

Health Horizon

Planning, Research and Analysis Branch, Health System Strategy and Policy Division, MOHLTC

Examples of policy-relevant research evidence and trends
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Primary Health Care

Nurse practitioner (NP) workforce 2012 survey results

“NPs provide improved access to primary care for vulnerable populations.” That is the conclusion supported by key findings of a [2012 survey](#) (n=613) conducted by the [Centre for Rural and Northern Health Research \(CRaNHR\)](#). Of the 349 NP respondents practicing in primary care, >40% were the main care provider for an average of 350 clients; >70% of NPs worked with low-income earners and the unemployed; 50% worked with cultural minorities and people with permanent disabilities; and 40% worked with Aboriginal people and recent immigrants.

Chronic Disease Prevention and Management

New evidence related to leg ulcer care

Leg ulcer care in Canada consumes hundreds of millions of dollars annually. The [Canadian Bandaging Trial](#) from Queen’s University showed that when trained registered nurses use an evidence-informed protocol, both the ‘four-layer bandage’ and ‘short-stretch bandage’ outcomes are similar for healing times, recurrence rates, health-related quality of life and pain in treating venous leg ulcers. A published [cost-effectiveness analysis](#) conducted by the [Toronto Health Economics and Technology Assessment Collaborative](#) showed that given the same practice context, both compression systems offer comparable effectiveness and value for money.

Mental Health and Addictions

Prevalence and treatment of depression in older adults

According to a [large Ontario study](#) of 14 home care (HC) agencies and 134 complex continuing care (CCC) units/hospitals, depression was less prevalent in clients over 65 in HC (12.0%) than in CCC (23.6%). The rate in CCC remained constant with age, but decreased in HC to about 6% among those older than 95. In both settings, less than half were treated with antidepressants and the likelihood of being untreated increased with age.

Public Health and Health Promotion

Obesity: a growing economic and health burden

One in four Canadian adults and one in nine children and youth are obese. A recent [McMaster Health Forum Evidence Brief](#) focused on integrating approaches to promoting healthy weights to address the underlying determinants. Systematic reviews point to three potential options: information and skills building; programs to support healthy built environments; and financial incentives and policies to enable healthy food and physical activity environments.

Institutional Care/Sectors

Adverse drug reactions among elderly patients in Ontario

Using multiple drugs from multiple pharmacies, particularly in older adults, directly increases the risk of adverse drug reactions (ADRs). A population-based [study](#) by the [Health System Performance Research Network](#) found ADR visits made up less than 1% of annual ED visits among adults over 65, but 21.6% of them required hospitalization. In 2007, acute care ADR costs topped \$13.6 million in Ontario – of which \$11 million was to care for patients with severe ADRs. Notably, long-term care residents were twice as likely to experience severe ADRs as people living at home.

Note: Health Horizon newsletter draws on current research from peer-reviewed journals. You may need to obtain some of the articles referenced in Health Horizon through the MOHLTC Journal Access Centre or by purchasing them. For assistance with obtaining articles please contact the Health Horizon Staff Lead, Jeffrey Sharom at Jeffrey.Sharom@ontario.ca tel. (416) 327-3864. Please note that Health Horizon is a summary of information from other sources, not a representation of the policy position or goals of the Ministry of Health and Long-Term Care. If material in the newsletter is to be referenced, please cite the original, primary source, rather than the newsletter itself.

World at a Glance



Canada

Alcohol-related harm reduction strategies in Canada

A [cross-provincial report](#) funded by [Canadian Institutes of Health Research](#) provided a comparative review of policies and programs with the potential to reduce the health and social harms from alcohol. Ten policy dimensions were examined and weighted as a percentage of an ideal score, where 100% corresponded to a perfect combination of effective strategies. Using this measure, ON (55.9%), BC (53.4%) and NS (51.4%) scored highest (meaning they employed the most promising policies); and NL (43.5%), PEI (41%) and QC (36.2%) scored lowest, where the provincial mean was (47.1%).



