

At A Glance

Monthly highlights of ICES research findings for stakeholders

Almost all Ontarians have geographic access to primary and urgent care

Glazier R, Gozdyra P, Yeritsyan N. *Access to Primary Care and Hospital Services for Rural and Northern Communities: Report to the Ontario Ministry of Health and Long-Term Care*. Toronto: Institute for Clinical Evaluative Sciences; 2011.

Issue	What is the geographic access to care by car in Ontario's rural and northern areas?
Study	Identified primary care providers, emergency departments (EDs), hospitals providing obstetrical delivery services or highly specialized services (trauma centres, burn units, cardiology or neurological centres), and calculated travel time by car at posted speed limits to these facilities for residents of Ontario communities with a population of 30,000 or less.
Key Findings	In 2009, approximately 23% of Ontario's population lived in communities of 30,000 or less. Overall, 99.6% of these residents lived within 30 minutes' drive of the nearest primary care provider, increasing to 99.9% within 60 minutes. EDs were accessible within 30 minutes by 97.8% of this population and within 60 minutes by 99.0%. Hospitals providing obstetrical delivery services were accessible to 93.8% of them within 30 minutes and to 98.1% within 60 minutes. Hospitals with specialized services were accessible to 40.5% of them within 30 minutes, 72.2% within 60 minutes and 96.5% within 240 minutes.
Implications	Although primary and urgent care are geographically accessible by car for residents of Ontario's remote communities, actual availability (appropriateness, wait times, staffing levels, available transportation, road/weather conditions) could create substantially different patterns of access.

Children from low-income neighbourhoods more likely to undergo surgery for bowel disease

Benchimol E, To T, Griffiths A, Rabeneck L, Guttman A. *Outcomes of pediatric inflammatory bowel disease: socioeconomic status disparity in a universal access healthcare system*. *J Pediatrics*. 2011 Jan 8 [Epub ahead of print].

Issue	Inflammatory bowel disease (IBD) is a chronic condition characterized by severe irritation of the digestive system. It encompasses Crohn's disease, which can affect the full gastrointestinal tract, and ulcerative colitis, which only affects the colon. Is the utilization of health care services by children with IBD in Ontario influenced by their socioeconomic status?
Study	Identified 3,404 children aged less than 18 years diagnosed with IBD in Ontario between 1994 and 2004 and compared their rates of physician and emergency department (ED) visits, hospitalizations and surgeries to their neighbourhood income level.
Key Findings	Compared with children from the two highest income quintiles, children from the two lowest quintiles were 17% more likely to be hospitalized and 21% more likely to visit an ED. Less affluent children with Crohn's disease were more likely to undergo surgery for IBD within three years of diagnosis, especially when diagnosed after 2000 when the likelihood of their requiring surgery was about 79% higher.
Implications	In 2000, new drug therapies for IBD were introduced, which were more costly than traditional treatments. Further study is required to determine the link between differential drug access by children with IBD and their rates of surgery.

Macrolide antibiotics pose a risk for seniors being treated for hypertension

Wright A, Gomes T, Mamdani M, Horn JR, Juurlink D. *The risk of hypotension following co-prescription of macrolide antibiotics and calcium channel blockers*. *CMAJ*. 2011 Jan 17 [Epub ahead of print].

Issue	The widely-prescribed antibiotics erythromycin, clarithromycin and azithromycin (classified as macrolides) are known to cause several adverse drug interactions. What is the risk of severe low blood pressure (hypotension) requiring hospitalization following the simultaneous use of calcium-channel blockers (commonly prescribed for high blood pressure) and macrolide antibiotics?
Study	Of the nearly one million patients aged 66 and older who were prescribed a calcium-channel blocker between April 1994 and March 2009 in Ontario, identified 7,100 who were admitted to hospital for hypotension. Their exposure to any of the three macrolides seven days before admission and in a seven-day control interval one month earlier was determined.
Key Findings	Overall, 176 patients were prescribed a macrolide antibiotic during either the risk or control intervals. Treatment with erythromycin was found to increase the risk of hypotension almost six-fold, while clarithromycin increased the risk almost four-fold. Azithromycin did not increase the risk of hypotension.
Implications	Clinicians should be aware of the potential interactions between these drugs. When a macrolide is required, azithromycin should be considered for patients already receiving a calcium-channel blocker.

