Directional Recommendations
Phase II
Stroke Current State Assessment and Best Practice Recommendations for Post-Hospital Care
# Table of Contents

1. **Executive Summary** .................................................................................. 4
   1.1 Directional Recommendations ................................................................. 7
       1.1.1 Specialized Intensive Rehabilitation .................................................. 7
       1.1.2 Ongoing Support and Recovery ......................................................... 7
       1.1.3 Community Hubs .............................................................................. 8
       1.1.4 Rapid Specialized Medical Services .................................................. 9

2. **Acknowledgement** .................................................................................. 10

3. **Introduction** .......................................................................................... 11

4. **Phase II Project Strategy** ...................................................................... 13

5. **Methods and Findings** ....................................................................... 14
   5.1 Environmental Scan .............................................................................. 14
   5.2 Current State .......................................................................................... 15
   5.3 Population Based Approach/Data Collection .......................................... 16
   5.4 Blue Sky Events .................................................................................... 17
   5.5 Gap Analysis .......................................................................................... 18
   5.6 Patient Experience ................................................................................. 21
   5.7 Engagement ........................................................................................... 21
   5.8 Prioritization - Impact and Effort Matrix ............................................... 21
   5.9 Communication ...................................................................................... 22
   5.10 Accountability & Sustainability ............................................................ 22

6. **Stakeholder Consultations** .................................................................. 22
   6.1 Stroke Survivors and Families ............................................................... 22
   6.2 Stroke Experts Engagement ................................................................... 24
   6.3 Physician and Other Referral Sources Engagement ............................... 25

7. **Detailed directional recommendations** ............................................... 27

8. **Next steps** ............................................................................................ 27

9. **Implementation** .................................................................................... 27

10. **Appendices** .......................................................................................... 27
   10.1 Appendix A – Definitions ..................................................................... 28
   10.2 Appendix B - Directional Recommendations .......................................... 31
       10.2.1 Specialized Intensive Rehabilitation ............................................... 31
10.2.2 Ongoing Support and Recovery.................................................................32
10.2.3 Community Hubs.........................................................................................34
10.2.4 Rapid Specialized Medical Services ..........................................................36
10.3 Appendix C – Governance Structure.............................................................41
10.4 Appendix D – Outcome Measurement Metrics/Success Criteria.........................42
10.5 Appendix E – Health Equity Impact Assessments ...........................................43
10.6 Appendix F – Stakeholder Engagement ..........................................................54
10.7 Appendix G – Physician Survey Results .......................................................55
10.8 Appendix H – Prioritization Matrix ...............................................................58
10.9 Appendix I – Proposed Stroke Services Model .............................................59

11. Appendix J – Considerations for High Level Implementation Planning .......... 60
11.2 Existing Resources and Stroke Services .......................................................61
11.3 Directional Recommendations and Implementation Considerations ............61
  11.3.1 Specialized Intensive Rehabilitation Teams ..............................................61
  11.3.2 Ongoing Support and Recovery .............................................................65
  11.3.3 Community Hubs .................................................................................66
  11.3.4 Rapid Specialized Medical Services ......................................................70
11.4 Key Enablers ............................................................................................73
11.5 Capacity Planning - Modeling Assumptions ..................................................74
11.6 Stroke Capacity Planning Document .........................................................77
Phase II
Stroke Current State Assessment and Best Practice Recommendations for Post-Hospital Care

Note: For purposes of this document, the term “post-hospital care” includes Community Rehabilitation and Recovery for Stroke Survivors (Community Rehabilitation & Recovery) and Secondary Stroke Prevention

1. Executive Summary

Throughout their care journey, stroke survivors require a number of health care services across the continuum of care.

In 2013 hospitals and other partners who provide stroke care within the South West Local Health Integration Network (South West LHIN) embarked on Phase I of the South West Stroke Project to take an in-depth look at how to improve stroke care in the region to positively impact access, transition and outcomes across the system of care.

In March 2015, this Phase I stroke work culminated in the approval of directional recommendations endorsed by the South West LHIN to improve in-hospital stroke care in the LHIN by realigning stroke care from 28 hospitals to seven Designated Stroke Centres. This realignment is scheduled for completion by 31 March 2017.