United States

Measuring hospital quality via Facebook

U.S. [researchers](#) used a quantitative analysis of the [Facebook](#) pages of 40 New York hospitals to determine whether Facebook “[Likes](#)” were associated with hospital quality and patient satisfaction. Results suggested that hospitals with lower 30-day mortality rates received more “[Likes](#)”; and those with more “[Likes](#)” were more likely to be recommended by patients. Both relationships were statistically significant, suggesting that the number of “[Likes](#)” may be used as a proxy for patient satisfaction and an indicator of hospital quality.



United Kingdom

Making integrated care a reality

A new publication from [The King’s Fund](#) summarizes [16 steps for realizing the vision of integrated care](#). Key points include: build integrated care from the bottom up as well as top down (e.g. multidisciplinary teams); identify services and user groups where the potential benefits from integrated care are greatest (e.g. multi-morbidities); innovate in the use of purchasing services, contracting and payment mechanisms and use of the independent sector (i.e. non-NHS public or private organizations); and, pool resources to enable commissioners and integrated teams to use resources flexibly (e.g. transfers between health and social care).



European Union

Work stress is not a risk factor for cancer

A 2013 [meta-analysis](#) of twelve European cohort studies explored whether work-related stress was associated with the overall risk of cancer. Analysis gave a hazard ratio of 0.97 indicating no clear evidence for such an association. There was a slightly increased risk of colorectal (1.16) and lung cancer (1.17), but a slightly decreased risk of breast (0.97) and prostate cancer (0.86).



Other

Gender differences in financial barriers to primary care in New Zealand

The impact of gender on cost-related barriers to doctors’ visits, medications and dental visits in New Zealand was explored in a [recent study](#). Women were 1.82 times more likely than men to defer a visit to a physician due to cost, which decreased to 1.45 once adjusted for demographic, socioeconomic and health-related factors. Women were 2.05 times more likely to defer collecting a prescription (1.47 adjusted), and 1.58 times as likely to defer a dentist’s visit (1.35 adjusted) Similar findings were reported by the [Project for an Ontario Women’s Health Evidence-Based Report](#) (POWER) study.

Focus on Multiple Sclerosis Research

Highlight

The Multiple Sclerosis (MS) Society of Canada

Founded in 1948, the [MS Society of Canada](#) is a national voluntary organization that supports both MS research and services for people affected by MS.

Providing support services and information

The MS Society provides access to [educational literature](#), [research updates](#) and other [services](#) for people affected by MS such as referral, supportive counseling, support and self-help groups, recreation and social programs and financial assistance. It also maintains: the [MS Research Portal](#), which highlights research studies seeking participants; [SomeoneLikeMe.ca](#), which features blogs, forums and inspirational stories of young people affected by MS; and the [CCSVI and MS](#) website, which provides up-to-date information about this experimental MS treatment (see main text).

Funding research

The goals of the [research funded by the MS Society](#) are to find a cure for MS, to protect the nervous system and repair damage caused by MS and to improve monitoring and management of the disease. The MS Society has funded over \$140 million dollars of [MS research](#) since its inception. It also funds the [MS Scientific Research Foundation](#), the largest MS research fund in the world, which supports large collaborative scientific projects and will spend [\\$12 million on MS research over the next three years](#).

Advocacy

The MS Society engages in a variety of [advocacy activities](#) at both the [federal](#) and [provincial](#) levels, seeking to change government policies, private industry practices and public attitudes in ways that will benefit people affected by MS.

Why is multiple sclerosis research important?

