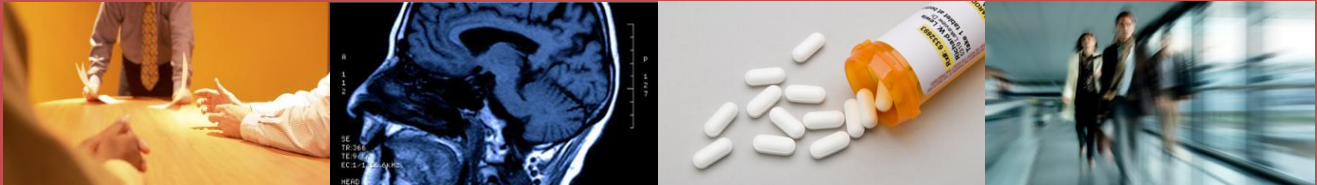




**HEART &
STROKE
FOUNDATION
OF BC & YUKON**



Provincial Telestroke Implementation Plan: Phase 2

Heart and Stroke Foundation of BC & Yukon

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CURRENT STATE

In 2008 the BC Telestroke Working Group and the Heart and Stroke Foundation of BC and the Yukon embarked on a telestroke planning exercise to determine the best model for telestroke implementation within BC based on existing requirements for a Telestroke program. To maximize these assets within a reasonable time frame and within resources allocated, a *Step-wise Service Model* was recommended for telestroke service development within BC. With little provincial experience in the complexity of emergency telemedicine and little structure in place to support the full spectrum of functional requirements, this phased in approach to a provincial model was developed with one consulting group on Vancouver Island servicing two referring emergency departments and another in the Lower Mainland servicing another two referring emergency departments within Fraser Health. This prototype model was designed as a strategy to maximize existing system assets and to assess their ability to meet telestroke functional requirements. The prototypes informed service design, policy and procedures and through the evaluation informed essential implementation requirements, such as a certain level of pre-existing stroke care within the referring facilities. **Table 1** shows the degree to which telestroke has been implemented in BC and where the other Health Authorities (HAs) are with Telestroke implementation. **Table 2** broadly outlines the service requirements for a provincial model, what has been achieved through phase 1, the percentage that this initial work contributes to Phase 2 and the pieces required to move to a provincial service. A detailed costing plan was also developed for phase 2. The condensed version of this can be found within the Stroke Action Plan.

While much has been learned through phase 1, moving to a provincial service will require significantly more commitment, resources and effort from all telestroke stakeholders. Understanding the scope of effort required to successfully implement a complex emergency telemedicine application such as telestroke is essential. This document will attempt to outline this scope of work and quantify the level of effort required.

Telestroke or telemedicine for stroke care is a technology that has emerged within the past decade that allows audio and visual connections amongst health care providers and stroke patients. It enables transmission of CT or MRI images and is a key enabler in providing remote access to stroke expertise and guidance of tPA therapy. Telestroke networks are established with a central

stroke center or consulting site at the hub and multiple regional hospitals, or referring sites, connected to it. The telestroke network is built on the foundation of designated hospital roles in stroke management across the province (i.e. Comprehensive, Primary, tPA enabled and Non-tPA Enabled). It should not be viewed as a new form of therapy per se, but rather as a means of supporting the increased delivery of timely, evidence-based medicine for stroke cases in “neurologically underserved” areas of a health region.

Table 1: Telestroke Service Delivery within the HAs

Region within BC	Current State of Telestroke	Next Steps
Vancouver Island Health Authority	<ul style="list-style-type: none"> One consulting site at Victoria General servicing Nanaimo Regional Hospital and Cowichan District Hospital. 	<ul style="list-style-type: none"> Looking into remote TeleTIA Clinic in Nanaimo Consider how existing telestroke technology can support other emergency telemedicine service Identification and selection of other Telestroke sites on the island Support for a provincial service
Vancouver Coastal	<ul style="list-style-type: none"> One consulting unit at the Diamond Centre with 7 neurologists and servicing two communities in Fraser Health. 	<ul style="list-style-type: none"> Initial planning is being considered for two coastal communities, Powell River and Sechelt. Support for a provincial service
Interior Health	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> ACVS communities designated as potential Telestroke sites are working on clinical telestroke readiness Support a provincial service
Northern Health	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Beginning to explore communities with greatest need for Telestroke Only one Stroke Neurologist in the north located in Prince George Support for a provincial service
Fraser Health	<ul style="list-style-type: none"> Peace Arch Hospital and Chilliwack General Hospital are both Telestroke referring sites 	<ul style="list-style-type: none"> Due to gaps in neurology service at other regional hospitals stroke planning includes the implementation of additional referring and consulting sites Support for a provincial service
Providence	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> No need expressed at this time

Table 2: Provincial Telestroke Service Requirements

Provincial Telestroke Service Requirements	Phase 1: Current State	% Complete	Steps Required
<u>Administrative structure</u> to manage a telestroke program	Heart and Stroke project managed phase 1: June 2008 - June 2010	5%	Organization resourced with a telestroke lead and resources to execute Provincial Telestroke Plan and provide ongoing leadership and management
<u>Policy and process</u> that support a comprehensive Telestroke Program	Policy and processes developed for phase 1	25%	Refinement of policy and processes for a provincial model
<u>Telestroke On-call Agreement</u>	VIHA and VCH neurologists currently operate within existing on-call agreements	0%	<ul style="list-style-type: none"> • Administrative structure • Committed Neurology group • Agreed service model • Funding for on-call compensation
<u>Referral Management:</u> Provincial mechanism in place to support <u>coordinated on-demand videoconference</u> interaction	bcbedline provides this service to the two prototypes	75%	Further refinement of current service level agreement with bcbedline, including service documentation requirements for clinical and utilization information
<u>On-demand videoconferencing connectivity</u> between consulting sites and ACVS designated telestroke sites across the province	On-demand videoconferencing in place for participating sites	10%	<ul style="list-style-type: none"> • List of all referring and consulting sites • IM/IT Departments, eNG staff and SSO aware of service and have approval to support the functional requirements of a provincial service
<u>On-demand DI access</u> for designated AVCS Telestroke sites by consultants	<ul style="list-style-type: none"> • DI solutions in place for both prototypes • bcbedline's image express 	5%	A provincial DI solution lead by VCH is currently in the contract stage of procurement (no time lines as yet).
Telestroke technology solutions must consider <u>alternative points of care</u> for consultants providing service 24/7 (i.e. home access)	Home access was not achieved through the prototypes VC Telehealth is looking into options	0%	A home and office access solution would be required for 24/7 service so that neurologists can be on-call at alternate points of care (i.e. Home and/or office)
<u>24/7 technical support</u> services for Telestroke	A technical support solution was developed for both prototypes during regular business hours SSO is aware of Telestroke service requirements	25%	Telestroke service support requirements need to be negotiated with appropriate service support partners (i.e. SSO) and funded.
<u>Data Reporting and Performance Management System</u>	Initial data collection for prototype evaluation	25%	Agreement on data, sources, collection, monitoring, support and ongoing evaluation

Telestroke is unique from other Telehealth services that are being provided in BC in that it is an emergency telemedicine application that requires 24/7 on-demand service and support and as such requires a much different technical system and processes to support the connectivity (Table 3).

