

BC Stroke Strategy Chronology and Phase One Telestroke Development & Implementation Stages

BC Stroke Strategy Chronology

2003 Canadian Stroke Strategy funded

2004 BC Stroke Strategy planning starts

2005 HSFBC&Y Stroke Strategy Working Group

2006 HSFBC&Y and MOHS Summit #1 (four pillars)

- Awareness and Prevention
- Emergency and Acute Care
- Rehabilitation and Community Integration
- Key measurement indicators and monitoring

2007 HSFBC&Y and MOHS Summit #2

2007 HSFBC&Y Business Case - \$17M requested across 9 priority action areas

- Primary Prevention
- Emergency Department Protocol
- Telehealth and Teleradiology¹
- Acute Stroke Management
- Primary Care
- Secondary Stroke Prevention
- Stroke Rehabilitation
- Community Re-integration
- Coordination
- Evaluation

2007 MOHS provides \$2.5M in funding to support prototype projects to demonstrate outcomes

- Rapid Assessment/TIA Secondary Prevention
- ER Stroke/TIA protocols
- Rehabilitation and re-integration
- Measurement and Evaluation
- Telestroke

2007 HSFBCY convenes a Telehealth Working Group

- Telestroke Action Plan

2008 BC Telestroke Start Date June 17th

2008 MOHS supports Hyperacute Capacity initiation (tPA-enabled province) - \$1M

- DRAFT ACVS Consensus Statement

¹ ...to “determine system requirements and other barriers and expand capacity and usage.”

BC Telestroke Phase One Development and Implementation Stages
(June 2008-June 2010)

- 1. Concept validation**
 - a. stakeholder assumptions
- 2. Project coordination and oversight**
 - a. accountabilities
- 3. Service Model Development**
 - a. *Step-wise service model:*
 - i. two independent consulting sites – one serving 2 intra-regional referring hospitals, the other serving two inter-regional referring hospitals – provide emergency stroke management consultations for hyperacute patients admitted at referring sites;
 - ii. consultants take telestroke on-call at one base hospital site
 - iii. utilizes existing on-call medical rotations (VIHA level 1 MOCAP neurology on-call – Victoria GH; VCH level 1 Hot Stroke Pager Program – multiple HA reach)
 - iv. utilizes existing first-contact and referral management rule structure
 - v. utilizes existing diagnostic imaging push/viewing solutions
 - vi. utilizes existing HA networks and PNG transport
 - b. *Functional service requirements*
 - i. consulting sites
 - ii. referring sites
 - iii. best practices (business & clinical processes)
 - c. *Candidate site identification*
 - i. functional service requirements narrow site selection
- 4. Advice and Approvals: Current**
 - a. Stakeholder engagement & communication
 - i. access to staff resources
 - ii. secure Executive Sponsorship
 - iii. determine regional oversight requirements
 - iv. identify referring sites
 - b. Issue identification
 - i. document gaps between existing systems and Telestroke service requirements
 - ii. investigate emergent opportunities
 - iii. validate clinical service assumptions
- 5. Readiness Assessment**
 - a. identify site specific resources and issues
 - b. develop plan to build on and address issues
- 6. Service Model Optimization**
 - a. address gaps/resolve unknowns (leverage additional resources, draft/amend SLAs, adapt protocols, integrate non-service pieces)
 - b. collate documentation
 - c. establish site specific oversight

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- d. launch change management

7. Implementation

- a. install network and procure equipment
- b. train and support users
- c. certify endpoints
- d. launch service: Target date: June 15, 2009
- e. deliver services
- f. refresh staff skills

8. Monitor activity

- a. capture site-specific utilization data

9. Repeat for subsequent sites

Estimating Potential Volumes²

Based on available data, an average of 5,952 patients were admitted to BC hospitals for stroke associated care per year. Of these patients, 3888 (65.3%) were admitted for ischemic events. The vast majority (91.1%)³ of patients admitted for ischemic events arrived via the emergency department. Based on Canadian data we can assume that 30% of the 3,888 (1,167) would arrive within 3 hours of their event onset and that 36% (1,400) would arrive within 4.5 hours of their event onset. About 27% of these – 1,167 or 1,400 (315 or 378, respectively) would meeting eligibility criteria for tPA

Estimating Telestroke Potential Referral Impact for FHA HSPP-enabled referring hospitals

Historical Ischemic Stroke Admissions and estimated arrival times					
Candidate Referring Site	Total ischemic event admissions ⁴	No. arriving within 3 hrs of symptom onset (30%)	No. arriving within 4.5 hrs of symptom onset (36%)	No. meeting tPA criteria (3hrs – 27%)	No. meeting tPA criteria (4.5 hrs – 27%)
PAH	119	35.7	42.8	9.6	11.6
RCH	189	56.7	68.0	15.3	18.4
SMH	192	57.6	69.1	15.5	18.7

Candidate Referring Site	HSPP Referrals ⁵	Adjusted Annual HSPP Referrals	%age of Ave Annual HSPP referrals (n=93) ⁶
PAH	27	18	19.35%
SMH	44	29.3	31.5%
RCH	1	< 1	.0107%

² H. Krueger and Associates. *Background Data for Telestroke Fee Codes*. 11 November 2008

³ FHA emergency admissions for ischemic stroke are 4 percent higher than average (95.13%)

⁴ Represents three year average (2005-06 to 2007-08) for ischemic event of central nervous system; cerebrovascular disorder; unspecified stroke.

⁵ *bcbl data*, January 2007 to July 2008

⁶ The average monthly number of referrals over 18 months multiplied by 12.