[Multiple sclerosis](#) (MS) is a neurological disease in which myelin – the protective covering around the nerves of the central nervous system – becomes damaged. MS is [most often diagnosed in young adults](#) aged 15 to 40, and affects three times as many women as men. Most people (85%) are diagnosed with the [relapsing-remitting](#) form of MS, characterized by episodes where new symptoms appear or worsen, separated by periods of remission where recovery is near-complete. Over time, 50-70% of people convert to [secondary progressive](#) MS, characterized by slow accumulation of disability without relapse. [Treatments](#) for MS include [disease modifying therapies](#) (DMTs) (drugs which target the immune system and aim to reduce the frequency/severity of relapses and slow the onset of disability), [steroids](#) (which suppress inflammation to decrease the severity/duration of relapses only) and therapies to ease MS-related [symptoms](#). Previous studies have found that [MS prevalence in Ontario is 230 per 100,000](#) (similar to the overall prevalence for Canada of 240 per 100,000), and that [Canada has one of the highest rates of MS in the world](#). The MS Society of Canada has estimated that [55,000-75,000 Canadians are living with MS](#), including [21,000-29,000 Ontarians](#).

Social costs: Recent analyses of survey data from Statistics Canada have found that respondents with MS report [unmet health care needs](#) and lower health-related quality of life compared to the [general population](#) and [people with other types of disabling conditions](#). A recent study of Canadian MS patients and their doctors also found that [patients consistently rated their health status as lower than their neurologists did](#). Access to DMTs for MS may not be optimal, and even when DMTs are prescribed, patients may not keep taking them. Recent Ontario studies have found that [DMT prescribing is highly concentrated](#), with 12% of MS clinic and community-based neurologists responsible for 80% of prescriptions, and that [patient adherence to DMTs is poor](#) (decreasing to 41-47% after two years).

Economic costs: A 2007 report by the [Canadian Institute for Health Information](#) (CIHI) found that [the total costs associated with MS in Canada were \\$950 million in 2000/01](#), and that MS was associated with the loss of over 13,000 disability-adjusted life years (a measure of years of life lost because of premature mortality and years of healthy life lost as a result of disability). A 2012 study found that [the annual economic burden of MS in Canada](#) (including direct medical costs, direct non-medical costs and indirect costs) was \$30,836 for patients with mild disability, \$46,622 for patients with moderate disability, and \$77,981 for patients with severe disability.

Current MS research

The [endMS Research and Training Network](#) is a nationwide initiative managed by the MS Society and funded through the MS Scientific Research Foundation as the flagship investment of the \$60-million [endMS campaign](#). The operational hubs of the network are its five endMS [Regional Research and Training Centres](#), with the [Manitoba-Ontario endMS regional centre](#) including MS expertise from a variety of academic and health institutions across Ontario. Selected MS Society-funded research is described below.

CCSVI: Chronic Cerebrospinal Venous Insufficiency (CCSVI) is a term coined by Dr. Paolo Zamboni. The CCSVI hypothesis – that MS is linked to narrowing or blockage of the veins in the head and neck – is the subject of ongoing research. [CCSVI is not an insured service in Ontario](#); however, some Ontarians have chosen to undergo this procedure outside of the country. The [Ontario Multiple Sclerosis Expert Advisory Group](#) has developed post treatment guidelines for [health care providers](#) who provide follow-up care to people living with MS who have undergone the procedure outside of Ontario. [Seven research projects investigating CCSVI and MS](#) – launched with a \$2.4 million investment by the US National MS Society and the MS Society of Canada – have [reached their two-year milestone](#), with most expected to be completed during 2013. The first reported double-blinded, randomized, controlled trial of a vein-opening procedure to treat CCSVI found that it [did not improve MS patient outcomes](#). A [national clinical trial investigating CCSVI and MS](#) has been [approved to proceed](#). It is a \$6-million collaboration between the [Canadian Institutes of Health Research](#) (CIHR), the MS Society of Canada and the provinces where the trial will take place.