Table 3: Comparison of Telehealth Service Requirements

Scheduled Telehealth Service	On-Demand Emergency Telemedicine Service
<ul style="list-style-type: none"> • Generally operates during regular business hours • Scheduling and referral management can be done in a number of ways • Time to book room and equipment • Time to ensure appropriate health care information arrives at the consulting and referring site • Utilizes a bridge • Most telehealth service can be rescheduled • Equipment is shared 	<ul style="list-style-type: none"> • 24/7 • Requires immediate referral management • Requires immediate access to a room and equipment • Consultant requires immediate access to the CT image • Referring sites requires the consult note on the patient chart ASAP • Point to point connectivity across different HAs • Service cannot be rescheduled • Equipment must be given priority to ET Service

FUTURE STATE: PHASE 2 BC TELESTROKE

A provincial telestroke service will contribute to a tPA-enabled health system with effective rapid assessment and management of stroke as part of the Provincial Stroke Action Plan.

When fully implemented, a provincial telestroke service will:

- Demonstrate how coordinated and comprehensive Telestroke services enable improved patient and system outcomes
- Improve access to stroke care for patients living within BC
- Increase the administrative rate of t-PA above current levels
- Increase awareness of t-PA and its effectiveness among providers
- Build provincial capacity for stroke diagnosis and treatment

Key components of a collaborative, comprehensive and coordinated Telestroke service include:

- Province-wide access to specialized stroke consultations 24/7
- Telestroke is acknowledged by all stakeholders as a way to provide specialized stroke care for patients across the province
- Telestroke is supported by a provincial consulting group and a comprehensive Telestroke-enabling compensation agreement has been established
- Telestroke fee-codes are in place
- On-demand point to point videoconferencing connectivity between referring sites and consulting sites
- Ability for consulting stroke neurologists to seamlessly access diagnostic quality CT imaging from designated sites across the province
- 24/7 centralized technical support that meets hyper acute emergency telemedicine requirements
- Health system ownership and governance of hyper-acute stroke services
- Performance Monitoring & evaluation capacity for Telestroke established
- Central administrative coordination as necessary for a provincial service

KEY ASSETS

Key assets identified in 2008 that leveraged Phase 1 Telestroke development have not changed, however Phase 2 Telestroke has higher requirements and as such requires further development.

- **Medical Leadership:** two neurology on-call groups, VIHA and VCH, continue to support phase 1 prototypes as part of existing on-call agreements. Other stroke neurologists in the province have expressed interest in supporting a provincial service.
- **Compensation agreements in place to support acute and hyper-acute stroke:** While the two neurology groups supporting the two prototypes have agreed to provide coverage of telestroke within current agreements and Telestroke fees for ACVS have been established, an on-call compensation agreement specific to Telestroke will be required for a provincial service.

- ***bcbedline/ImageExpress***: *bcbedline* has been an active partner of Phase 1 Telestroke with its natural alliances with the Hot Stroke Pager Program and ability to send images from referring sites to VGH. A referral management structure like *bcbedline* will be essential for a provincial service when any of the 20-22 telestroke referring sites require immediate connection to the neurologist on-call from the provincial pool of 10 -12 neurologists. In phase 2, the referral management service will require enhanced central data capture and reporting of Telestroke activity.
- ***VIHA digital imaging***: nine of the eighteen Medical Imaging sites on Vancouver Island utilize CT scanners. Images are managed using Intel Rad MI PACs. VIHA clinicians are able to remotely retrieve DI via a web-based platform. A DI solution would need to be considered within the scope of a provincial service that would require similar image transfer and access across HA boundaries.
- ***Provincial DI Viewer (PDIV)***: CT is available at most of the VCH facilities. Currently the Neurologists are utilizing the DI Viewer to access images from the two referring Telestroke sites in the Fraser Valley. The Provincial Diagnostic Imaging Viewer solution, being lead and managed by VCH, is currently at the contract stage of procurement; however no deployment timelines outside of FH have been proposed. A provincial diagnostic system that allows specialists to access diagnostic images sent from any health facility to consulting sites within any of the health regions is essential for a provincial on-call model that utilizes all stroke neurologists practicing within BC.
- ***BC Telehealth Development Committee (BCTDC)***: brought together in 2005 as part of the PHSA's Telehealth strategic planning process, the BCTDC addresses system-wide clinical, technical and operational interoperability. BCTDC is playing a lead role enabling province-wide tele-oncology and tele-thoracic initiatives and identifying requirements for provincial scheduling, bridging and network systems. This group played a key role in Phase 1 and should be involved in any Phase 2 planning.
- ***E-Health Network Gateway (eNG)***: The eNG is now in place and utilized successfully for the FH/VCH Telestroke Prototype. This advanced platform that replaced the PNG supports high

bandwidth services such as videoconferencing and digital imaging. Point to point connectivity across HAs is not standard practice within BC but is proven a solution with the lower mainland prototype and is utilized for other Telehealth services in the province.

IMPLEMENTATION CHALLENGES

BC acute stroke and telemedicine environments are maturing and major improvements are anticipated, however many of the challenges identified in 2008 remain.

- A percentage of emergency physicians do not support **the use of tPA** and many feel efforts should be focused on other stroke service delivery solutions which have better return on investment for the patient and system.
- **Existing Telehealth service delivery** supports regular scheduled clinical, administrative and educational sessions, not more complex emergency telemedicine services. The provincial Telehealth picture remains fragmented with no central coordination or long term planning.
- **Networks, videoconference systems, rooms** and local coordination differ from health authority to health authority. Limited development of shared clinical, technical and administrative standards and protocols limit cross-health authority delivery. Furthermore, clinical Telehealth rooms are hospital-based, making it demanding for service providers who support a 24/7 telemedicine service. Home access solutions have proven to be difficult and expensive to implement in other jurisdictions, but new technologies are offering innovative solutions for the future, which may reduce cost. The remaining hurdles will be associated with meeting the privacy and security legislative and policy requirements.
- **DI/PACS systems** are not interoperable and therefore image sharing across HA boundaries are limited to the PDIV which is in early stages of development and imageexpress which is not an on-demand solution. bcimageexpress only supports image transfer from provincial facilities to Vancouver, and therefore would not meet the requirements of a provincial on-call roster that includes neurologists from other locations (i.e. Prince George, Kamloops, Kelowna, Victoria) .

