

*Stroke is the Number One cause of acquired long-term disability, the Number Two cause of dementia and the Number Three cause of death in British Columbia. Fortunately, managing personal risk factors and improving stroke care can prevent a large percentage of strokes.*

*The BC Stroke Strategy is an integrated plan that takes a coordinated approach to improving stroke care – from public awareness and primary and secondary prevention, through acute treatment to rehabilitation and community reintegration. Along the way, projects are evaluated and data collected to determine next steps and measure overall system performance.*

*The Heart and Stroke Foundation of BC & Yukon, the Ministry of Health Services and regional health authorities came together in 2006 to develop and implement the BC Stroke Strategy.*

*The objective is simple: to reduce the number of deaths and disability caused by stroke in British Columbia.*

## TIA Rapid Assessment Clinics

Approximately 20 per cent of Transient Ischemic Attacks (TIAs or mini strokes) become full-blown strokes within three months. Rapid Assessment Clinics identify TIAs and work with patients to significantly reduce their risk of having a full-blown stroke.

The BC Stroke Strategy builds capacity in the health care system to respond to mini-strokes, and TIA Rapid Assessment Clinics are being established or expanded across the province.

- Vancouver Coastal and Vancouver Island Health Authorities have expanded hours of existing clinics at Vancouver General, Victoria General, and St. Paul's Hospitals.
- Since opening in February, Fraser Health's TIA Rapid Assessment Clinics in Abbotsford, Surrey and New Westminster have seen more than 600 patients.
- The Interior Health Authority opened a clinic in Kamloops this fall and plans to open an additional clinic in Cranbrook shortly.
- The Northern Health Authority is looking at improving the way TIAs are identified and referred for rapid follow-up, as well as expediting diagnostic tests.

## Telestroke

Telestroke merges acute stroke therapies and telemedicine, allowing stroke specialists to assist emergency room physicians evaluate and manage acute ischemic stroke via information and communications technologies.

The first Telestroke prototype began operating in July 2009 with the Vancouver Island Health Authority. Since then, there have been 13 Telestroke consultations, and six patients received tPA, the clot-busting drug.

The Vancouver Coastal and Fraser Health Authorities are working on the second Telestroke prototype, developing a model that crosses health authority jurisdictions. This project is expected to launch in early 2010.

## ACVS

A province-wide Telestroke network is part of the Acute Cerebrovascular Syndrome (ACVS) Care component of the BC Stroke Strategy. The goal of ACVS is to provide optimal hyper-acute stroke care across the province.

If implemented, British Columbians could access optimal stroke care at the right time and in the right place. Requirements include a comprehensive pre-hospital system, triage protocols for hyper-acute stroke care, an organized system of Stroke/ACVS/TIA care for Emergency Departments, a provincial Telestroke pool, diagnostic imaging networks and access to stroke care specialists. This is the backbone of comprehensive and organized stroke care in BC.

ACVS proposes and has identified four levels of care for hospitals across the province:

- Level 1 Comprehensive Stroke Centres – two hospital sites
- Level 2 Regional Stroke centres – six hospital sites
- Level 3 Primary Stroke Centres (telestroke enabled) – 26 hospital sites
- Level 4 (non-tPA enabled) – 64 hospital sites.

Implementing ACVS will require:

- commitment from the provincial government and health authorities
- designated hospital roles and a stroke network
- developing capacity and delivery elements for tPA, and
- outcome and quality monitoring

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## Emergency Department Stroke Protocols

In 2008, the Current Practice Indicator Project (CPIP) identified recommendations to improve the diagnosis and treatment of stroke in Emergency Rooms across BC. As a result, the Emergency Department Protocol Working Group established stroke protocols, which have been disseminated to all Health Authorities. The BC Stroke Strategy has developed and executed a plan to increase awareness and uptake of these protocols.

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## Rehabilitation and Community Re-integration

Timely, intensive rehabilitation and specialized community supports are essential components of stroke recovery.

To address gaps in care and build capacity in this area, the BC Stroke Strategy assembled a provincial, multi-disciplinary expert panel on rehabilitation and community. The panel worked with health authorities, the Ministry of Health Services and non-governmental organizations to identify and develop project concepts. These projects would:

- allow patients to receive community-based rehab services upon release from hospital
- improve access and coordination of community resources for stroke survivors returning home
- build a Telerehab program for therapists in rural and remote communities, and
- identify standards and levels of stroke care across the province.

These proposals have been put forward for funding consideration.

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## Measurement and Evaluation

The Measurement and Evaluation Working Group tracks patient and process outcomes from TIA Rapid Assessment Clinics and the Telestroke prototypes. The information will be used to evaluate their effectiveness and make recommendations about expanding these initiatives.

The Working Group has built a world-class Stroke Registry in BC, tracking incidents, treatments and outcomes for patients. The Registry links several health databases and provides extremely reliable data for decision making. The group has also developed five key stroke indicators that can be used to measure overall system performance:

1. Reduce the proportion of patients who die in hospital or are sent to a long term care facility after being admitted/discharged (principle diagnosis) for ischemic stroke. (If only one composite measure is used it would be this measure of death and dependency.)
2. Reduce the age-standardized incidence rate of both ischemic and hemorrhagic stroke (by 10 per cent between 2007/08 and 2011/12).
3. Reduce acute care days (this includes a combination of reduced admissions and reduced average length of stay) for admissions in which an ischemic stroke is the principle diagnosis (by 10 per cent between 2007/08 and 2011/12).
4. Increase the volume of TIA/mild strokes processed in TIA Rapid Assessment Clinics (by 50 per cent between 2007/08 and 2011/12).
5. Increase the number of ischemic stroke patients receiving tPA (to 5 per cent between 2007/08 and 2011/12).

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## Communications

The BC Stroke Strategy website has been updated with information about key initiatives, details about prototype projects and background to the BC Stroke Strategy. Visit [www.bcstrokestrategy.ca](http://www.bcstrokestrategy.ca) to check it out, and sign up for our newsletter to keep in touch.

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## Next steps

The BC Stroke Strategy has made significant and demonstrable progress so far. Prototypes are operating, expanding and being evaluated. System-wide improvements have been identified and work plans developed.

Priorities for the future include:

- embed stroke best practice as a priority within the health care system
- complete and evaluate initial stroke prototype projects and related initiatives
- implement the Acute Cerebrovascular Syndrome (ACVS) plan, and
- implement rehabilitation and community reintegration projects.