Enhancing the effectiveness of health care for Ontarians through research

ICES Institute for Clinical Evaluative Sciences

At A Glance

May 2004

Monthly highlights of ICES research findings for stakeholders

Essential health services not disrupted by SARS outbreak

Woodward G, Stukel T, Schull M, Gunraj N, Laupacis A. Utilization of Ontario's health system during the 2003 SARS outbreak. *ICES Investigative Report*. May 2004.

Issue The impact of the 2003 outbreak of Severe Acute Respiratory Syndrome (SARS) on health service use, particularly within the Greater Toronto Area (GTA) where hospitals were subject to significant restrictions, is unknown.

Study Examined monthly trends during the SARS outbreak (April and May 2003) within and outside the GTA for inpatient and outpatient hospitalization, diagnostic testing, physician and emergency department visits, use of prescription medication, intensive care bed availability, and cardiac care. A comparison was made to health system use in April and May of 2002.

Key Findings Restrictions imposed on hospitals had the greatest impact on the use of elective services and a much lesser effect on essential services. Not surprisingly, impact on use was greater within the GTA than outside of it. The impact was also larger in April than in May 2003.

Implications Hospital restrictions during the 2003 SARS outbreak caused hospital use to fall dramatically, freeing up health system resources to deal with SARS. However, the decline was seen mostly in elective services and essential services were largely maintained. ICES is undertaking additional research to determine whether the decrease in the use of the health care system during SARS had any negative effects on population health.

Nearly 25% of nursing home residents on antipsychotic drugs within one year of admission

Bronskill S, Anderson G, Sykora K, Wodchis W, Gill S, Shulman K, Rochon P. Neuroleptic drug therapy in older adults newly admitted to nursing homes: incidence, dose and specialist contact. *J Am Geriatr Soc*. 2004; 52 (5): 1-7.

Issue Concerns have been raised about the overuse of neuroleptic drugs in older adults in nursing homes because of the associated risk of serious adverse events, such as drug-induced Parkinsonism, falls, and cerebrovascular events.

Study Examined nearly 20,000 elderly Ontarians, with no history of dementia, who had never been prescribed neuroleptics and were new residents of a nursing home between 1998 and 2000. The number of residents started on neuroleptic drugs, the dosage they were given, and visits to a geriatrician or psychiatrist (specialists with expertise in treating dementia) were tracked.

Key Findings Neuroleptics were newly prescribed for 17% of the residents within 100 days of being admitted to a nursing home, and to 24% within 1 year. Almost 10% of residents who were prescribed neuroleptics received an initial dose that exceeded recommendations. Only 14% of residents started on neuroleptics had contact with a geriatrician or psychiatrist prior to the medication being prescribed.

Implications There is a need to review how neuroleptic therapies are being used in nursing homes. Non-pharmacological approaches must always be considered as the initial therapy, and specialists should be involved as much as possible. If neuroleptics are used, patients should be started on the lowest possible dose.

Ontario study offers first population-wide look at childhood asthma in Canada

To T, Dell S, Dick P, Cicutto L, Harris J, Tassoudji M, Duong-Hua M. Burden of childhood asthma. *ICES Investigative Report*. May 2004.

Issue There has never been a population-based study of childhood asthma in Canada, despite it being the most common childhood illness in North America.

Study Tracked children 0 to 9 years of age between 1995 and 1999 to examine: the incidence and prevalence of childhood asthma; mortality rate; differences in physician visits and hospitalizations between children with and without asthma; and, seasonal and geographic variations in health care use by children with asthma.

Key Findings There were over 228,000 new cases of childhood asthma during the study period. One out of every five children aged 0 to 9 years had asthma in 1999. Health care use by children with asthma remained notably higher than the general pediatric population during the study period.

Implications This research serves as a benchmark to monitor future changes in asthma diagnosis, treatment, management and health services use both within Ontario and nationally.

Outcomes can be better at hospitals that perform high volumes of various complex surgeries

Urbach D, Baxter N. Does it matter what a hospital is "high volume" for? Specificity of hospital volume-outcome associations for surgical procedures analysis of administrative data. *BMJ*. 2004; 328 (7442): 737-740.

Issue Previous studies have found that hospitals that perform a high volume of certain complex surgeries have better patient outcomes. However, it is unknown whether improved patient outcomes are a general characteristic of hospitals that perform a high volume of different complex surgeries, or are confined to the volume of the specific procedure itself.

Study Patients who underwent any of five complex surgical procedures in Ontario hospitals between 1994 and 1999 were tracked to examine the 30-day mortality rate for each procedure relative to hospital volume for that procedure, as well as hospital volume for the other four procedures.

Key Findings In general, 30-day mortality for a given surgery was inversely related not only to hospital volume for that surgery, but also to hospital volume for the other four surgical procedures. In some cases, hospital volume for one of the other four procedures had a greater impact on outcomes for a given surgery, than the effect of the volume for the given surgery itself.

Implications Better outcomes in higher volume hospitals are related to the shared structure and process characteristics of the large hospitals that typically perform a greater number of complex surgical procedures. Possible options for improving outcomes could include regionalizing complex surgeries to high volume hospitals, or increasing resources and instituting quality improvement programs in smaller hospitals.

Many Canadian heart failure patients experience poor outcomes

Lee D, Johansen, H, Gong Y, Hall R, Tu J, Cox J. Regional outcomes of heart failure in Canada. *Can J Cardiol*. 2004; 20 (6): 599-607.

Issue Heart failure is a growing public health concern in Canada because the incidence increases with age and the elderly are the most rapidly growing demographic group. To date, regional comparisons of outcomes following hospitalization for heart have not been performed nationally.

Study Tracked over 83,000 patients hospitalized for heart failure across Canada between 1998 and 2000 to examine in-hospital mortality rates, and hospital readmission rates.

Key Findings

- The number of heart failure cases increased dramatically with each decade after age 50, with 85% of hospitalized patients being 65 years or older.
- On average, 10% of hospitalized patients died, though there were significant regional variations for in-hospital mortality rates across health regions in Canada.
- National hospital readmission rates for recurrent heart failure were 9%, 14%, and 24% at 30 days, 90 days and one year, respectively.

Implications There is an urgent need to develop better strategies for treating acute heart failure. Approaches should include timely access to specialized health services, close follow-up after hospital discharge, and compliance with treatment regimens. As well, making the best use of evidence-based drug therapies, such as ACE inhibitors and beta-blockers, and providing counseling to chronic heart failure patients about their condition is important.

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