- The **Provincial Diagnostic Imaging Viewer solution**, being lead and managed by VCH, is currently at the contract stage of procurement; however no deployment timelines have been proposed.
- The **consultation note** adapted from the Ontario Telestroke Services was developed for Phase 1 Telestroke, however it was not well integrated into practice. According to the BCSS Telestroke Evaluation, the collection of a minimal set of data was challenging both in the Vancouver Island and Lower Mainland prototype programs, with a substantial degree of missing or incomplete data received by the evaluator. Getting agreement on the most appropriate documentation format that aligns with the Telestroke consultation process and a process that enables consultation information to get onto the patient chart in a timely way will be essential in resolving this clinical and service utilization documentation issue.
- Concerns related to the use of **bcbedline** as a mechanism to connect with the consulting telestroke neurologists was raised by the referring sites within each of the prototypes. These concerns are related to the redundancy in process and the perceived delay in contacting the neurologist compared to the usual consultant access routes within established health authority based neurology or “hot stroke” on call programs. A provincial Telestroke model may require a central approach for contacting “on call” telestroke physicians, who may not be based in the same health authority as the referring site.
- Currently, neurologists providing on-call services as part of Phase 1 are being **compensated** within their existing regional or hot stroke based on-call agreements. Development of an on-call agreement that meets the levels of service required for provincial Telestroke will be necessary and require funding resources beyond current regional-specific stroke on-call and fee-for-service billing arrangements.
- As stroke happens any time of the day, **24/7 Hot Stroke coverage is essential**. Since neurologists practice in a number of different settings, such as the office, clinic and home, access to telestroke technologies at alternative points of care is essential. Privacy and security legislation as well as Provincial and Health Authority policy make these options very difficult and expensive to implement. Solutions have been found for the Alberta and Ontario Telestroke services and should be considered for BC.

EMERGING PROJECT INTERFACES

- A **Provincial Stroke Action Plan** is currently being finalized and initial implementation is targeted to begin in 2010/11. It details where initial efforts and resources should be focused:
 - The Plan promotes embedding best evidence clinical practices, guidelines and education guided by the Canadian Stroke Best Practice documents for optimal care;
 - The Plan aligns with clinical care management / KRA objectives in BC – “high quality care and best outcomes for all”;
 - The Plan builds on systemic **linkages** with respect to facility functional capacity and role designation, cross boundary referrals, pre-hospital assessment and transport and timely acute inpatient and rehabilitation care as the “backbone” of strategy implementation;
 - The Plan addresses critical gaps in current practice and is fundamental to the expansion of technologies such as telestroke.
- **Shared Services Organized (SSO):** The SSO, which is now under the PHSA, will manage videoconferencing bridging, scheduling and service desk functions for the province. Their role in Telestroke will need to be negotiated once they have been formed and are ready to take on an additional service support role.
- **Provincial Diagnostic Imaging Viewer (PDVI):** This province-wide initiative envisions an interoperable and automated system of sharing diagnostic imaging results. It has been utilized for the FH/VCH Prototype. The Provincial Diagnostic Imaging Viewer solution, being lead and managed by VCH, is currently at the contract stage of procurement; however no deployment timelines have been proposed.
- **bcbedline:** Continued role involvement in central referral management and data collection for telestroke phase 2 is proposed.

Table 3: Phase 2 Implementation: 5 years

Estimated Timeframe	Project Phase	Key Requirements
Year 1	Planning & Regional Clinical Readiness	<p>Provincial:</p> <ul style="list-style-type: none"> • Development of a <u>Provincial Telestroke Technology and Connectivity Plan</u>, that details alternative points of care solutions, cross HA point to point solution using the eNG, provincial DI solution and service level requirements. • Development of <u>Provincial Telestroke Service Delivery Model</u>, including the development of an on-call rota and a clinical service level agreement (with details of referral management, documentation and monitoring and reporting). <p>Regional and Facility: Clinical Preparation (See Appendix 1)</p> <ul style="list-style-type: none"> • Formal sign-off on hospital designations for stroke care • Bypass and transport protocols for BCAS/EMS that support ACVS • Repatriation agreements for Cross-boundary referrals • Implementation and Embedding of Stroke ED order sets into clinical practice • Coordination of stroke care pathways (from pre-hospital to inpatient acute care) • Protocols and stroke team for acute stroke EDs • Regional engagement initiated
Year 2	Pre-Implementation: Provincial Service Development and Regional Preparation	<p>Provincial:</p> <ul style="list-style-type: none"> • Align Telestroke management and governance within Stroke Care administration • Negotiate an on-call compensation agreement • Enable consulting sites with telestroke technology capacity • Negotiate Technical and Clinical Service Level Agreements, including referral management and data collection requirements • Train neurologists • Merge prototype referring sites into new provincial service • Rank telestroke sites based on clinical need and technology readiness <p>Regional and Facility:</p> <ul style="list-style-type: none"> • Regional Clinical Preparation Continued • All designated Telestroke sites have clear processes that support timely neuro-imaging available during hours of telestroke operation • Regional Administrative Preparation (see Appendix 2: Implementation Check List)
Years 3-5	Implementation	<p>Facility:</p> <ul style="list-style-type: none"> • Add telestroke sites (see Appendix 2: Implementation Check List)

APPENDIXES

Appendix 1: Clinical Protocols Required for Telestroke Service Implementation

This table has been developed from a far more comprehensive planning document that details the sources of all best practices outlined and reasons for the ratings. The purpose of adding this document is to show the clinical stroke protocols that should be in place at referring sites prior to telestroke service implementation.

Appendix 2: BCTELEStroke Implementation Check Lists

The following tables are a series of checklists to guide the implementation of a Telestroke service within BC. Although presented in a sequential fashion, there are a number of elements from each of the tables which occur simultaneously. While significant effort has been made to estimate the time and resources required for a full provincial telestroke implementation, more will be understood as service model and planning continue.

Provincial Telestroke Service and Model: The first higher level implementation checklist is focused on the development of the foundational elements of a provincial service. This includes the development and planning around service design, technical infrastructure, clinical readiness and the formation of governance structure to support and guide the program into the future.

Regional Administrative Preparation: Regional engagement for Telestroke will have been initiated through stroke service planning and consultation with the HAs through the development of the Stroke Action Plans. HA leads and stroke leads will have identified telestroke service as a priority for their HA. This check list focuses on the administrative details that are required for project implementation.

Consulting Site Engagement and Service Implementation: Prior to consulting site engagement, a provincial service will be in place and the regions will have formally approved the project charter and are committed to implementing the consulting and referring telestroke sites. This checklist is a higher level view of what is involved in connecting the consulting sites to the telestroke network. This implementation checklist must be completed before moving onto the referring site checklist.

Referring Site Engagement and Service Implementation: Prior to consulting site engagement, a provincial service will be in place and the regions will have formally approved the project charter and are committed to implementing the consulting and referring telestroke sites. This checklist is a higher level view of what is involved in connecting the referring sites to the telestroke network.

Appendix 3: Implementation and Operational Documentation from Prototypes

Appendix 4: DRAFT TOR: Telestroke Working Group – Phase 2

APPENDIX 1: CLINICAL PROTOCOLS REQUIRED FOR TELESTROKE SERVICE IMPLEMENTATION

This table presents the clinical stroke protocols that should be in place at referring sites prior to telestroke service implementation.