This document focuses on the next step in the project, known as Phase II, in which recommendations were developed to meet post-hospital care needs for stroke survivors including community stroke rehabilitation, and secondary stroke prevention clinics and services. See Appendix A for definitions of terms.

Developing these recommendations involved a thorough review including a system-level current state analysis, blue sky visioning exercise, future state identification, and gap analysis. Extensive stakeholder feedback and key informant participation was included as part of the planning process. People with TIA (transient ischemic attack) and stroke survivors, families, physicians, care providers and other stakeholders were engaged to design a seamless system of post-hospital stroke care that embodies best practices and improves outcomes.

Phases I and II align with the Canadian Best Practice Recommendations for Stroke Care as well as the Health Quality Ontario and the Ministry of Health and Long-Term Care (MOHLTC) Quality-Based Procedures: Clinical Handbook for Stroke (Acute and Post-Acute) which outline best practice recommendations in clinical stroke care.

Planning was also informed by other existing research and available evidence (including the Rehabilitative Care Alliance and South West LHIN Rehabilitative Care Committee reports), population demographics and health needs, current service utilization patterns, and emerging practices from other jurisdictions. Phase II also aligns with the “Patients First: Action Plan for Health Care” (Patients First) which aims to improve access to health care services by giving
patients and their families faster and better access to care, and putting them at the centre of an integrated health system.

With the engagement of a broad group of stakeholders, the Phase II Project resulted in a number of directional recommendations which will be presented to the South West LHIN for their endorsement in April 2017.

These directional recommendations are the components that would form the strongest possible foundation to deliver the best possible post-hospital stroke care. Further, this is not a commitment to implement these draft recommendations as Phase II implementation planning has not yet received funding. Implementation planning from December to March 2017 explored the feasibility of making these recommendations a reality.

Phase II consisted of two work teams. The focus of the Community Rehabilitation and Recovery for Stroke Survivors team was on specialized community stroke rehabilitation and recovery programs. This team created directional recommendations that met best practices for post hospital care, in order to maximize recovery and ensure successful community re-engagement for stroke survivors.

The other team, the Secondary Stroke Prevention team, analyzed specialized stroke prevention services including ongoing prevention opportunities in the community. This team created directional recommendations that meet best practice secondary stroke prevention care needs for people with stroke and TIA, optimizing medical and self-management to avoid the onset of subsequent stroke.
Figure 1: The four Phase II Directional Recommendations
Four key components for stroke prevention, rehabilitation and recovery form the Directional Recommendations. Figure 1 depicts the details of the key components of the Directional Recommendations. Each component requires focus to ensure change occurs where required; yet, they are all interrelated and need to be considered together for their overall impact on peoples’ lives.
1.1 Directional Recommendations

Note: Several recommendations make reference to specific Quality Based Procedures (QBPs) found in Health Quality Ontario and the MOHLTC’s publication Quality-Based Procedures: Clinical Handbook for Stroke (Acute and Post-Acute).

Note: The recommendations below are high level summaries. Appendix B contains the recommendations in their entirety for Community Rehabilitation and Recovery for Stroke Survivors, and Secondary Stroke Prevention including implementation considerations, key enablers, and limitations.

1.1.1 Specialized Intensive Rehabilitation

Expand and integrate existing Community Stroke Rehabilitation Teams and stroke outpatient rehabilitation services to provide specialized, intensive stroke rehabilitation teams (SIRT) in the community (Quality Based Procedure (QBP) 9.4) using a combined model of care, in which the same team offers:
- early supported discharge (QBP 7.2)
- in-home rehabilitation services
- outpatient services

This blended model enables flexibility of service delivery based on patients’ needs and provides continuity of care by allowing clinicians to follow the patient through their transitions. This model will also allow for cost effectiveness as patients are transitioned out of acute care more quickly with Early Supported Discharge, and from home based to ambulatory care in the future state.

