

## At A Glance

November 2011

### Monthly highlights of ICES research findings for stakeholders

#### One in six residents of Ontario long-term care homes receives nine or more medications

Bronskill SE, Gill SS, Paterson JM, Bell CM, GM Anderson, Rochon PA. Exploring variation in rates of polypharmacy across long-term care homes. *J Am Med Dir Assoc.* 2011 Aug 11 [Epub ahead of print].

<b>Issue</b>	Polypharmacy (the use of multiple, concurrent drug therapies) is a concern in long-term care (LTC) settings where frail older adults are at risk for adverse events. What is the scope of this practice in Ontario?
<b>Study</b>	Identified 64,394 residents aged 66 or older in 589 Ontario LTC homes in the fall of 2005 and determined their prescription drug insurance claims. Facility-specific rates of polypharmacy—defined as taking nine or more distinct drug therapies concurrently—were calculated.
<b>Key Findings</b>	In total, 15.5% of residents received nine or more drug therapies, and 2.0% received 13 or more. Only 2.9% of residents received no drug therapy. Among those receiving nine or more drug therapies, diuretics, proton-pump inhibitors and ACE inhibitors were the most commonly dispensed. There was a threefold variation in polypharmacy rates across LTC homes (from 7.9% to 26.2% of residents); 65 homes were classified as high-rate facilities for polypharmacy, and 116 homes were considered low-rate.
<b>Implications</b>	The high rate of polypharmacy in Ontario LTC homes and the wide variation in rates across the province suggest a role for this measure in guiding drug review at the facility level.

#### Regulatory agency warnings reduced pediatric desmopressin prescribing rates

Gomes T, Juurlink DN, Moore I, Maguire JL, Mamdani MM. The impact of federal warnings on publicly funded desmopressin utilization among children in Ontario. *J Pediatr Urol.* 2011 Jul 16 [Epub ahead of print].

<b>Issue</b>	Desmopressin is an antidiuretic drug sometimes prescribed for bed-wetting. U.S. and Canadian health regulatory agencies issued safety alerts in December 2007 and July 2008, respectively, advising that the intranasal formulation of desmopressin was no longer indicated for the treatment of bedwetting. What impact did these alerts have on desmopressin prescribing rates among Ontario children?
<b>Study</b>	Examined prescribing rates of oral and intranasal desmopressin preparations among children aged younger than 13 years who were eligible for publicly funded drug coverage in Ontario between January 2003 and March 2010.
<b>Key Findings</b>	A total of 3,652 children received 23,104 desmopressin prescriptions over the study period. Following the alerts, the average treatment rate for all desmopressin users (oral and intranasal) fell 29.8%: from 6.7 to 4.7 people per 1,000 eligible population. The average treatment rate for users of oral and intranasal formulations fell 11.8% and 73.1%, respectively.
<b>Implications</b>	These findings highlight the effectiveness of regulatory agency warnings on changing physician prescribing behaviour in a pediatric population.

#### One-third of Ontarians hospitalized for depression not receiving recommended followup care

Lin E, Diaz-Granados N, Stewart DE, Bierman AS. Postdischarge care for depression in Ontario. *Can J Psychiatry.* 2011; 56(8):481–9.

<b>Issue</b>	People hospitalized for depression are often discharged before the acute phase of their illness has resolved and need timely care transitions to prevent relapse. High rates of post-discharge emergency department (ED) visits or rehospitalizations may signal suboptimal care. Is postdischarge depression care consistent with guideline and policy directions in Ontario?
<b>Study</b>	Identified Ontarians aged 15 or older hospitalized for unipolar depression from March 2005 to February 2006, and determined their depression-related health service use within 30 days following discharge.
<b>Key Findings</b>	During the one-year study period, there were 13,385 hospital discharges for depression. Among these, 63% were followed within 30 days by a physician visit, 17% had a subsequent ED visit and 8% were rehospitalized. Women and people from urban or high-income areas were more likely to have postdischarge physician visits. Residents of rural areas or low income neighbourhoods were more likely to have a postdischarge ED visit. Hospital readmission rates were consistent (6% to 8%) across age, sex, urban/rural dwelling, neighbourhood income and Local Health Integration Network.
<b>Implications</b>	Transitional discharge and outpatient management models, often consisting of physicians and non-physicians, have been demonstrated to provide improved outcomes for people with depression and should be considered as a means to address these gaps in care.