Scale:

Basic: Clinical protocols that are essential or important in the success of Telestroke service delivery.

Beneficial: These are clinical protocols that would support improved Telestroke service delivery.

Optimal: These protocols support best practices but are not essential for Telestroke implementation.

A. TELESTROKE CLINICAL PROTOCOLS	Basic	Beneficial	Optimal
1. Stroke Bypass Protocol With or To?	Basic		
2. Established process and commitment to participate in repatriation of stroke patients	Basic		
3. Commitment to participate in the regional medical redirect, if applicable?		Beneficial	
4. Triage process developed for access into ED (Emergency Department) within 10 minutes or less, 24/7:	Basic		
5. Triage protocol (Code Stroke) established and documented:	Basic		
6. Cincinnati Stroke Scale, Stroke Triage Checklist*, Nursing Checklist (Stroke)Started*	Basic		
7. Process for STAT CT, 24/7 (target door to CT 25 minutes):	Basic		
8. Communication systems established for triage and ED neuro-care:	Basic		
9. Process established for meeting benchmarks for delivering tPA in accordance with the guidelines for thrombolytic therapy for an ischemic stroke:		Beneficial	
10. STAT Lab services and communication of results processes established 24/7:	Basic		
11. Inclusion/Exclusion Criteria for stroke thrombolysis (based on NINDS)	Basic		
12. Standardized order set (Thrombolysis & Acute Stroke/TIA)	Basic		
13. Treatment Protocol for Hypertension Management for Acute Stroke (Ischemic & Hemorrhagic)	Basic		
14. Hyperglycemia Protocol for Stroke	Basic		
15. tPA Infusion Chart	Basic		
16. Stroke Consultation & Telestroke protocol established and documented:	Basic		
17. Stroke Documentation: Consult note, NIHSS, ASPECT, Barthel &/or Rankin		Beneficial	

A. TELESTROKE CLINICAL PROTOCOLS	Basic	Beneficial	Optimal
18. Process to access, manage & treat acute stroke patients with Oro-lingual Angio Edema Post-tPA			
19. Process to assess and manage acute stroke patients with intracerebral hemorrhage Post t-PA			
20. Order Sets (Thrombolysis & Acute Stroke/TIA) or standardized order set with			
a) VS/Neuro VS			
b) ECG			
c) CT/MRI			
d) Routine stroke blood work			
e) Hypertension, hyperglycemia & fever protocol			
f) Bowel Protocol			
g) Bladder Protocol			
h) Statins, anti thrombotics (DVT & atrial fibrillation), anti- anti-platelets &/or ASA			
i) Activity			
j) Diet (after swallowing screen)			
k) <u>Dysphagia Assessment</u>			
l) Inter-disciplinary Consult			
21. Process to provide Stroke/TIA education to patient and caregiver			
22. Process to assess and manage acute stroke patients swallowing/dysphagia			
23. Oral care			
24. Pharmacy preparedness for t-PA based on projected volumes (e.g. stock/supplies, distribution, budget):			
25. Development of t-PA administration protocol including post infusion care (24 hours):			
26. Triage system for admission to inpatient t-PA bed (monitored bed) (within hospital or transport arrangement to another site in place):			
27. Development of plans to manage acute stroke inpatients based on best practice guidelines (acute stroke pathway):			

APPENDIX 2: BCTELESTROKE IMPLEMENTATION CHECK LISTS

The following tables are a series of checklists to guide the implementation of a Telestroke service within BC. Although presented in a sequential fashion, there are a number of elements from each of the tables which occur simultaneously. While significant effort has been made to estimate the time and resources required for a full provincial telestroke implementation, more will be understood and known as we embark on the service model and planning.

Assumptions

- These check lists assume that HAs have been introduced to telestroke through the development of the regional Stroke Actions Plans and that each of the HAs have agreed that Telestroke is one of their regional priorities.
- It is also assumed that the basic clinical protocols required for telestroke are in place and meet best practices in stroke care.
- There is an assumption that service and technical planning undertaken during the planning and clinical readiness stage of Phase 2 Telestroke will better inform pre-implementation and implementation phases.

Activity	Current State	How	By When	Responsibility Level	Potential Barriers
1.0 Provincial Telestroke Service and Model	The first higher level implementation checklist is focused on the development of the foundational elements of a provincial service. This includes the development and planning around service design, technical infrastructure, clinical readiness and the formation of governance structure to support and guide the program into the future.				
1.1 Creation of an administrative mechanism for managing a provincial telestroke service (i.e. system coordination, referral management, contract management, monitoring and evaluation).	Heart and Stroke currently provides support to the existing prototypes until the end of June 2010	<ul style="list-style-type: none"> • Links to Stroke Action Plan • BC Telestroke Team 	During Pre-implementation Prior to initiating provincial model	Provincial	<ul style="list-style-type: none"> • No obvious home with combined clinical and technical nature of Telestroke • Resource requirements
Creation of a <u>Provincial Telestroke Team</u> to support planning and pre-implementation activities.	<ul style="list-style-type: none"> • Phase 1 implementation team disbanded as of March 31, 2010 	Build a team similar to the Pilot Program Model: Telestroke Implementation Team: <ul style="list-style-type: none"> • Project Manager, • Clinical Coordinator, • Technical Advisor, • Physician Liaison 	Planning & Regional Clinical Readiness	Provincial	<ul style="list-style-type: none"> • Resources • Clear mandate

Activity	Current State	How	By When	Responsibility Level	Potential Barriers
<u>Telestroke operational management</u> must be aligned with clinical stroke care operations, and delegated the authority and given the resources to manage a telestroke network (clinical & technical policy and process, development and management of an on-call consulting rotation, negotiation of an on-call agreement for the province, overseeing service delivery).	<ul style="list-style-type: none"> There is no delegated authority to manage this service. PHSA is being considered as the lead organization for Stroke 	<ul style="list-style-type: none"> Provincial Telestroke Team or combination of Technical and Clinical Seek advice from existing provincial advisory bodies and HAs 	Pre-Implementation	Provincial	<ul style="list-style-type: none"> Resources required Administrative and support staff required to manage this service, should be linked to the Stroke Strategy
Create a <u>Provincial Telestroke Advisory/Working Group</u> with representation of each of the regions, neurology on-call group, technical representation, BC Telehealth Development Committee. Work to be focused on advising on Provincial Model.	<ul style="list-style-type: none"> The Provincial Telestroke Working Group held last meeting March 8, 2010 	<ul style="list-style-type: none"> Provincial Telestroke Team to support administratively 	Planning and Pre-implementation	Provincial	<ul style="list-style-type: none"> Securing the right people on this committee who are able to make and inform decisions
<u>Development and refinement of project management documentation and policy and process</u> that supports a comprehensive Telestroke service.	Technical and clinical service level documentation developed as part of Phase 1 Telestroke DRAFT Toolkit to be developed as part of phase 1	<ul style="list-style-type: none"> BC Telestroke Team 	DRAFT for Pre-implementation and ongoing development	Provincial with regional and facility input	<ul style="list-style-type: none"> Will require ongoing refinement Differing perspectives
Ongoing <u>performance monitoring</u> and establishment of targets and milestones	Developed as part of the Measurement and Evaluation Group for prototypes	Formalize and support the ongoing measurement and evaluation of phase 2	End of pre-implementation	Provincial and Regional	<ul style="list-style-type: none"> Data collection processes and systems support Compliance
<u>Secure Referral Management Partner</u> : Provincial structure to support on-demand coordinated interaction between referring and consulting sites (i.e.bcbedline)	bcbedline is currently in this role for Phase 1 Telestroke.	<ul style="list-style-type: none"> Negotiation of a SLA in the context of Phase 2 and Provincial Model 	Planning and Pre-Implementation	Provincial	Possible resource implications.
1.2 Clinical / Operations Practice Change					
<u>Clinical Preparation</u>	Varies across the regions and facilities	Stroke Action Plan	Implementation	All	Priorities, funding
Ongoing <u>training and professional development</u> for physicians and health service professionals involved with stroke patients	No formalized structure	Incorporate as part of an overall strategy. Link with other educational partners	Regional Clinical Readiness	Provincial & Regional	Resources, Priorities
Ongoing <u>performance monitoring</u> and establishment of targets and milestones	Being developed as part of the Measurement and Evaluation Group	Formalize and support the ongoing measurement and evaluation	Regional clinical Readiness	All	Adoption of a data collection tool(s)