1.1.2 Ongoing Support and Recovery

The Canadian Stroke Best Practice Recommendations indicate that the post-discharge period is consistently reported by stroke survivors and their families to be a stressful and challenging time as they adjust to new roles and potentially altered functional and cognitive abilities.

Also, family and caregivers are often expected to assume roles, tasks and responsibilities that may be beyond their skills and knowledge. This can increase caregiver burden, which has the potential to result in depression (as high as 60 percent reported for caregivers of stroke and similar post-stroke depression rates occur in patients and are linked to poorer recovery outcomes). The Canadian Stroke Best Practice Recommendations reports that “when there is coordination of care beyond the inpatient setting and community support services are provided, patient outcomes and patient and caregiver satisfaction improves.” (CSBPR, Transitions)

The following recommendations were created to support stroke survivors following the transition from more formalized rehabilitation.

- **Stroke-Specific Adult Day Programs**
  Ensure adult day program stroke-specific days are appropriately situated and resourced to support equitable access to stroke services across the South West LHIN.
• **Therapy Groups**
  Create ongoing support (QBP 10.5) and therapy groups across the geography of the South West LHIN to ensure equity in access. To include the following groups:
  - Stroke Survivor Peer Support (QBP 9.13.4)
  - Caregiver Support (9.13.4)
  - Aphasia and Conversation (QBP 9.22.2)

• **Rehabilitation Facilitator**
  Build a stroke rehabilitation facilitator role, modeled on a similar role currently serving acquired brain injury clients, to provide navigation, and support ongoing stroke recovery and maintenance in the home/community. This service will provide additional rehabilitation and recovery support to a small percentage of complex stroke survivors following discharge from SIRT, or for those who require additional rehabilitation/recovery support beyond what can be provided or accessed through the Community Hub.

• **Stroke Support Fund**
  Support a fund to enable stroke survivors to meet unexpected and/or transitional needs. This could be used for home renovation, equipment needs, driving assessment or vocational rehabilitation that extends beyond what is available through private insurance or community supports.

1.1.3 **Community Hubs**

*The Ontario Hospital Association publication* Redefining Health Care: A Dialogue on Health Policy (Issue I, Fall 2016) *speaks to the benefits of the health hub model including greater responsiveness, improved access, more efficient transitions, reduced travel costs based on care closer to home, more robust patient and family engagement, shared (common) client intake processes, comprehensive supports for seniors, better system navigation and shared electronic patient records.*

Develop and implement a model for Community Hubs based on the “no wrong door” concept which will serve as a “one stop shop” providing multifactorial interventions, partnering with vascular and chronic disease services. Services will include navigation, education, peer/caregiver support, risk factor and lifestyle management, self-management, counseling, supervised exercise and services that support leisure and community re-engagement. Wherever possible and feasible, the Community Hubs will be built upon existing services/resources and tailored to the geography served. (QBP 10.5.2)

The detailed planning phase will reveal what existing resources could be utilized /maximized, and will also help to identify what additional resources will be required for implementation.

For people with stroke and TIA, as well as their caregivers, these hubs will provide access to:
- a community facilitator (stroke system services worker) with stroke specific knowledge on site including navigation as one of their roles
- a nurse with stroke expertise
- a computer and resource library (QBP page 133 Module 10 Home)
- a community client database
• A centrally coordinated strategy will be developed at the Community Hub to provide stroke survivors with a follow-up phone call (or contact) after hospital discharge at one week, 30 days, 90 days and yearly for up to five years to assess for needs, possible referral and/or re-entry into system, and collect outcomes for system evaluation.

• An education strategy will be developed and facilitated out of the Community Hub to provide standardized, foundational stroke education to community front line service providers, e.g. municipal recreation staff, and community support service staff and volunteers who work with stroke survivors. This education will be provided at minimum on an annual basis.

• Develop the capacity, using existing and emerging technology, to support equitable access to specialized consults for stroke survivors across the South West LHIN.

• Orphan patients will have access to a nurse practitioner through the Community Hub who will provide them with medical management until a permanent primary care provider can be found.

