Enhancing the effectiveness of health care for Ontarians through research

ICES Institute for Clinical Evaluative Sciences

At A Glance

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Monthly highlights of ICES research findings for stakeholders

Wealthy Ontarians have better access to MRI scans

You J, Venkatesh V, Laupacis A. Better access to outpatient magnetic resonance imaging in Ontario, but for whom? *Open Med*. 2009; 3(1):22–25.

Issue The 2004 launch of Ontario's Wait Times Strategy resulted in an increase in the availability of magnetic resonance imaging (MRI) scanning. Have all Ontarians benefitted equally from this increased capacity?

Study Identified all health insurance claims for MRI scans performed in Ontario between April 2002 and March 2007 and correlated these to patient age, sex and neighbourhood income.

Key Findings Between 2002/03 and 2006/07, the volume of MRI scans increased by 112%—from 183,729 to 389,261 scans. In 2002/03, patients living in the wealthiest Ontario neighbourhoods were 25% more likely to receive MRIs than those living in the poorest. By 2006/07, patients living in the wealthiest neighbourhoods were 38% more likely to receive MRIs than those living in the poorest.

Implications Decision-makers should be aware that efforts to increase MRI capacity may have the unintended consequence of increasing disparities according to income level. Physicians should strive to target services according to need and thereby improve the appropriateness of health services utilization.

Diabetes testing more common but its effectiveness questioned

Wilson S, Lipscombe L, Rosella L, Manuel D. Trends in laboratory testing for diabetes in Ontario, Canada 1995-2005: a population-based study. *BMC Health Serv Res*. 2009; 9:41.

Issue There are concerns that testing for type 2 diabetes is low and that many people are not diagnosed. To what extent are Canadian clinical practice guidelines for diabetes screening being followed in Ontario?

Study Analyzed outpatient diabetes laboratory tests performed on Ontario residents aged 20 years and older between 1995 and 2005. The diabetes tests included serum blood glucose, hemoglobin Alc, and oral glucose tolerance testing. The latter test is recommended for the diagnosis of diabetes.

Key Findings

- In 2005, more than three million Ontarians (37% of the total population) were tested for diabetes with a serum blood glucose test, a 28% increase from 1995.
- The oral glucose tolerance test was used on less than 1% of Ontarians in any year between 1995 and 2005.
- Use of the hemoglobin Alc test, which is intended for diabetes monitoring but not recommended for diabetes diagnosis, increased 250% between 1995 and 2005 in people without diabetes.
- If current trends continue, the hemoglobin Alc test may soon be ordered more frequently in non-diabetics than in diabetic patients.

Implications Diabetes-related lab testing is common in Ontario. Despite its absence in Canada's diabetes screening recommendations, hemoglobin Alc testing among individuals without diabetes is increasing rapidly, and oral glucose tolerance testing, which is recommended, is rarely performed.

Risk of eye infection low after cataract surgery

Hatch W, Cernat G, Wong D, Devenyi R, Bell C. Risk factors for acute endophthalmitis after cataract surgery: a population-based study. *Ophthalmology*. 2009; 116(3):425–430.

Issue Endophthalmitis, an infectious condition involving swelling of the eyeball, is a serious postoperative complication of cataract surgery. What is the risk of developing acute endophthalmitis in Ontario?

Study Reviewed insurance claims of 442,177 cataract surgeries performed in Ontario between April 2002 and March 2006, and tracked post-operative procedures to treat suspected eye infections that occurred within 14 days of surgery.

Key Findings There were 617 cases of acute endophthalmitis. The overall rate was low—1.4 cases per 1,000 surgeries—but higher in certain patient groups. Men had higher rates than women (1.70 vs. 1.19 per 1,000 surgeries), and those aged 85 and older had the highest rate (2.18 per 1,000). The endophthalmitis rate was 10 times higher in patients who experienced capsular rupture during surgery compared with those who did not (13.11 vs. 1.34 per 1,000).