Activity	Current State	How	By When	Responsibility Level	Potential Barriers
1.3 Comprehensive Telestroke Technology Solutions for a Provincial 24/7 Service					
Provincial <u>technology solution</u> , implementation plan and budget that addresses the need for access to videoconferencing from neurology consulting sites (including home and office) and referring sites across the province.	Two consulting sites & 4 referring sites have been equipped with the technology	BC Telestroke Team in consultation with key technology stakeholders to develop a Telestroke Technology Plan	Pre-implementation	Provincial	-Cost -Competing priorities
Provincial <u>diagnostic imaging</u> solution and implementation plan that addresses the need for access to CT images sent from any referring sites to any of the neurology consulting sites (including home and office).	VIHA has a HA pacs system which is accessible from all VIHA network locations. The provincial DI Viewer is a prototype that is currently in place with VGH Neurologist and select FH sites.	Consultation with appropriate provincial bodies to determine the best provincial DI solution for a provincial telestroke service.	Pre-implementation	Provincial	<ul style="list-style-type: none"> Funding Achieving agreement on the best solution Delay with DI Viewer implementation
Refinement of the current Telestroke <u>Videoconferencing Equipment Catalogue</u>	One developed for Prototype	Update current catalogue in consultation with vendors, regional partners and other experts in the field	Planning	Provincial	<ul style="list-style-type: none"> Keeping up to date with vendors
1.4 24/7 Technical Service Support Model for Telestroke				Provincial with regional input	24/7 has resource implications
Review and update <u>technical requirements</u> for telestroke in the context of at home and office access.	<ul style="list-style-type: none"> Detailed requirements in place from phase 1 	<ul style="list-style-type: none"> Engage SSO and IM/IT groups Telestroke Service Development Team in consultation with provincial technical and DI groups 	Planning	Provincial	Difficult to predict without SSO being in place and understanding their services, structure etc
Negotiate with the <u>Shared Services Organization</u> (SSO) how they can best meet the provincial Telestroke technical service requirements.	SSO is currently in development and aware of telemedicine requirements	Telestroke Service Development Team in consultation with provincial technical and DI groups	Pre-Implementation	Provincial	SSO does not have the operating capacity to support telestroke
Identify a process for <u>testing and commissioning</u> new equipment installations with the provincial Telestroke Network (i.e. create a test site).	VIHA and VCH both utilized slightly different processes and have documents to support this activity	Technical team to take a lead in policy and process development associated with commissioning.	Planning	Provincial and Regional	Different regional processes

Activity	Current State	How	By When	Responsibility Level	Potential Barriers
<u>Develop and negotiate a Technical SLA</u> for a provincial Telestroke service in consultation with Support Desk and HAs.	SLA developed for both prototypes.	Telestroke Service Development Team in consultation with provincial technical and DI groups	Pre-implementation	Provincial	Different regional processes and policy
1.5 Provincial Telestroke On-call Agreement	Two on-call consulting groups are providing Telestroke on-call for their respective sites within existing on-call agreements	Work with interested Stroke neurologists, MSP/BCMA, HAs	Pre-implementation	Provincial	• Resource implications for on call and back up consultants
Confirm Telestroke sites across BC	<ul style="list-style-type: none"> Designated within ACVS & SAP HA agreement required 	<ul style="list-style-type: none"> Part of stroke planning 	Planning	Provincial with regional input	HA support and agreement
<u>Define scope of clinical telestroke service</u> (i.e. ACVS and relapse prevention) and confirm Telestroke volumes based on retrospective data at designated telestroke sites	<ul style="list-style-type: none"> Focus on ACVS 	<ul style="list-style-type: none"> Telestroke administrative mechanism Compiling historical clinical data (stroke registry data) SAP 	Planning	Provincial	Different clinical and regional expectations and needs
Develop best <u>on-call model to support BC</u> based on current referral and stroke service design, telestroke requirements, technical design etc.	<ul style="list-style-type: none"> Stroke on-call currently regional 	<ul style="list-style-type: none"> Telestroke administrative mechanism, Advisory groups, neurology and negotiation 	Planning	Provincial	<ul style="list-style-type: none"> Regional preferences Different referral patterns will influence existing on-call agreements Numbers of interested consulting sites
Identify interested pool of stroke neurologists.	<ul style="list-style-type: none"> Two committed on-call groups for the prototype and proposed provincial service Other neurologists have expressed interest in supporting service 	Individual engagements by physician lead. Consult with lead provincial neurologists on process.	Planning	Provincial	<ul style="list-style-type: none"> Depend on model Depend on compensation and impacts of new agreement
Develop <u>consult note solution</u> and process	<ul style="list-style-type: none"> Consult note developed based on OTN's and refined by both prototypes. Not ideal solution. Needs to be aligned with consultation & referring site process. 	Telestroke implementation lead in consultation with Provincial Working Group and stroke evaluation leads and health records.	Planning	Provincial with input from regions.	<ul style="list-style-type: none"> IT Support Ease of Data collection & extraction Performance monitoring &