1.1.4 Rapid Specialized Medical Services

• Emergency Department Management
  Individuals with TIA or minor stroke will have core diagnostic investigations (i.e., CT, EKG, Carotid Imaging) completed at a regional or district stroke centre prior to discharge from emergency department (ED), according to the Canadian Stroke Best Practice Recommendations (QBP 1.6 and 2.4; CSBPR Secondary Stroke Prevention 1.0, 1.1, 1.2)

  Individuals with suspected TIA or minor stroke not admitted to hospital will be referred to an urgent TIA clinic (QBP Module 1 Implementation Considerations; Module 5a Implementation Considerations; CSBPR Secondary Stroke Prevention 1.1 )

• Urgent TIA Assessment
  Individuals with suspected TIA or non-disabling stroke will be seen at an urgent TIA clinic at a Regional or District Stroke Centre within recommended urgency timelines for a comprehensive assessment and the creation of a recommended management plan.

• Timely Carotid Revascularization Services
  Assessment and appropriate interventions will occur within the recommended timelines for all potential carotid revascularization candidates. (QBP 5.1.7; CSBPR Secondary Stroke Prevention 8.0).

• Follow-up from Physician with Stroke Expertise
  Individuals with a stroke or TIA who are admitted to hospital and require additional specialist care will be seen by a physician with stroke expertise for consultation after discharge (QBP 5.10.1).
• **Decision Algorithm for Primary Care**
  Create and implement a decision algorithm for primary care providers directing them to the most appropriate referral destination for patients who present to the office identifying symptoms of TIA/minor stroke. (Consensus)

• **Transitions**
  A strategy is created and implemented to optimize communication between primary care providers and stroke prevention services throughout the patient journey in secondary stroke prevention.

2. **Acknowledgement**

As Co-chairs of the Steering Committee of the South West LHIN *Stroke Current State Assessment and Best Practice Recommendations for Post-Hospital Care* project, we extend our sincere thanks to Mike Barrett and Kelly Gillis for this opportunity to present recommendations to further enhance community stroke rehabilitation and recovery and secondary stroke prevention for people in the South West LHIN.

Through the commitment and leadership of the project teams, these recommendations were informed by the expertise gathered from a broad range of stroke survivors, caregivers, and stroke care providers throughout the South West LHIN.

We believe these recommendations lay a solid foundation upon which to build the strongest possible model of post-hospital stroke care to serve the residents of the South West LHIN and to support stroke planning work occurring across the province.

Sincerely,

Anne Campbell, Co-chair  
South West Stroke Project Phase II  
Steering Committee  
VP Partnerships & Patient Experience  
Huron Perth Healthcare Alliance

Roy Butler, Co-chair  
South West Stroke Project Phase II  
Steering Committee  
VP Patient Care & Risk Management  
St. Joseph’s Health Care London
3. Introduction

In February, 2015, Health Quality Ontario and the Ministry of Health and Long Term Care released an updated *Quality Based Procedures: Clinical Handbook for Stroke (Acute and Post-acute)*. These Quality Based Procedures (QBP’s) were identified using evidenced based frameworks that provide opportunities for process improvement, enhancement of the patient experience, improvement of patient outcomes and a potential cost savings to the health system. (Health Quality Ontario; Ministry of Health and Long-Term Care, 2015).

Best practices outlined in this handbook highlight and advance the models of care provided in urgent TIA/secondary stroke prevention clinics (SSPC), as well as the need for specialized stroke outpatient/community rehabilitation and recovery services, in achieving a high quality stroke care system. Achieving the best practices in post-hospital prevention, rehabilitation, and recovery areas of stroke care provides a robust discharge strategy from hospital for people with stroke and TIA, and supports QBP recommendations in acute and inpatient rehabilitative care. The recommendations emerging from Phase II will ensure the success of Phase I of the Stroke Capacity Assessment and Best Practice Implementation Project by addressing current gaps in the system of care for stroke patients discharged from hospital.

Phase II also supports Patients First by putting a greater focus on disease prevention and health promotion, and many of the recommendations align with the Patients First Plan which focuses on the four key objectives of: Access, Connect, Inform, and Protect.

