

Integrated 'Best Practices' Stroke Care

Stroke is the leading cause of adult disability in Canada and the third leading cause of death. Canadian Institutes of Health Research (CIHR) More than 50,000 Canadians experience a stroke annually and more than 300,000 Canadians live with the effects of a stroke. As our population ages and the incidence of risk factors for stroke (e.g., hypertension and diabetes) rises, there is concern that a corresponding increase in stroke will occur over the next 10 years.

A recent economic analysis of the impact of stroke revealed a cost of \$3.6 billion annually. Canadian projections based on a recently developed economic model for stroke care suggest that over a 20-year period, organized stroke care that includes specialized units and teams and access to acute interventions could prevent 160,000 strokes and achieve a projected \$8 billion in net savings to the Canadian health care system.

Organized stroke care has been shown to reduce mortality and morbidity and to improve functional outcome and quality of life for stroke survivors. In 1998, the Heart and Stroke Foundation of Ontario (HSFO) led the Coordinated Stroke Strategy, which was an innovative approach to the system-wide organization of stroke care. Four sites participated in this pilot project: Southeastern Ontario, Southwestern Ontario, Central South Ontario and West Greater Toronto Area. The success of this pilot project provided the foundation for the development of a province-wide strategy by the Ministry of Health and

Long-Term Care (MOHLTC) that would reorganize stroke care.

Integrated stroke care

In 2000, a joint working group of the MOHLTC and HSFO produced a document titled: 'Towards an Integrated Stroke Strategy for Ontario, Report of the Joint Stroke Strategy Working Group.' This document provides a detailed vision for achieving integrated stroke care and its benefits. The key elements of a regional stroke strategy reach across the care continuum and are as follows:

- knowledge transfer and implementation of best practices;
- a focus on improving access;
- collaboration and strategic alliances;
- local and regional commitment;
- data and information;
- education of the public, clients and care providers; and
- a provincial system of linkages.

In 2001, the MOHLTC designated six regional stroke centres to provide leadership in developing a stroke strategy within their respective regions. Since then, another five regional stroke centres have been designated. In addition, the Ontario Stroke System (OSS) includes 18 district stroke centres, 24 secondary stroke prevention clinics, community hospitals and many regional partners.

The Ontario Stroke Strategy

The Ontario Stroke Strategy is a collaborative system of provider organizations and partners who deliver stroke care across the continuum, in addition to stroke prevention programs. The OSS is guided by four principles:

- Comprehensive: improve stroke services across the care continuum from prevention to care in a long term care or community setting.
- Integrated: create an integrated or coordinated system of care where different services and sectors function as a unified whole across the care continuum and across Ontario to minimize duplication of

services and optimize existing resources.

- Evidence-based: promote the use of practices and care that have been supported by scientific evidence or are considered the gold standard ('best practice') according to prevailing knowledge.
- Province-wide: benefit all Ontarians regardless of their geographic location.

Each regional stroke program team comprises a regional program manager, regional stroke education coordinator, regional rehabilitation coordinator, community and long term care specialist and regional medical director. The regional program manager is primarily responsible for facilitating the implementation and sustainability of the stroke system within a region. The regional stroke education coordinator identifies and facilitates educational initiatives to support the implementation of stroke best practices across the continuum and for all regulated health care providers. The regional rehabilitation coordinator establishes links with rehabilitation providers within a region to identify and support opportunities for implementation of stroke best practices. The community and long term care specialist develops relationships with stakeholders in the community and long term care sector to be able to identify, plan and implement stroke best practice initiatives in partnership. Along with this work, is the responsibility to support the educational needs of care providers related to stroke best practices within the community and long term care.

The OSS provincial stroke steering committee is responsible for overseeing the implementation of the stroke strategy and the achievement of the OSS's goals. In 2007, in response to changes within the Ontario health care environment, the OSS initiated a strategic planning process. The purpose of the strategic planning process was to:

- confirm the vision for the OSS;
- develop strategic directions for the next three to five years;

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- enhance the credibility and sustainability of the OSS; and
- enhance decision-making and accountability structures within the OSS.