Activity	Current State	How	By When	Responsibility Level	Potential Barriers
					accountability
<u>Negotiate an on-call agreement</u> with the stroke neurology group.	<ul style="list-style-type: none"> No provincial agreement in place Current on-call groups providing service as part of existing agreements 	Negotiation that secures an on-call agreement that is agreed to by stroke consulting group, MSP/BCMA and HAs	Pre-implementation	Provincial with regional input	<ul style="list-style-type: none"> Costly VIHA, VCH, FH and IH, currently have on-call stroke agreements with neurologists 24/7 requires home access solution
1.6 Development of a Provincial Telestroke Implementation Model and Plan					
Based on ACVS planning, stroke service development, provincial videoconferencing and DI solutions, and referring and consulting site readiness, <u>develop an implementation plan to bring on new referring sites.</u>	Lessons learned from phase 1 and the evaluation provide advice into phase 2	Telestroke Service Development Team in consultation with a provincial Telestroke Working group and other provincial advisory groups.	Pre-implementation	Provincial	<ul style="list-style-type: none"> Resources Commitment
<u>Provincial PIA and Risk Assessment</u>	Developed for prototypes Will need to be reviewed in the context of a provincial service and refined.	BCTELEStroke team in consultation with partners.	Pre-implementation	Provincial	<ul style="list-style-type: none"> Time consuming approval delays Need for HA specific versions and resources to create PIAs
2.0 Regional Administrative Preparation	Regional engagement for Telestroke will have been initiated through stroke service planning and consultation with the HAs through the development of the Stroke Action Plans. HA leads and stroke leads will have identified telestroke service as a priority for their HA. This check list focuses on the administrative details that are required for project implementation.				
2.1 Health Authority and Project Management					

Activity	Current State	How	By When	Responsibility Level	Potential Barriers
<p><u>Introduce BCTelestroke opportunity to HA principals</u></p> <ul style="list-style-type: none"> • Present BCTelestroke PPP • Share Toolkit (BCTELEStroke Implementation and Operations Manual for Referring Sites) • Share relevant PM Documentation (i.e. SLA's, Partnership Agreement etc) • Obtain endorsement and process for engaging HA • Assess Internal Health Authority Project Management processes 	<ul style="list-style-type: none"> • HA Stroke Strategy Leads are aware of Telestroke through membership on the BC Telestroke Working Group. • Several senior HAs executives have been briefed on the opportunity. 	<ul style="list-style-type: none"> • Telestroke Service Development Team to engage HA Executive and Stroke Leads in the context of the stroke strategy. • Ideally hospital designations confirmed prior to engagement. 	Pre-Implementation	Regional with provincial oversight	<ul style="list-style-type: none"> • Agreement on hospital designations. • Resource allocation to support deployment of service and technology
<p><u>Refine Project Charter</u> for Provincial Telestroke Service</p> <ul style="list-style-type: none"> • Template Charter aligned with Stroke Action Plan • Telestroke Implementation Budget (HA Specific) 	<ul style="list-style-type: none"> • Pilot project charter and budget has been developed and accepted by VIHA, VCH and FHA. 	Based on lessons learned from the pilot phase, solutions for the provincial requirements and further stroke service planning, the Telestroke service development team can better estimate the charter and budget.	Pre-implementation	Regional with provincial oversight.	<ul style="list-style-type: none"> • Successful execution of provincial Telestroke requirements: • Provincial SLA • Home Access • On-Call Agreement and Rota
<p><u>Secure Executive Approvals</u></p> <ul style="list-style-type: none"> • Utilization of existing stroke SC or the Development of specific Telestroke SC within NH and Interior Health • Holding a regional meeting & presentation of telestroke service, implementation requirements, budget etc • Charter reviewed and signed • Endorsement from Sponsors • Direction on HA procurement process and requirements and approval to initiate procurement • Discuss IT networking and configuration requirements for telestroke and identify solution for any potential issues. 	<ul style="list-style-type: none"> • Approvals for the pilot in VIHA, VCH, FHA. • Framework is in place for securing the executive approval. 	Aligned with Stroke Action Plans. Telestroke service implementation team together with assigned stroke and telestroke HA leads.	Pre-Implementation Heads up through ACVS Planning	Regional	<ul style="list-style-type: none"> • Other priorities • Budget and resource implications

Activity	Current State	How	By When	Responsibility Level	Potential Barriers
<p><u>Creation of a Regional Telestroke Implementation Team/SC Team</u> to support the implementation of Telestroke within each HA To be composed of: Physician Champion, Emergency Leadership, Stroke Liaison, Nursing representation, ICU or equivalent. One of these members could represent the HA at a provincial level To be complimented by site implementation teams</p>	Developed for VIHA, VCH, FHA.	Commitment to be outlined at the Regional Steering Committee Level for membership recommendation.	Pre-Implementation	Regional	<ul style="list-style-type: none"> Leadership time restrictions
<p><u>Share charter</u> with Provincial BC Telestroke Team</p>	Charter developed for Pilot Program Template available	Broaden the project charter to include the full scope of the Provincial Telestroke program.	Pre-HA site engagement	Regional	Central coordination needed
<p><u>Engage regional physicians</u> (MACs and other related - ED – bodies regarding telestroke and tPA administration Host a tele-learning session on telestroke and tPA administration, lead by participating neurologists Have the Telestroke Physician Lead join a Regional MAC Meeting and discuss Telestroke service and process</p>	Various site engagement processes used during the Pilot Program.	Review and determine the optimal site engagement process for regional physicians and other related ED bodies. Develop processes and materials that could be used by sites. Finalize funding issues for physicians to be involved in site engagement	ACVS engagement Pre-implementation	Regional	<ul style="list-style-type: none"> Concerns around tPA Concerns around traditional referral patterns Physician payment for time invested into service development
<p><u>Initiate HA procurement</u> to facilitate purchasing of the videoconferencing equipment for consulting and referring sites.</p>	Process identified for FH, VCH and VIHA however follow-up would be required to ensure no changes	BC TELEStroke team to follow-up with HA representative	Pre-site engagement and implementation	Regional	<ul style="list-style-type: none"> Advances in technology
<p><u>PIA and Risk Assessment</u> reviewed and approved</p>	Completed for Prototypes Will have been completed at the provincial level.	BC TELEStroke Team in Consultation with advisory and working groups	Pre-implementation	Regional and Provincial	<ul style="list-style-type: none"> Health Authority specificity required
<p>3.0 Consulting Site Engagement and Service Implementation</p>					
<p>Prior to consulting site engagement, a provincial service will be in place and the regions will have formally approved the project charter and are committed to implementing the consulting and referring telestroke sites. This checklist is a higher level view of what is involved in connecting the consulting sites to the telestroke network. This implementation checklist must be completed before moving onto the referring site checklist.</p>					
<p><u>Stroke Specialist engagement and buy-in</u> (planning and service development)</p>	Provincial Neurologists are aware for Telestroke and the desire to move to a	BC TELEStroke Team through engagement and	Planning Stage	Provincial	<ul style="list-style-type: none"> Funding Compensation