Phase II Project

The Phase II work encompassed two project streams:

1. Community Rehabilitation and Recovery for Stroke Survivors (Community Rehabilitation & Recovery)
2. Secondary Stroke Prevention

Project AIM Statement

To ensure people with TIA and stroke will have equitable access to best practice/evidence based stroke care through the alignment, development, enhancement and delivery of specialized secondary stroke prevention, community stroke rehabilitation and recovery programs.

Project Objectives

Community Rehabilitation & Recovery

- To complete a system level current state review, future state identification and gap analysis of specialized community stroke rehabilitation and recovery programs.
- To create future state directional recommendations that meet best practices for post-hospital care in order to maximize recovery and ensure successful community re-engagement for stroke survivors.
Secondary Stroke Prevention

- To complete a system level current state review, future state identification and gap analysis of specialized stroke prevention services including ongoing prevention opportunities in the community.
- To create future state directional recommendations that meet best practice secondary stroke prevention care needs for people with stroke and TIA, optimizing medical and self-management, to avoid the onset of a subsequent stroke.

Key Phase II deliverables

- create future state directional recommendations to meet post-hospital care needs for people with stroke and TIA including community stroke rehabilitation & recovery and secondary stroke prevention, and
- produce a high level implementation plan, including a plan for ongoing communication and community engagement.

The creation of enhanced post-hospital services will enable timely discharge from hospital, reduce admissions / readmissions and improve the patient and caregiver experience. Effective delivery of prevention and rehabilitation & recovery services in the community will address the need for post-hospital care that is responsive to the diverse needs of both rural and urban populations.

The recommendations will build on existing stroke services, some of which include:

- Urgent TIA/Secondary Stroke Prevention Clinics (SSPC):
  - Grey Bruce Health Services – Owen Sound Hospital
  - Huron Perth Healthcare Alliance – Stratford General Hospital
  - London Health Sciences Centre – University Hospital
  - St. Thomas Elgin General Hospital

- Community Stroke Rehabilitation Teams (CSRT):
  - Grey Bruce
  - Huron Perth
  - Thames Valley

- Intensive outpatient rehabilitation programs:
  - Comprehensive Outpatient Rehabilitation Program (CORP) at St. Joseph’s Parkwood Institute
  - Intensive Outpatient Rehabilitation Program (IROP) at Woodstock Hospital

- Community support services:
  - Adult day programs including stroke specific days in Clinton (One Care), Woodstock (VON) and Aylmer (County of Elgin)
  - Community exercise programs including stroke specific classes in London and Woodstock (VON)
  - Peer Support and Conversation including groups led by March of Dimes, Dale Brain Injury, and Western University.
In scope and out of scope
Following are the parts of the project that will be addressed (in scope) or will not be addressed (out of scope).

In scope
- Develop current state analysis of South West LHIN funded providers who deliver SSPC and Community Stroke Rehabilitation Teams, and stroke specific outpatient programs, and Community Support Services (i.e., adult day programs), including an identification of the types of stroke related services provided by non-LHIN funded providers (i.e., exercise classes, peer support, etc.)
- Define patient experience approach throughout planning to help inform gap analysis and case for change
- Complete a gap analysis of community stroke service needs across the South West LHIN
- Develop preferred future state for SSPC, CSRT, outpatient stroke services based on best practices
- Investigate Early Supported Discharge Models in conjunction with CSRT, Community Care Access Centre (CCAC) services, outpatient and community supports
- Demand Modeling based on population based data and Emergency Department (ED) separations.
- Ensure QBP requirements for Community Stroke Rehabilitation and Secondary Stroke Prevention are embedded into future state directional recommendations, as appropriate
- Create a high level implementation plan, including plan for ongoing communication and community engagement.