The results of this process provided the Ontario Stroke Network with a vision—‘Fewer Strokes, Better Outcomes’—and a mission: to continuously improve prevention, care, recovery and re-integration. The Ontario Stroke Network provides the governance and operational structures for provincial leadership, accountability and coordination. The OSS is the system of regional networks responsible for the delivery of stroke care across Ontario.

The Canadian Stroke Strategy

In addition to this provincial approach to organized stroke care, in 2005 the Canadian Stroke Network and the Heart and Stroke Foundation of Canada (HSFC) partnered to develop the Canadian Stroke

Strategy (CSS). The goal of the CSS is to help support an integrated approach to stroke prevention, treatment and rehabilitation in every province and territory by 2010. Through supporting and sharing national tools—such as training and education programs, best practices, awareness initiatives and evaluation and monitoring systems—each province will be able to develop its own unique approach to health systems change.

The goal of the CSS is supported through the creation of working groups to address priority initiatives such as best practice implementation, professional development and information and evaluation. The Best Practices and Standards Working Group is one of the five working groups of the CSS. The goal of this group is to support the development and dissemination of Canadian best practice recommendations for stroke care.

Canadian best practice recommendations

These recommendations are the result of an intensive review of international stroke research and published evidence-based recommendations related to stroke care. The recommendations reflect the continuum of care from primary prevention to community re-integration and long term recovery. In addition to providing best practice recommendations related to direct care delivery, the CSS also provides information relating to system implications, performance measures and evidence summaries.

The first edition of the ‘Canadian Best Practice Recommendations for Stroke Care’ was released in 2006, with a commitment to update the recommendations every two years. In December 2008, the ‘Canadian Best Practice Recommendations for Stroke Care Update 2008’ was released through the *Canadian Medical Association Journal*. The 2008 update

includes revisions to the 24 best practice recommendations from 2006 and an additional four new recommendations on the subjects of emergency medical services, management of transient ischemic attack and minor stroke, acute in-patient care and vascular cognitive impairment. The guideline is available at www.cmaj.ca/cgi/content/full/179/12/S1.

Providing education

The development of an information and evaluation framework both provincially and nationally is beginning to provide valuable data to inform clinicians and decision-makers to support advocating for best practice stroke care at all levels.

The Professional Development and Training Work Group is another of the five working groups of the CSS. This group is focused on the implementation of a professional development and training plan for

health care providers who are caring for stroke patients. A national needs survey identified the need for point-of-care tools that facilitate knowledge transfer of the best practice recommendations to the clinical setting. These tools are now available on the websites of the CSS (www.canadianstrokestrategy.ca) and the HSFC (www.heartandstroke.ca/profed).

Current available point of care tools include:

- an acute stroke management resource;
- a Toolkit for the Canadian Best Practice Recommendations for Stroke Care (2006) (2008);
- pocket reference cards: cranial nerves, common stroke presentations, functions of the brain, the National Institutes of Health Stroke Scale, the Canadian neurological scale and stroke prevention;
- FAAAST frequently asked questions for nurses; and
- the *National Professional Education Atlas*.

Going forward

Work is already underway to develop the next update of the Canadian Best Practice Recommendations for 2010 under the leadership of the CSS and with participation by stroke experts from all provinces, including Ontario.

The last decade has been a period of great change for those who give and receive stroke care, both nationally and within Ontario. 'Canadian Best Practice Recommendations for Stroke Care' is a valuable resource for clinicians delivering care across the continuum and for system implications and changes. The development of regional roles, such as the community and long term care specialist in the Ontario Stroke Strategy, offers a resource for health care providers in community and long term care environments to further strengthen and improve access to best practice stroke care. **LTC**