Implications The findings can be used as a benchmark for quality-improvement initiatives and can assist clinicians in educating their patients regarding the risk associated with cataract surgery.

Audit finds major improvements in stroke care in Ontario

Kapral M, Hall R, Silver F, Lindsay M, Richards J, Robertson A, Fang J. *Registry of the Canadian Stroke Network. Report on the 2004/05 Ontario Stroke Audit.* Toronto: Institute for Clinical Evaluative Sciences; 2009.

Issue

In 2000, Ontario launched a coordinated stroke strategy to ensure that the province's citizens have equal access to high-quality stroke care. The Registry of the Canadian Stroke Network is mandated to conduct an audit of the Ontario Stroke System every two years, the first of which was undertaken in 2002/03. This report presents data for 2004/05.

Study

Invited all Ontario acute care institutions, excluding children's and mental health care hospitals and those with fewer than 10 stroke or transient ischemic attack (TIA) separations per year, to participate in the 2004/05 stroke audit. All patients seen in an emergency department or admitted to hospital with a diagnosis of stroke or TIA were eligible for inclusion. Overall, 153 acute care institutions (with 154 individual hospital sites) participated in the audit.

Key Findings

- There were 23,800 emergency department visits or hospitalizations for acute stroke or TIA in Ontario in 2004/05; approximately 21% of all cases (4,913 patients) were included in the audit.
- In 2004/05, 29% of patients were referred to a secondary prevention clinic after discharge from hospital, an increase from 14% in 2002/03. This coincides with an increase in the number of Ministry-designated stroke prevention clinics, from 11 in 2002/03 to 18 in 2004/05.
- In 2004/05, the median inpatient length of stay in hospital for stroke patients was 6.5 days, a decrease from 7.7 days in 2002/03.
- In 2004/05, 29 of 152 acute institutions had dedicated stroke units, and 10.9% of all stroke patients were admitted directly to these units, an improvement from 2.7% of all stroke patients in 2002/03.

Implications

The 2004/05 stroke audit revealed significant improvements in the use of evidence-based practices and interventions. However, variations in care delivery among hospital types continue to exist, with lower rates of many stroke care interventions at small community hospitals compared with other hospital types. Although the analysis did not allow the investigators to evaluate the reasons for the observed improvements in care, there is a temporal association between the implementation of the Ontario Stroke System and improved stroke care delivery.

Study questions use of expensive patient transfer resources for routine, non-urgent trips

Robinson V, Goel, V, MacDonald R, Manuel D. Inter-facility patient transfers in Ontario: Do you know what your local ambulance is being used for? *Healthc Policy*. 2009; 4(3):53–66.

Issue

Patients are usually transported between healthcare facilities by fully equipped ambulances staffed by highly trained paramedics. With the introduction of a new population-based information system, inter-facility patient transfers in Ontario can be examined for the first time.

Study

Using a dataset made available by the Provincial Transfer Authorization Centre, analyzed 5,000 randomly chosen land transfers in Ontario between June 2004 and May 2005.

Key Findings

- Nearly 350,000 patient transfers—about 1,000 trips per day—take place in Ontario every year.
- The total cost of land transfers during the study period was $283 million. The average cost for an individual, one-way inter-facility patient transfer was $704.
- The majority (80%) of patient transfers were classified as non-urgent.
- Most of the patients transported between facilities had health problems related to the circulatory system followed by patients with musculoskeletal and connective tissue problems.
- About 25% of all transferred patients were moved between healthcare facilities for non-urgent physician appointments, dialysis and return trips to the patient's residence or home facility.
- About 70% of all patient transfers were to facilities within 25 kilometers.
- There was a high rate of "lateral transfers" (the movement of patients between similarly classified hospitals); more than 16,000 patients (4.7% of all transfers) were moved from one large tertiary care teaching hospital to another.

Implications

These findings call into question the use of sophisticated, highly trained, and expensive patient transfer resources to provide routine transportation services in Ontario.

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.