At A Glance

February 2013

Monthly highlights of ICES research findings for stakeholders

Heart failure clinics associated with decreased mortality but increased rehospitalizations

Wijeysundera HC, Trubiani G, Wang X, Mitsakakis N, Austin PC, Ko DT, Lee DS, Tu JV, Krahn M. A population-based study to evaluate the effectiveness of multi-disciplinary heart failure clinics and identify important service components. *Circ Heart Fail.* 2013; 6(1):68–75.

Issue Multidisciplinary heart failure (HF) clinics have been proven effective in clinical trials. What are the real-world outcomes of patients treated in Ontario HF clinics versus usual therapy? What clinic features are associated with these outcomes?

Study Identified 14,468 Ontario patients over age 20 who were discharged after an HF hospitalization between April 2006 and March 2007, and compared those who subsequently visited an HF clinic with control patients not treated in an HF clinic. Determined mortality and readmission rates for both groups and evaluated these outcomes against clinic-level characteristics.

Key Findings Overall, 1,288 patients (8.9%) were seen at 21 HF clinics. Within four years of follow-up, 52.1% of patients treated at an HF clinic died vs. 54.7% of control patients. In contrast, HF clinic patients had greater rates of all-cause readmission (87.4% vs. 86.6%) and HF-related readmission (58.7% vs. 47.3%) than control patients. HF clinics with greater frequency of follow-up visits were associated with lower mortality and hospitalization. More intensive management of medication was associated with lower readmission rates.

Implications The relationship between HF clinic services and patient outcomes is complex; this is highly relevant to policy makers and clinicians when designing such clinics.

ED treatment often substituted for primary care for persons with spinal cord injuries

Guilcher SJ, Craven BC, Calzavara A, McColl MA, Jaglal SB. Is the emergency department an appropriate substitute for primary care for persons with traumatic spinal cord injury? *Spinal Cord.* 2013 Nov 13 [Epub ahead of print].

Issue Persons with traumatic spinal cord injury (TSCI) have high rates of preventable secondary health conditions, including urinary tract infections, pressure ulcers and pain. What are the characteristics of emergency department (ED) utilization by this population over time?

Study Identified 1,217 individuals with TSCI aged 18 and older admitted to Ontario hospitals between April 2003 and March 2009. Calculated their total number of ED visits by year, visit type (potentially preventable, low acuity, high acuity) and visit characteristics (day and time of visit, seen by physician).

Key Findings Of the 4,403 ED visits made over the six-year period, 17% were classified as potentially preventable, 33% as low acuity and 50% as high acuity. Most ED visits (44%) occurred during a weekday and the majority of patients did not see a primary care physician on the day of the visit. ED use was highest in the first year but remained high in subsequent years. The majority of potentially preventable visits were related to urinary tract infections (51%) and pneumonia (12%).

Implications Given the high rates of ED use for low acuity and potentially preventable conditions, these results suggest that the ED is frequently used as an inappropriate substitute for primary care by individuals with TSCI.

Older men at greater risk of hospitalization and death after starting new antipsychotic drugs

Rochon PA, Gruneir A, Gill SS, Wu W, Fischer HD, Bronskill SE, Normand SL, Austin PC, Seitz DP, Bell CM, Fu L, Lipscombe L, Anderson GM, Gurwitz JH. Older men with dementia are at greater risk than women of serious events after initiating antipsychotic therapy. *J Am Geriatr Soc.* 2013; 61(1):55–61.

Issue Many medications pose a greater risk to women than men either because they are prescribed more often to women or because adverse events are more common in women. How do older women and men with dementia compare in their risk of an adverse event from atypical antipsychotic therapy?

Study Analyzed 21,526 Ontario residents (64% women, 36% men) aged 66 and older with dementia and newly started on oral atypical antipsychotic therapy (olanzapine, risperidone or quetiapine) between April 2007 and March 2010. Measured the occurrence of a serious event (hospitalization or death) within 30 days of treatment initiation.

Key Findings In the study group, 8.8% of patients had a serious event within 30 days (7.6% of women, 10.9% of men). Of these, 2.6% of women and 4.6% of men died. Men were 47% more likely than women to be hospitalized or die during the 30-day follow-up period. Men were significantly more likely than women to experience a serious event regardless of age, setting of care, comorbidity or drug dose.

Implications More research is recommended to understand why older men experience worse outcomes than women when newly prescribed antipsychotic therapy.

Higher income patients only marginally advantaged in post-hospitalization stroke care

Huang K, Khan N, Kwan A, Fang J, Yun L, Kapral MK. Socioeconomic status and care after stroke: results from the Registry of the Canadian Stroke Network. *Stroke*. 2013; 44(2):477–82.

Issue
Socioeconomic status is inversely associated with mortality after stroke, although the reasons for this are not well understood. Does socioeconomic status account for differences in stroke care and medication adherence after hospital discharge?

Study
Identified 11,050 patients with ischemic stroke or transient ischemic attack who were admitted to any of 11 specialized stroke centres in Ontario between July 2003 and March 2008. After adjusting for age, sex, stroke severity and comorbidity, assessed differences in processes of stroke care and medication adherence across neighbourhood income quintiles within one year of hospital discharge.

Key Findings
Higher income was associated with higher rates of stroke unit admission, neurology consultations, referrals to secondary prevention clinics, and physician visits after hospital discharge; however, the absolute differences in rates were small. There was no difference across income quintiles in the use of postdischarge homecare services or in adherence to antihypertensive, antithrombotic or lipid-lowering medications. Of note, medication adherence was suboptimal in all patients.

Implications
Higher income is associated with improvements in some aspects of stroke care delivery. However, the magnitude of the care gap across income quintiles is small and is unlikely to account for the previously observed association between socioeconomic status and survival after stroke.

Screening tool identifies symptoms most likely to result in ED visits for cancer patients

Barbera L, Atzema C, Sutradhar R, Seow H, Howell D, Husain A, Sussman J, Earle C, Liu Y, Dudgeon D. Do patient-reported symptoms predict emergency department visits in cancer patients? A population-based analysis. *Ann Emerg Med*. 2013 Jan 3 [Epub ahead of print].

Issue
In 2007, Cancer Care Ontario adopted the Edmonton Symptom Assessment System to screen for the severity of nine symptoms in cancer outpatients. The symptoms, assessed on a scale of 0 to 10, include anxiety, appetite, depression, drowsiness, nausea, pain, shortness of breath, tiredness and well-being. What kinds and intensity of symptoms bring cancer patients to the emergency department (ED)?

Study
Identified 45,118 cancer patients in Ontario who were first assessed for symptoms at a cancer clinic or a home care visit between January 2007 and March 2009. Examined the association between their symptom severity scores and the likelihood of an ED visit within seven days.

Key Findings

- In total, 1,732 patients (3.8%) made a subsequent ED visit.
- Of these visits, 12% were related to pain; 7% were potentially avoidable, including device problems, constipation, repeated prescriptions, follow-up visits or laboratory examinations; 4% were related to not coping or to dehydration, malaise, fatigue, palliative care or wasting syndrome; and less than 1% were related to anxiety or depression.
- Pain, tiredness, poor appetite and lack of well-being triggered visits across all symptom intensities, whereas nausea, drowsiness and shortness of breath were triggers when more severe.

Implications
Specific symptoms, such as pain, nausea and shortness of breath, are obvious management targets, but constitutional symptoms, such as well-being, fatigue and poor appetite, are also associated with ED visits. Further research should investigate whether interventions aimed at decreasing these latter symptoms would optimize both patient outcomes and ED use.

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.