Activity	Current State	How	By When	Responsibility Level	Potential Barriers
<ul style="list-style-type: none"> Service model development (design, policy and process) Agreement on Technology Plan On-call rotation and its management Compensation agreement 	provincial service TS fees are in place for ACVS provincially	planning exercise. Formation of a Telestroke Working Group with a Clinical Advisory Sub-Group			<ul style="list-style-type: none"> Agreement Service Model Agreement (i.e. Provincial vs Regional)
Development of <u>an alternative points of care</u> connectivity solution and implementation plan.	Must be considered as part of the DI and Technology plans developed during the planning stage.	Telestroke Lead to facilitate and document planning and consensus reached.	Planning	Provincial & Regional	<ul style="list-style-type: none"> Cost (initial and ongoing) Policy, Technical and Legislative Issues
Execution of the <u>consulting sites</u> technology plan.	Two consulting sites are equipped with telestroke technology.	Detailed in technology plan.	Pre-implementation	Provincial & Regional	Will be determined and detailed in a plan.
<u>Development of an orientation and training plan</u> for the neurologists. <ul style="list-style-type: none"> Policy and process development Development of the training material Development of training plan with mock consultations 	Contract will have been developed for the on-call group with clear service level agreements, including finalized consultation note and data collection solutions. Significant material from prototypes.	BCTELEStroke Team with assistance from regional representatives	Pre-implementation	Provincial and Regional	<ul style="list-style-type: none"> Availability
Development of Consulting Site Implementation and Operations Manual	Prototype documentation	BCTELEStroke Team	Pre-referring site implementation	Provincial and Regional	<ul style="list-style-type: none"> None

4.0 Referring Site Engagement and Service Implementation		The referring site implementation check list is the most specific of the checklists as it has been refined through the prototype implementations and developed based on examples of other telestroke programs. This checklist is a detailed step by step guide for implementing a telestroke system into a referring site. It assumes that all provincial and regional engagement has been completed, all functional requirements for telestroke have been addressed, and consulting sites have been implemented and are able to support the referring sites.	
Week 1	Current State	How	Challenges
Completion of the Pre-Implementation Site Readiness Survey	Various templates from existing Telestroke services refined for BCTELEStroke	Regional Lead works with local representatives	Time and expertise
Provide Site with Implementation and Operations Manual for Referring Sites	DRAFT: needs further refinement	Telestroke Leads	
Telestroke Lead identified	Lessons learned from Prototype	Regionally and site appointed	Finding the right person for the job
Identification of a local Telestroke Team – All pertinent program leads within your facility must be made aware of this service and the importance of their involvement. <ul style="list-style-type: none"> ○ ED Nurse Manager ○ ED Physician Representative ○ Clinical Nurse Educator ○ Manager of Radiology ○ Manager of ICU/Monitored Service ○ Pharmacy Manager ○ Information Technology Site Lead ○ Videoconferencing Technical Contact (may be same as IT Site Lead) ○ Site Administrator Create a contact list	Lessons learned from Prototype	Regional and site appointment	Getting the support to put together such a large and comprehensive team.
Review all relevant clinical order sets that link with telestroke and ensure that these are up to date and meet telestroke requirements	Linked with ACVS	Telestroke Team Lead	Completion and adoption of order sets Time intensive
Schedule an Initial Implementation Kick-off Meeting for week 2-3	Service development documentation from regional engagement and phase 1	Telestroke Site Lead	Time and availability
Identification of potential Telestroke exam room(s) and where the videoconferencing equipment will be stored.	Support documentation from Phase 1	Telestroke Lead in consultation with BCTELEStroke Team, local department leads	Politics and differing views from different clinical leads
Selection of videoconferencing equipment from BCTELEStroke Catalogue: Fixed or mobile	Lessons learned from Phase 1 and a catalogue of potential choices	Telestroke lead in consultation with ED and facilities management and IT (wall mounting might be an issue)	Differing opinions
Determine PO Process for the facility	Unknown: will determine this at the regional level	Site Lead	Time consuming process

Confirm available bandwidth to support videoconferencing	Unknown: may be able to determine this at the regional level	Local IT department input <i>Pre-Implementation Site Readiness Survey</i>	Cost implications if upgrade required: most likely not an issue as most sites with CT scanners will have sufficient bandwidth
Schedule a business process review meeting for week 2 (2 hours)	Unknown: ACVS will inform some but process will be important as part of change process	Scheduled by local site lead. Meeting lead by the BC Telestroke implementation Lead	Time availability from program leads
Schedule the Telestroke Clinical Engagement Meeting for week 5.		Scheduled by local site lead.	Time availability: may need to look into coverage plans with site administrators and leads Ability to compensate physicians for their time would be important.
Share Telestroke Technical Commissioning Document and <i>Technical SLA</i> with the Information Technology Site Lead.	Documents from prototypes. Will be refined as part of pre-implementation activities.	BC Telestroke Implementation Lead via the local telestroke lead	Relevance and time to read
Status report to regional team, local implementation team and to the BCTELEStroke Implementation Team	Status report template completed	Telestroke Site Lead	None
Week #2-3	Current State	How	Challenges
Business process review meeting for week 2 (2 hours)	Prototype Documentation: Telestroke Algorithm, bcbeline Algorithm, R&R documents, Job Action Sheets	Lead by BCTELEStroke Implementation Lead	Availability of clinical staff
Initial Implementation Kick-off Meeting	PPP	Lead by BCTELEStroke Team	Availability of clinical
Finalize local area network wiring	Prototype Documentation	IT and Telehealth Representatives	Finalizing best locations to wire
Schedule clinical training as required	ACVS, Nursing Education	Business process review meeting will identify clinical knowledge gaps not already address through ACVS	Hopefully most of the educational gaps will have already been addressed through BCSS/ACVS prior to telestroke implementation
Finalize equipment selection	Prototype Videoconferencing Catalogue and Selecting the Right Telestroke Equipment	Telestroke Lead	Different perspectives & compatibility issues
Schedule technology upgrades if required	Unknown	IT Lead	
Radiology department engagement to assess process and technology readiness	Template algorithms	Meeting with BCTELEStroke organized by local lead	Buy-in/ acceptance For 24/7 Available staffing
Pharmacy department engagement to assess medication requirements for telestroke	unknown	Meeting with BCTELEStroke organized by local lead	Potential funding implications
Status report	Template	Facility telestroke lead	None