## Stroke prevention clinic referrals linked to significantly lower patient mortality

Webster F, Saposnik G, Kapral MK, Fang J, O'Callaghan C, Hachinski V. Organized outpatient care: stroke prevention clinic referrals are associated with reduced mortality after transient ischemic attack and ischemic stroke. *Stroke*. 2011; 42(11):3176–82.

<b>Issue</b>	Since 2001, 24 stroke prevention clinics (SPCs) have been established in Ontario to facilitate early assessment, diagnosis and treatment of patients with transient ischemic attack (TIA) or non-disabling stroke. What affect does referral to an SPC after an initial stroke admission have on mortality and readmission?
<b>Study</b>	Tracked 16,468 consecutive patients with TIA or ischemic stroke who were seen in the emergency department or admitted to hospital between July 2003 and March 2008 at 12 registry stroke centres in Ontario. Patients subsequently referred to outpatient SPCs were matched with those who were not; secondary prevention measures and all-cause one-year mortality and readmission rates were calculated.
<b>Key Findings</b>	Overall, 7,700 patients (46.7%) were referred for follow-up to an SPC. These patients were more likely to: be younger; be male; reside in higher income neighborhoods and urban areas; have had a TIA; and have been independent before the index event. They were also less likely to have had a history of stroke, diabetes, atrial fibrillation, myocardial infarction, congestive heart failure or dementia, but more likely to have had a history of hyperlipidemia. After adjusting for age, sex, ethnicity, income, coexisting conditions, stroke symptoms and severity, receipt of thrombolysis, stroke unit care, discharge destination and functional status at discharge, survival analysis showed a 26% reduction in mortality at one year for those referred to SPCs. There were no significant differences between the two groups in hospital readmission rates at one year.
<b>Implications</b>	These findings provide additional evidence that outpatient SPCs are an important strategy for secondary stroke prevention. Future research could examine whether SPCs are cost-effective in reducing hospital and emergency department visits.

## Congenital heart defects more prevalent in children of lower socioeconomic status

Agha MM, Glazier RH, Moineddin R, Moore AM, Guttman A. Socioeconomic status and prevalence of congenital heart defects: Does universal access to health care system eliminate the gap? *Birth Defects Res A Clin Mol Teratol*. 2011 Oct 17 [Epub ahead of print].

<b>Issue</b>	Congenital heart defects (CHDs) are the leading cause of death from congenital malformations, accounting for 6-10% of all infant deaths. Early studies observed a higher prevalence of CHDs among children born to mothers from low socioeconomic status (SES) groups. Have trends in the prevalence of CHDs remained the same for high and low SES groups?
<b>Study</b>	Identified children born with CHDs in Ontario between 1994 and 2007 and stratified them into one of five SES groups based on neighbourhood income and education levels. Rates of CHDs, categorized as severe or nonsevere, were compared.
<b>Key Findings</b>	Of 1.87 million children born during the study period, 28,302 (6.8%) were diagnosed with CHDs. Children born in low SES areas represented 23% of all births. CHD rates were 20% higher in low income areas and 26% higher in low education areas. After adjusting for maternal age and maternal diabetes, both low income and low education remained significant risk factors for nonsevere heart defects. For severe defects, only low education was found to be a significant risk factor.
<b>Implications</b>	These findings indicate that free and universal access to health care did not eliminate the SES gap observed in the prevalence of congenital heart disease. Access to prenatal screening and care and pregnancy termination may differ by SES. Identification of these factors and their incorporation into public health policies and practices should lead to further reductions in disease disparity.

---

*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.*