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

Many nursing homes prescribe antipsychotic drugs to residents who don't need them

Rochon P, Stukel T, Bronskill S, Gomes T, Sykora K, Wodchis W, Hillmer M, Kopp A, Gurwitz J, Anderson G. Variation in nursing home antipsychotic prescribing rates. *Arch Intern Med*. 2007; 167 (7): 676-683.

Issue Excessive prescribing of antipsychotic drugs is a concern due to their potential to cause serious adverse events, such as falls, hip fracture, parkinsonism and death.

Study Tracked 47,322 residents of 485 provincially-regulated nursing homes in Ontario in December 2003. Facilities were classified into groups according to their average antipsychotic prescribing rates. Residents were grouped according to those with and those without a potential clinical need for antipsychotic therapy.

Key Findings One-third of residents were dispensed an antipsychotic drug. Average antipsychotic prescribing rates ranged from 21% to 44%. Residents of nursing homes with high antipsychotic prescribing rates were about three times more likely than those in facilities with low prescribing rates to be dispensed an antipsychotic, regardless of whether they had an identified clinical need for this therapy.

Implications Given the serious adverse events associated with antipsychotic therapy, non-drug approaches to manage agitated behaviour in nursing home residents should always be explored first. Nursing homes should review their prescribing practices and identify where and how these can be improved upon.

Growth of cardiac technology in Ontario is outpacing scientific evidence

Singh S, Austin P, Chong A, Alter D. Coronary angiography following acute myocardial infarction in Ontario, Canada. *Arch Intern Med*. 2007; 167 (8): 808-813.

Issue While there has been significant growth in cardiac technology, the extent to which this growth has occurred in tandem with scientific clinical trial evidence is unclear.

Study Tracked patients 66 years of age and older admitted to Ontario hospitals for acute myocardial infarction (AMI) between 1992 and 2004. Compared the points of maximum growth of post-AMI angiography use and post-AMI statin therapy with the publication dates of the first positive evidence, obtained from randomized clinical trials (RCTs), for the use of these therapies in patients.

Key Findings For coronary angiography use, the maximum growth point was reached in September 1998, 11 months before the publication of the first positive RCT. For statin therapy, the maximum growth point occurred in October 1998, 47 months after the publication of the first positive RCT.

Implications Poor alignment between technology proliferation and supporting scientific evidence may undermine a health care system's efficiency by using more costly and less effective technologies, rather than less costly and more effective medical interventions. Clinical decision leaders must advocate for suitable health technology studies and the transfer of knowledge from these studies to ensure that patients are receiving treatment that is consistent with and supported by current scientific evidence.

Satellite haemodialysis units are effective for service delivery in rural Ontario

Prakash S, Austin P, Oliver M, Garg A, Blake P, Hux J. Regional effects of satellite haemodialysis units on renal replacement therapy in non-urban Ontario, Canada. *Nephrol Dial Transplant.* 2007 Apr 4; [Epub ahead of print].

Issue Satellite haemodialysis (HD) units were introduced in rural Ontario communities in an effort to improve service access and care; however, the effectiveness of this effort has not been evaluated.

Study Compared two groups of rural regions at two points in time (1995 and 2002) to examine local rates of renal replacement therapy (RRT), patient travel distance, and local peritoneal dialysis (PD) utilization. These regions were either already serviced by a satellite unit in 1995 (control group) or had new satellite units built between 1995 and 2002 (exposure group).

Key Findings The exposure group had a slightly greater increase in the rate of RRT over time, relative to the control group. The mean weekly travel distance was reduced by 211 km with the introduction of new units. There was no significant difference between the groups in the reduction of PD utilization; however, with local access, there was a significant increase in the number of elderly people receiving RRT.

Implications Building satellite units could be an effective approach to HD delivery in Ontario, since these findings show that satellite units improve access to RRT for elderly people, decrease travel time for patients on HD, and do not create a supply-induced demand for RRT.

Study explores depression, gender and income levels in recent Canadian immigrants

Smith K, Matheson F, Moineddin R, Glazier R. Gender, income and immigration differences in depression in Canadian urban centres. *Can J Public Health*. 2007; 98 (2): 149-153.

Issue It is known that immigrants have lower rates of depression than the Canadian-born population, with the lowest rates among those who have arrived recently in Canada. It is established that women and low-income individuals are more likely to have depression. Given that recent immigration is a protective factor and female gender and low income are risk factors, it is important to examine the relationship between these factors and depression.

Study Used 2000/01 Canadian Community Health Survey data to identify 41,147 adults between the ages of 18 and 74, who live in census metropolitan areas to examine the relationship between recent immigration-low income, by gender, and depression.

Key Findings The prevalence of depression in urban centres was 9% overall (7% for men and 11% for women). The depression rate for recent immigrants was 5% overall (4% for men and 7% for women). The depression rate among low-income individuals was 15% overall (11% for men and 17% for women). The lowest rate of depression was among low-income, recent immigrant males (2%), whereas the highest rate was among low-income, non-recent immigrant females (11%).

Implications Different demographic groups may require different treatment programs to accommodate gender, socioeconomic and immigration status. Since the proportion of immigrants is increasing, this information is important for public health planning and health promotion, immigration and settlement services, and health policy development.

Significant regional variation exists across Ontario for anti-reflux surgery to treat GERD

Lopushinsky S, Austin P, Rabeneck L, Kulkarni G, Urbach D. Regional variation in surgery for gastroesophageal reflux disease in Ontario. *Surg Innov*. 2007; 14 (1): 35-40.

Issue There is uncertainty regarding the optimal treatment for gastroesophageal reflux disease (GERD) and the degree of variation in the rate of anti-reflux surgery across the province. Large variation has significant implications for health care spending and may represent uncertainty regarding treatment among health care providers.

Study Tracked all patients 18 years of age and older who underwent a primary anti-reflux procedure in Ontario between 1991 and 2002 to identify population-based utilization and measure area rate variations in the use of GERD surgery.

Key Findings The crude rate of anti-reflux procedures was 11.6 per 100,000 adults. Patients between the ages of 45 and 64 had the highest rates of surgery. More women than men underwent anti-reflux surgery (13.6 vs. 9.4 per 100,000). Between counties, adjusted surgical rates ranged from 5.0 to 28.7 per 100,000 persons.

Implications Significant regional variation exists in anti-reflux surgery across Ontario, suggesting that there is a need for consensus and explicit guidelines regarding the appropriate role of surgery in the management of GERD. Data from long-term randomized controlled trials or large scale population-based effectiveness studies comparing medical and surgical therapies may ultimately reduce the variation in care that currently exists.

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