method to deliver CRC screening in a community setting. Given the decline in the number of FS done by physicians over the past decade, an important opportunity exists to expand the capacity for CRC screening by implementing community-based programs of FS done by nurses.

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