

At A Glance

May 2003

Monthly Highlights of ICES Research Findings for Stakeholders

Parkinson's disease is placing a heavy financial burden on Ontario's health care system

Guttman M., Slaughter P.M., Theriault M-E., DeBoer D.P., Naylor C.D. Burden of Parkinsonism: A Population-Based Study. *Movement Disorders*. 2003; 18(3): 313–336.

Issue	The number of Ontarians with Parkinson's disease is growing at an alarming rate and is placing a significant financial burden on the health care system.
Study	15,000 Ontarians with Parkinson's disease were age/sex matched with 30,000 residents without Parkinson's to examine physician and drug-related costs, and hospital utilization.
Key Findings	Between 1992 and 1997, there was a 25% increase in the number of Ontarians with Parkinson's disease. For Parkinson's patients, OHIP claims were 40% higher, average annual ODB costs were 300% higher, there were 44% more hospitalizations and a 19% increase in average length of stay.
Implications	There is a need for governments, researchers and industry to pursue more aggressive and definitive Parkinson's therapies. Improved knowledge about the causes of Parkinson's and preventative strategies, as well as the development of drugs to reduce the progression of the disease, will help to diminish the need for health services and result in significant cost savings to Ontario's health care system.

Key cause of emergency department overcrowding is a lack of inpatient beds

Schull M.J., Lazier K., Vermeulen M., Mawhinney S., Morrison L.J. Emergency Department Contributors to Ambulance Diversion: A Quantitative Analysis. *Annals of Emergency Medicine*. 2003; 41(4): 467–476.

Issue	Overcrowding in Emergency Departments (ED) has been a long-standing issue, with ambulances being diverted as much as 40% of the time.
Study	38,000 patient visits to one ED in Toronto were examined to identify factors that may impact overcrowding—the number of patients arriving either by walk-in or by ambulance, the number admitted to hospital beds, the number waiting for hospital beds, delays in the assessment of patients, physician on-duty and nurse staffing levels.
Key Findings	The availability of hospital beds for patients requiring admission is the most important predictor of overcrowding, and therefore ambulance diversion.
Implications	Reducing the volume of walk-in patients with minor illnesses is not likely to alleviate overcrowding and lessen the use of ambulance diversion. The problem would be most effectively addressed by increasing the capacity of hospitals to quickly assess, treat and admit the most acutely ill patients.

Inequities in accessing specialists mainly due to geography

Chan B.T.B., Austin P.C. Patient, Physician and Community Factors Affecting Referrals to Specialists in Ontario, Canada. *Medical Care*. 2003;41(4): 500–511.

Issue	Geography is still a key factor in accessing specialist care in Ontario.
Study	The first time referral patterns of 7,000 family physicians to specialists were examined. Urban cities with no medical schools were used as a baseline.
Key Findings	People living in rural areas had 12% fewer specialist referrals, while those residing in urban areas with medical schools had 14% more specialist referrals.
Implications	Policy-makers and planners should consider these findings when estimating the demand for specialists. Population growth and aging, increased prevalence of some diseases, and an insufficient number of family physicians will all impact future demand.

Drug interactions in the elderly are causing unnecessary admissions

Juurink D.N., Mamdani M., Kopp A., Laupacis A., Redelmeier D.A. Drug-Drug Interactions Among Elderly Patients Admitted for Drug Toxicity. *JAMA*. 2003; 289(13): 1652–1658.

Issue	Interactions between commonly used prescription drugs are resulting in avoidable hospitalizations and contributing to deaths in Ontario's elderly population.
Study	Tracked hospitalizations of Ontario seniors for the following three common drug interactions, between 1994 and 2000. <ol style="list-style-type: none">1. sulfa antibiotic (<i>co-trimoxazole</i>) + diabetes medication (<i>glyburide</i>) can cause low blood sugar2. antibiotic (<i>clarithromycin</i>) + heart disease medication (<i>digoxin</i>) can result in too much digoxin in the blood3. Diuretics (<i>Potassium-sparing</i>) + commonly used heart disease medications (<i>ACE inhibitors</i>) may cause abnormally high potassium levels in the blood
Key Findings	Patients were 8–30 times more likely to be hospitalized in the 7 days following these drug interactions, with 1–4% dying in hospital.
Implications	There is a need for greater awareness among physicians, pharmacists, and patients about drug interactions, as well as closer monitoring of patients when new drugs are prescribed. Enhanced pharmacy software and improved communication between health professionals may also reduce serious health consequences due to drug interactions.

Physicians under-treating diabetic heart attack patients

Alter D.A., Khaykin Y., Austin P.C., Tu J.V., Hux J.E., Processes and Outcomes of Care for Diabetic Acute Myocardial Infarction Patients in Ontario. *Diabetes Care*. 2003; 26(5): 1427–1434.

Issue	Despite much greater health risks, Ontarians with diabetes mellitus (DM) who have suffered a heart attack are receiving less aggressive medical treatment than their non-diabetic counterparts.
Study	Over 25,000 Ontario patients (6,052 with DM and 19,645 without DM) hospitalized for heart attack between 1992 and 1993 were examined to identify the use of cardiac procedures one year after the heart attack; follow-up care and drug use in the elderly; and, recurrent heart attacks and death 30 days and five years after the heart attack.
Key Finding:	Diabetic heart attack patients were more likely to be hospitalized for congestive heart failure and readmitted to hospital. These patients also had a greater chance of dying five years after their first heart attack, and were less likely to be treated by a cardiologist or receive angiography. Elderly diabetic heart attack patients were less likely to receive evidence-based medications.
Implications	There is a need for more effective strategies to address cardiovascular risk modification in people with DM. Physicians may be underestimating the benefits of aggressively treating high-risk patients with DM, or may be less attentive to the necessities of managing multiple chronic diseases.

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