Week #4-5	Current State	How	Challenges
Conduct Telestroke Clinical Engagement Meeting	PPP, Documentation, experts,	Facility telestroke lead & BCTELEStroke Coordinator	Coordination and communication, capturing the interest
Schedule 1st Telestroke Clinical Mock Consultation for week 10	Template mock documentation	Facility telestroke lead & BCTELEStroke Coordinator	Coordination
Schedule Telestroke Service Training for Weeks 10-11 for ED Physicians and nurses.	Training Plan	Facility telestroke lead	Coordination, time, support, acceptance.
Identify communication requirements for site and engage regional communications representative.		Meetings PR Representatives	Ensuring all concerns identified
Status report to regional team, local implementation team and to the BCTELEStroke Implementation Team.	Template	Facility telestroke lead	None
Week #6-8	Current State	How	Challenges
Conduct clinical training sessions (i.e. NIHSS) scheduled week 2-3.	Should be completed as part of clinical readiness.	Site decision	Time
Ensure network wiring installation is completed to keep on schedule for the installation of the videoconferencing equipment.	Clear expectations detailed in plan.	Directed by IT/Telehealth lead	Availability of person to do this work.
Configure a static IP address as per the <i>BC TELEStroke Technology Plan/Agreement</i>	IP address will be known	Directed by IT/Telehealth lead	Skill
Videoconferencing unit installation and configuration.	Procurement process will have already been initiated.	Directed by IT/Telehealth lead	Vendor delays, weather etc
Status report to regional team, local implementation team and to the BCTELEStroke Implementation Team.	Template	Facility telestroke lead	Time
Week #9	Current State	How	Challenges
Finalize commissioning of equipment by connecting with consulting sites.	Commissioning and testing documentation	Technical Team	Time
Conduct a CT image transfer test to ensure that a quality CT image from the referring site can be accessed from any of the consulting sites.	No process detailed as of yet, however straight forward and not new practice	DI Team	Communication
Status report to implementation team and BCTELEStroke Implementation Team.	Template	Facility telestroke lead	Time
Week #10 - 11	Current State	How	Challenges
Conduct 1st Telestroke Clinical Mock Consultation scheduled in week 5.	Template documentation to support mock.	Facility Telestroke Lead and BCTELEStroke Coordinator	Coordination
Conduct scheduled telestroke service training for nurses and ED physicians.	Prototype documentation	Site Team, Lead and BCTELEStroke Coordinator	Absences, staffing issues, other priorities.
Once 1 st mock completed, schedule the mock drill for week 12.	DRAFT Communication	Facility Lead	Coordination of many people and different sites.
Start internal marketing campaign during week 11. See "Marketing" section of this manual for example communication templates.	Template	Facility Lead	Access to communications representative.

Week #12	Current State	How	Challenges
Conduct a successful mock drill. Prior to go-live the site must participate in a successful mock drill.	Detailed process from prototypes	Facility Lead and BCTELEStroke Coordinator	Absences, staffing issues, other priorities.
Site Readiness Check-list signed-off and sent to Regional Telestroke representatives.	Template	Facility Lead	None
Broader communication initiated.	Template documentation	Facility Lead, BCSS, Communications rep	Approval of communication
Officially brought onto the Provincial BCTELEStroke Network. All relevant BC TELEStroke representatives notified of successful consultation, commissioning document sign-off and sign-off of the readiness check-list.	Communication Template	BCTELEStroke Coordinator	None
Enter all new VC equipment into equipment inventory.	Equipment inventory list	BCTELEStroke Coordinator	None
Notify PHSA Telehealth Office of new VC equipment and IP address.	Clear and known process	BCTELEStroke Coordinator	None
Week #13 GO LIVE!	Current State	How	Challenges
Schedule debrief meetings post first few Telestroke Consultations. Invite a BCTELEStroke representative. Refine processes and address concerns.	Conducted successfully for prototypes. Straight forward informal process	Facility Lead and BCTELEStroke Coordinator	Coordination and time
Ensure monitoring and data collection process is working and data collected is complete.	Data collection process from prototype, adapted based on phase 2 planning	Facility Lead and BCTELEStroke Coordinator	None

APPENDIX 3: IMPLEMENTATION AND OPERATIONAL DOCUMENTATION FROM PROTOTYPE

- Provincial Telestroke Working Group Terms of Reference
- Provincial Telestroke Working Group Membership List
- Telestroke Partnership Agreement
- Status Report
- Technical Service Level Agreement
- Commissioning and Testing Documentation
- Training Plan
- Communication Plan
- Clinical Service Level Agreement
- Privacy Impact Assessment
- Referring Site Implementation and Operations Manual
- Pre-Site Survey
- Videoconferencing Catalogue and Selecting the Right Telestroke Equipment
- Patient Brochure
- Telestroke Algorithm
- Roles and Responsibilities Documentation and Job Action Sheets
- Consult Note
- Technology User Guides
- bcbedline algorithm
- Telestroke Working Group Terms of Reference
- Telestroke Evaluation Material and Final Report

APPENDIX 4: DRAFT TERMS OF REFERENCE: TELESTROKE WORKING GROUP –PHASE TWO

Definitions for the purpose of this document:

The term “Telestroke” was proposed by Levine and Gorman to define the use of telemedicine in acute stroke intervention. Levine and Gorman, Telestroke: the Application of Telemedicine for Stroke, *Stroke*, 1999;20:464-4.

Purpose

The Telestroke Working Group (TWG) provides guidance and assistance in the development of Telestroke services in British Columbia.

The Responsibilities of the Telestroke Working Group

To direct the formation of required sub-committees and identify committee leadership as required.

To monitor work of the sub-committees, ensuring that issues are resolved and tasks completed.

To work with and offer advice to the BC Stroke Strategy Steering Committee in resolving issues that may impede Telestroke project progress.

To participate in on-going efforts to keep all stakeholders informed of the project objectives, requirements and dependencies.

To provide input and direction into the development of the Provincial Telestroke Service and Technology Planning efforts.

To formulate recommendations based on sound analysis of current conditions and data collected as a part of the service development process of the project to ensure the continuous growth of Telestroke and its integration into everyday healthcare services in the province of British Columbia.

Terms of Reference

- The TWG will consist of representatives from various stakeholder groups and will include regional representation.
- The TWG will fulfill its responsibilities for the duration of the project, up to XXXX
- The Project Manager of the BC Stroke Strategy will have a reporting relationship to the TWG, who are acting as an oversight body during the Telestroke Project.

- The Chair of the TWG has a reporting relationship to the BC Stroke Strategy Steering Committee and will accept responsibility of liaising with the Project Manager as needed
- Agendas for regularly scheduled meetings will be drafted by the Provincial Telestroke Coordinator and approved by the Chair before being circulated to the members.
- Agendas will be distributed within 5 working days of the meeting.
- Notes of decisions and actions will be recorded and circulated to the members and the Chair of the BC Stroke Strategy Steering Committee. They will be reviewed at the start of the next meeting for amendments or additions.
- Recommendations put forth from the Working Group, must be agreed upon by a simple majority, documented and forwarded to the BC Stroke Strategy Steering Committee , prior to implementation.

Membership

The membership structure of the Telestroke Working Group will be as follows:

- 1 Clinical and Telehealth/Technical representative from Fraser, Interior, Northern, Provincial Health Services, Vancouver Coastal and Vancouver Island Health Authorities
- Healthlines Services BC (1)
- DI Imaging Representative
- Emergency Department Physician
- Consulting Neurologist representing call group
- eNG representative
- Ministry of Health, a representative from the Health Authorities Division and the Director of Telehealth
- Telestroke Clinical Coordinator
- Provincial Telestroke Coordinator
- Project Manager, Stroke Strategy Project

Membership will be for the duration of the project and if required, replacements for members, will be approved by the Chair and the Project Manager of the BC Stroke Strategy. This is a voluntary committee.

Schedule of Meetings

Quarterly or as determined by the Chair.