Infectious diseases kill nearly 5,000 Ontarians annually: OAHPP/ICES study

Kwong J, Crowcroft N, Campitelli M, Ratnasingham S, Daneman N, Deeks S, Manuel D, ONBOIDS Advisory Group. *Ontario Burden of Infectious Disease Study*. Toronto: Ontario Agency for Health Protection and Promotion and Institute for Clinical Evaluative Sciences; 2010.

Issue	Over the past decade, infectious diseases have regained prominence in Ontario with outbreaks of <i>E. coli</i> , West Nile virus, severe acute respiratory syndrome (SARS) and pandemic H1N1 influenza. What are the relative contributions of select infectious diseases to the overall burden of disease in Ontario?
Study	Used a composite health gap measure—health-adjusted life years (HALYs)—to assess the burden of illness for 51 infectious diseases in Ontario. Deaths were estimated from Ontario vital statistics data for 2003–2005. Disease incidence was estimated for 2003–2005 by compiling Ontario reportable disease data, health care utilization data and cancer registry data, supplemented with local modeling studies and national and international epidemiologic studies.
Key Findings	<ul style="list-style-type: none"> • Each year in Ontario, there are over seven million infectious disease episodes and nearly 4,900 deaths from infectious diseases. • Infectious diseases accounted for 82,881 HALYs, comprising 68,213 years of life lost due to premature mortality and 14,668 year-equivalents of reduced functioning; more than 80% of the disease burden associated with infectious diseases is from premature mortality rather than from disease-associated morbidity. • The 10 most burdensome infectious diseases were found to be: hepatitis C virus, <i>Streptococcus pneumoniae</i>, human papillomavirus (HPV), hepatitis B virus, <i>Escherichia coli</i> (<i>E. coli</i>), human immunodeficiency virus (HIV/AIDS), <i>Staphylococcus aureus</i>, influenza, <i>Clostridium difficile</i> (<i>C. difficile</i>) and rhinoviruses (common cold).
Implications	<p>The study calls for the implementation of:</p> <ul style="list-style-type: none"> • Policies and knowledge exchange and dissemination to increase the uptake of existing means of preventing infectious diseases (e.g., vaccines, hand hygiene and needle exchange programs); • Increased investment in developing new ways to fight infectious diseases (e.g., new vaccines and antibiotics); • Increased screening for diseases such as hepatitis B and C, in order to identify and support those already infected and thus help to minimize the long-term impact of these diseases; • Improvements in data quality and availability; and • Better infrastructure for surveillance, research and program evaluation (which could be accomplished in many cases by better linkage of existing data).

Rheumatoid arthritis patients treated by specialists more likely to receive early drug therapy

Widdifield J, Bernatsky S, Paterson M, Pope J, Thorne C, Gunraj N, Cividino A, Bombardier C. Quality care in seniors with new-onset rheumatoid arthritis: a Canadian perspective. *Arthritis Care Res*. 2011; 63(1):53–7.

Issue	It is well known that for patients with rheumatoid arthritis (RA), delays in initiating therapy are associated with reduced health outcomes. What proportion of seniors with RA receive disease-modifying anti-rheumatic drugs (DMARDs) within the first year of diagnosis?
Study	Used Ontario physician billing data for 1997–2006 to identify 24,942 seniors with RA. Their exposure to one or more DMARD prescriptions within the first year of RA diagnosis was assessed. Seniors who had received rheumatology care were compared to those who had not.
Key Findings	Only 39% of the seniors with new-onset RA were exposed to DMARD therapy within one year of diagnosis. This increased from 30% in 1997 to 53% in 2006. In 2006, 67% of subjects receiving care from a rheumatologist were exposed to DMARDs vs. 21% of those with no rheumatology care.
Implications	Although RA care has improved, more efforts are needed, particularly in the area of access to rheumatologists. Future research should examine practice patterns, the influence of funding and the effectiveness and safety of antirheumatic therapies.