Out of scope
- Public health, vascular health strategy and primary care clinical practice
- Pediatric stroke population
- Implementation of directional recommendations
- Funding for stroke services to support implementation
- Development of new clinical guidelines
- Recruitment planning
- Conditions other than stroke and TIA
- Stroke services outside of South West LHIN
- Ensuring sustainable data collection of stroke services in the community

4. Phase II Project Strategy
See Appendix C for the governance structure supporting the Phase II work.

Through extensive engagement with hospitals and community stakeholders, and people with TIA and stroke in the South West LHIN, the following planning approach was undertaken by both project teams to determine the type and level of services required to enhance post-hospital community rehabilitation and recovery and secondary stroke prevention for people with stroke and TIA:

- Data was gathered from a current state analysis, population analysis, patient experience interviews and stroke best practices.
• Project teams were led through an item-by-item examination of the QBP Handbook and Canadian Stroke Best Practice Recommendations.
• To inform planning, Health Equity Impact Assessments were completed which provided an understanding of key barriers to equitable access, and the specific needs of health-disadvantaged populations.
• Literature searches were completed by researchers and clinical librarians to ensure the most up-to-date evidence based information where available.
• Data collected was presented to a wide group of stakeholders at blue sky visioning events in June 2016. Participants combined many inputs including population data, best practice recommendations and patient experience, to create an ideal model for post-hospital rehabilitation & recovery and secondary stroke prevention.
• Based on this ideal model, further consultation took place with additional stakeholders.
• Gap analyses identified where additional system capacity and resources, and/or process changes might be required to meet best practices and achieve the desired future state.
• Data gathered from analyses and consultations served as the foundation for the creation of the future state directional recommendations.
• Directional recommendations were drafted and prioritized.
• Recommendations were vetted by project teams and consultation tables, finalized and presented to the South West LHIN for endorsement.

5. **Methods and Findings**

See [Appendix D](#) for an outline of the project’s outcome metrics / success criteria.

5.1 **Environmental Scan**

An environmental scan of existing research and available evidence was completed and documents reviewed for alignment. The “Patients First: Action Plan for Health Care” report aims to improve access to health care services by providing patients and their families faster and better access to care, and putting them at the centre of an integrated health system. These principles were foundational in creating the Phase II directional recommendations.

The South West LHIN Rehabilitative Care Committee reports, An Evidence Informed Bedded Rehabilitation Capacity Plan (2016) and Current State Analysis of Rehabilitative Care Services Provided in the South West LHIN (2015), contributed to the current state inventory of rehabilitation services, current service utilization patterns, and system capacity planning.

Research and literature regarding emerging practices from other jurisdictions were reviewed including the Ontario Stroke Network (OSN) reports; [Provincial Integrated Working Group on Early Supported Discharge – Final Report](#) (2015) and [Community Stroke Rehabilitation Models in Ontario](#) (L. Allen; 2016), Hamilton Niagara Haldimand Brant’s [Community Stroke Rehabilitation Model](#) (2013) report, as well as the OSN Stroke Prevention Services: Stroke Prevention Clinic Core Elements (currently in draft). The first three documents provided lived experience regarding models for community rehabilitation services. The last, outlines essential, best-practice components in rapid TIA assessment and secondary stroke prevention. The Ontario Stroke Network’s Strategy for Patient Oriented Research Demonstration Project:
Ensuring Quality in the Implementation of Quality Based Procedures - Stroke (2016) provided key messages for stroke care providers from patients and their families regarding what is most important to them.

Alignment with the provincial Rehabilitative Care Alliance’s framework, tools and processes was also considered in developing recommendations for community rehabilitation and recovery services.

Literature reviews were conducted relevant to all the components considered for post-hospital stroke care to ensure the most up to date evidence was available to inform the recommendations. In particular, there is a significant body of evidence (see p. 12-17) regarding the effectiveness of the Community Stroke Rehabilitation Teams.

Health Equity Impact Assessment

See Appendix E for the Health Equity Impact Assessments

Health equity is a core value in Ontario’s health care system as it is recognized that people belonging to certain groups may experience poorer health, yet are not able to access the range of services to meet their needs. Every person, no matter who they are, where they live or how much money they make, deserves equitable access to health care.

Both the Community Rehabilitation & Recovery and Secondary Stroke Prevention project teams completed a Health Equity Impact Assessment (HEIA) with the intent to identify how implementing services reflecting stroke best practice guidelines would impact population groups in different ways. The key populations identified included: Aboriginals, youth and seniors, those with disabilities, rural dwellers, and low income populations.