Experimental bone marrow transplantation: An experimental MS treatment involving [bone marrow transplantation](#) has received recent [media coverage](#). In this procedure, the patient's own stem cells are harvested from bone marrow and stored temporarily while high doses of chemotherapy are used to destroy the immune system, which is then regenerated from infused stem cells. A small pilot study has found that for some patients with aggressive MS, this treatment reduced or eliminated ongoing clinical relapse, halted further progression and reduced the burden of disability. The research of [Dr. Harold Atkins](#) and [Dr. Mark Freedman](#) at the Ottawa Hospital Research Institute aims to [understand the immune system of patients who have undergone this treatment](#) and establish whether patients enter a long-lasting MS progression-free state.

Childhood MS: About 3-5% of MS patients experience their first episode in [childhood](#), with the first attack known as acquired demyelinating syndrome (ADS). The Canadian Pediatric Demyelinating Disease Network is a study involving 23 sites across Canada and [led by the Hospital for Sick Children](#) in Toronto. Network researchers have found [magnetic resonance imaging \(MRI\) parameters](#) and [genetic and environmental factors](#) in children with ADS that can predict eventual diagnosis with MS, and noted [other disorders that may mimic ADS](#). They have also found that [relations with parents are a key factor influencing the emotional well-being of youth with MS](#), suggesting an important role for family-centered care in this population.

Treatments for MS symptoms: Many people living with MS experience [depression](#) and [cognitive deficits](#). At the Sunnybrook Research Institute, [Dr. Neil Rector](#) is investigating the effects of cognitive behavioural therapy, exercise and a combination of both on depression and neuropsychological functioning in MS. [Dr. Anthony Feinstein](#) is investigating the effect on brain activation and cognitive functioning of inhaled cannabis, which is used by some MS patients to manage symptoms such as pain and spasticity.

Looking ahead

Canadian Multiple Sclerosis Monitoring System: The [Public Health Agency of Canada](#) is [supporting](#) the development of a new [Canadian Multiple Sclerosis Monitoring System](#). The system is being [developed](#) by CIHI in close collaboration with the [Canadian Network of Multiple Sclerosis Clinics](#) and the MS Society of Canada. As of April 2013, MS clinics, community neurologists and family physicians are able to submit data to the monitoring system using either data extraction from their local registry or using CIHI's secure online data entry tool. The information collected will help those diagnosed with MS, clinicians, researchers, policymakers and the public to better understand disease patterns across Canada, variation in use of treatments and long-term outcomes.

National Population Health Study of Neurological Conditions: In 2009, the Government of Canada [invested \\$15 million over four years](#) to fund the first-ever [National Population Health Study of Neurological Conditions](#). The purpose of the study is to fill gaps in knowledge about 14 neurological conditions, including MS, and their impacts on individuals, families, caregivers and health care systems. [Funded projects](#) aim to improve current knowledge of the incidence, prevalence, risk factors, use of health services, as well as economic costs currently associated with neurological conditions and projected over the next 20 years. The Public Health Agency of Canada is working with [Neurological Health Charities Canada](#), [Health Canada](#), CIHR and expert groups on the implementation of the project, with a comprehensive report expected in 2014.

Listening to People Affected by MS Initiative: In 2012, the MS Society of Canada launched the [Listening to People Affected by MS](#) initiative, a multi-pronged evaluation to better understand the impact of MS on quality of life needs and barriers. Over 6,000 people responded to the initiative, including people with MS, those awaiting a diagnosis, caregivers and those who have close friends or family members with the disease. The results of this feedback will inform the MS Society's programs, services and advocacy work.

Recent systematic reviews

[Disease-modifying drugs for MS in pregnancy](#)

[Effects of physiotherapy interventions on balance in MS](#)

[Treatment of cognitive impairment in patients with MS](#)

Interesting links

[CIHR, Health Canada and the MS Society of Canada: Canadian MS research priorities](#)

[MS International Federation: Global economic impact of MS](#)

[Future MS care: a consensus statement of the MS in the 21st Century Steering Group](#)

[Personalized medicine in MS: hope or reality?](#)

[Setting a research agenda for progressive MS: the International Collaborative on Progressive MS](#)

[Debate: "Media, politics and science policy: MS and evidence from the CCSVI Trenches"](#)

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