At A Glance

November 2012

Monthly highlights of ICES research findings for stakeholders

Increased OxyContin dispensing in Canada after U.S. launch of tamper-resistant formulation

Gomes T, Paterson JM, Juurlink DN, Dhalla IA, Mamdani MM. Reformulation of OxyContin and pharmacy dispensing patterns near the US-Canada border. *Open Med.* 2012; 6(4):141–5.

Issue In August 2010, a tamper-resistant formulation of oxycodone (OxyContin–OP) was introduced in the U.S. but not in Canada. Did this influence prescription volumes for the original oxycodone formulation (OxyContin) at Canadian pharmacies near the Canada–U.S. border?

Study Analyzed data on outpatient prescriptions for OxyContin dispensed by pharmacies in Niagara Falls, Windsor and Sarnia, Ontario, between April 2010 and February 2012. Calculated and compared monthly dispensing rates per 1,000 population.

Key Findings From August 2010 to February 2011, the monthly rate of OxyContin dispensing by pharmacies near the Detroit–Windsor Tunnel rose from 505 to 1,969 tablets per 1,000 population. No such change was seen at four other border crossings. By April 2011, after warnings to prescribers and pharmacies about drug-seeking behaviour, the dispensing rate in this area declined to 1,683 tablets per 1,000 population. By November 2011, the rate had returned to early 2010 levels. The analyses suggest that 242,075 excess OxyContin tablets were dispensed near the Detroit–Windsor Tunnel from August 2010 to October 2011.

Implications These findings highlight the effect that differing availability of opioids can have on trafficking across borders and suggest that timely notification to prescribers and dispensers about potential drug-seeking behaviour can help to mitigate the problem.

Study examines appropriate use of angioplasty and bypass surgery in Ontario

Ko DT, Guo H, Wijeysundera HC, Natarajan MK, Nagpal AD, Feindel CM, Kingsbury K, Cohen EA, Tu JV. Assessing the association of appropriateness of coronary revascularization and clinical outcomes for patients with stable coronary artery disease. *J Am Coll Cardiol.* 2012; 160(19):1876–84.

Issue Patients with severe narrowing of coronary arteries may require coronary revascularization in the form of percutaneous coronary intervention (PCI) or coronary artery bypass grafting (CABG). Are these invasive procedures being used appropriately to improve clinical outcomes?

Study Reviewed the medical records of 1,628 Ontarians who underwent cardiac catheterization from April 2006 to March 2007 to retrospectively adjudicate their suitability for coronary revascularization (PCI or CABG) using appropriateness criteria developed by the American College of Cardiology. Patients were followed to March 2010 to determine their risk of adverse outcomes.

Key Findings Of 991 patients who had appropriate indications, coronary revascularization was performed in 69%. Of 326 patients classified as uncertain candidates, 54% underwent revascularization. Of 311 patients who had inappropriate indications, 45% underwent revascularization. Overall, 14% of revascularizations were classified as inappropriate. Patients with appropriate indications who did not undergo revascularization had a 39% increased risk of adverse outcomes at three years compared to those who received treatment. Treating patients classified as inappropriate was not associated with lower mortality or readmission for acute coronary syndrome.

Implications Using appropriate use criteria, researchers identified substantial underutilization and overutilization of coronary revascularization procedures in clinical practice.

Prostate removal linked to a 5% risk of subsequent urinary incontinence surgery

Nam RK, Herschorn S, Loblaw DA, Liu Y, Klotz LH, Carr LK, Kodama RT, Stanimirovic A, Venkateswaran V, Saskin R, Law CH, Urbach DR, Narod SA. Population based study of long-term rates of surgery for urinary incontinence after radical prostatectomy for prostate cancer. *J Urol.* 2012; 188(2):502–6.

Issue Loss of bladder control can be a significant complication of prostate surgery. What is the long- term risk of urinary incontinence surgery following radical prostatectomy and what factors influence the risk?

Study Of 25,346 men who underwent radical prostatectomy in Ontario between January 1993 and December 2006, identified 985 men who were subsequently treated with surgery for urinary incontinence.

Key Findings Rates of post-prostatectomy incontinence surgery were 2.6% at 5 years, 3.8% at 10 years and 4.8% at 15 years. Factors linked to significantly higher risk of incontinence surgery were increasing patient age, radiation treatment after prostate removal, and having a surgeon who performs fewer prostatectomies.

Implications These findings provide new information for physicians and patients contemplating prostate removal.

Most seniors on warfarin therapy for atrial fibrillation stop treatment within five years

Gomes T, Mamdani MM, Holbrook AM, Paterson JM, Juurlink DN. Persistence with therapy among patients treated with warfarin for atrial fibrillation. *Arch Intern Med.* 2012 Oct 22 [Epub ahead of print].

Issue

In clinical trials, persistence with warfarin, an anticoagulant drug, varies from 75% to 79% at one year. How does this compare to rates of persistence in real-world clinical practice?

Study

Identified all Ontario residents aged 66 and older with a recent diagnosis of atrial fibrillation who started treatment with warfarin between April 1997 and March 2008. Measured treatment persistence by age, sex, $CHADS_2$ risk score (which increases by one point for each of congestive heart failure, hypertension, age 75 or older, diabetes, and prior stroke or transient ischemic attack) and date of warfarin therapy initiation.

Key Findings

Of 125,195 patients who started warfarin therapy, 8.9% did not fill a second prescription during follow-up. Warfarin therapy was discontinued by 31.8% within one year, 43.2% within two years and 61.3% within five years. Men discontinued warfarin therapy earlier than women, and patients aged 66 to 75 were more likely to discontinue treatment than older patient groups. Persistence with warfarin therapy increased with stroke risk, as reflected by the $CHADS_2$ score. Patients who started warfarin therapy between 2003 and 2007 adhered to therapy longer than those who initiated treatment between1997 and 2002.

Implications

These findings highlight the importance of considering real-world estimates of warfarin therapy persistence, particularly when comparing warfarin with newer anticoagulants that also carry a risk of hemorrhage yet do not require routine monitoring.

Cataract surgery in Ontario expected to more than double by 2036

Hatch WV, Campbell EL, Bell CM, El-Defrawy SR, Campbell RJ. Projecting the growth of cataract surgery during the next 25 years. *Arch Ophthalmol.* 2012; 130(11):1479-81.

Issue

Cataract surgery, the most frequently performed surgical procedure in Ontario, is a low-cost operation that significantly improves the quality of life of those with cataracts. What effect will the province's aging population have on demand for this procedure?

Study

Used projected population estimates to predict the number of cataract surgeries that would be performed in Ontario by 2036, based on cataract surgery rates in effect in the years before (2004–2005) and after (2006–2007) initiation of the government-mandated Wait Time Strategy.

Key Findings

The number of cataract surgeries required to meet population demand is projected to increase from about 143,000 in 2006 (after launch of the Wait Time Strategy) to 326,000 by 2036—a 128% increase. The projected increase in cataract surgery based on surgery rates before initiation of the Wait Time Strategy is 72% by 2036. The projected increase in cataract surgery based on surgery rates after the initiation of the Wait Time Strategy is 144% by 2036. The proportion of cataract operations provided for older patients is projected to rise significantly, with the number of surgeries for those aged 85 and older more than tripling by 2036.

Implications

Ontario hospitals, surgical centres and ophthalmology training programs must plan for the growing demand for cataract surgery.

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.