This HEIA exercise helped inform the future state recommendations for Phase II stroke care by ensuring that the needs of all determinants of health were represented and assessed throughout the Phase II project. Also, it created an awareness of the potential impacts to all populations, and assisted the teams in identifying barriers that might inhibit equitable access to high quality care.

5.2 Current State

To determine needs, current state mapping sessions brought together stakeholders in four South West LHIN regions: Elgin/Oxford/Norfolk, Grey/Bruce, Huron/Perth, and London/Middlesex. The mapping included a complete system level assessment of specialized community stroke rehabilitation & recovery programs, and stroke prevention services across the South West LHIN.

These sessions engaged a variety of front line staff, enabling them to have their voices heard and to break down silos to understand the views of their fellow frontline workers from across the care continuum.
The following themes emerged from across the continuum during the current state mapping sessions:

- timely access to post-hospital rehabilitation
- transition to supports after intensive rehabilitation
- long term community services (maintenance and supports)
- caregiver and respite needs?
- secondary prevention
- re-access to consults

5.3 Population Based Approach/Data Collection

The population based approach aimed to consider opportunities for system design built around the needs of the population. Project teams began with a scoping exercise based on four Ws (who, what, where, and when). At a high level, the exercise focused on patient groups under consideration (who), services they require (what), geographically-relevant considerations (where), and clinically important phases post stroke (when).

Building on the information gleaned during the scoping work, project teams were led through an item-by-item examination of the QBPs and Canadian Stroke Best Practice Recommendations. The results of this exercise, combined with targeted in-depth literature reviews, provided the background for the teams to consider: where these activities could be carried out, by whom (i.e., what staff would be required), and at what point in their recovery journey. This helped the group to consider the types of activities/services that need to be available to patients.

How population data informed the directional recommendations
The information derived from the current state and population based approach was used to guide the project team in developing a model called the Stroke Capacity Planning Document for identifying service needs/volumes. Wherever possible, population-level data were used to inform the group about the approximate number of clients in each sub-LHIN region that would require each type of service. Regional maps were created to graphically illustrate the distribution of clients based on their primary residence, and this information was used by the Project Teams to inform decisions about potential service locations.

Work load analysis for SSPC Clinics (staffing planning for future state)
Due to the regionalization of stroke care in the South West LHIN, the Secondary Stroke Prevention Clinics (SSPC) are expected to see a significant increase in patient volumes. To ensure appropriate resource planning for SSPC staff, a workload analysis was completed at the following clinics: Huron Perth Healthcare Alliance - Stratford General Hospital, Grey Bruce Health Services - Owen Sound, and Urgent TIA and Carotid Clinics at London Health Sciences Centre – University Hospital.

The approach for this analysis was for the nurse practitioners, administrative assistants and the registered nurses to capture the amount of time they spend on daily tasks at the clinic. Ultimately, the analysis shows the amount of staff time required per patient, allowing for appropriate resourcing with the future higher volume clinics.
5.4 Blue Sky Events

The Blue Sky Events brought together a diverse range of health care providers from across the stroke continuum of care to brainstorm the best possible care models for Community Rehabilitation & Recovery and Secondary Stroke Prevention. Blue sky is a term referring to a brainstorming exercise to create a vision for a future state that offers the best practice stroke care services possible without imposed constraints.

At this event, the components were aligned with quality based procedures and best practices to create the ideal system to support those experiencing TIA as well as stroke survivors as they transition back into the community and minimize their risk of having a subsequent stroke.

**How the Blue Sky events informed directional recommendations – Community Rehabilitation & Recovery**

At the Community Rehabilitation & Recovery Blue Sky event, the group began by identifying Guiding principles, which were identified as ideas that would be the foundation for the work leading to the final recommendations. These guiding principles included things such as: continuity of care, stroke expertise, improved communication between partners, ease of access and re-access to the system, patient-centred care and goal identification, seamless navigation and evidence based.

The group then identified two main phases to focus on moving forward: 1. Intensive Rehabilitation – including more formalized rehabilitation services in the immediate period following discharge from inpatient acute or rehab settings 2. Maintenance (Ongoing Support and Recovery) – the period following more formalized rehabilitation where stroke survivor and family must adapt to new roles and functional limitations while striving to maintain gains made during the rehabilitation phase. This is where the stroke survivor works to reengage in their community, and CSS Services were identified as a main component of this bucket of work.

Under each of these areas, the teams reflected on the Quality Based Procedures and created ideas in regards to the very best services that could be offered as well as where they could be offered and who would ultimately be providing these services.

After the event, the project teams worked on identifying the gaps between this ideal future vision and what existed today. While identifying services to bridge these gaps, the team reflected on the guiding principles to help determine what future state services were realistically possible to recommend while aligning with stroke best practices.

**How the Blue Sky events informed directional recommendations - Secondary Stroke Prevention Project Team**

A “Blue Sky” event was held on June 22, 2016 for the for the Secondary Stroke Prevention stream of the South West Stroke Project. Expert stakeholders came together from across the South West LHIN for the purpose of innovating an ideal, holistic system for secondary stroke prevention. Financial, resource and system restrictions were not considered at this event to enable ideas to freely flow.
The day began with the group identifying features and processes of a healthcare system that would provide comprehensive, patient-friendly care. The responses were both high level (i.e., cultural sensitivity) and tangible (i.e., instructions on who patient is to contact). These items were then organized into the following themes: Accessibility, Education, Navigation, Specialized Care, Transitions, Communication, and Supports.

Through reviewing a case study, the group identified elements of care they would like to see occur in the patient journey. These were then consolidated into 5 components: Primary Care, Emergency Department, Discharge Post-Acute, Secondary Stroke Prevention Clinic, Risk Factor Management Services Community Support. The elements of care under each component were then sub-categorized into Education, Action, Documentation, and Check point/QA. It was confirmed that each sub-category was represented in each component to ensure accountable, quality care.

The project team then used the material from the blue sky to develop components of the proposed future state of secondary stroke prevention. The components identified at the Blue Sky event align with the components comprising the directional recommendations. The content for each component was initially developed from the sub-categories of Education, Action, Documentation, and Check Point/QA. However, these were changed at the request of the Evaluation Consultant as they were perceived as processes rather than structures, and structures are easier to evaluate. The project team then drew upon the themes identified in the Blue Sky event to form the content of the recommendations. All material from the Blue Sky event was included in the information used to develop implementation considerations.

5.5 Gap Analysis

By combining the information from population-based data, current state, stakeholder input, and proposed components emerging from the blue sky events, the gap analysis process identified high level gaps for implementation.

In October 2016, the Community Rehabilitation & Recovery and Secondary Stroke Prevention Project Teams and their respective stakeholders, including stroke survivors and caregivers, met to solidify some of the key proposed components of the new models of care.

For Community Rehabilitation & Recovery for Stroke Survivors the three key proposed components discussed in-depth were:
- Early Supported Discharge
- Specialized Intensive Rehabilitation Teams, and
- Community Hubs.

For the Secondary Stroke Prevention the four key proposed components discussed in-depth were:
- Emergency Department
- Urgent TIA Clinics
- Carotid Clinic, and
- Community Hubs.
Maps illustrating the geographic distribution of stroke and TIA incidents to inform planning for the distribution of services for rehabilitation and recovery and secondary stroke prevention are found on the following two pages.

Rehabilitation and Recovery

Markers reflect an annual average of South West LHIN residents with primary diagnosis of stroke or TIA between 2013/14 and 2015/16 as identified in CIHI’s National Ambulatory Care Reporting System (NACRS).

Map created by the Decision Support Department at London Health Sciences Centre.
Markers reflect an annual average of SW LHIN residents with primary diagnosis of TIA between 2013/14 and 2015/16 as identified in CIHI’s National Ambulatory Care Reporting System (NACRS).

Map created by the Decision Support Department at London Health Sciences Centre.
How the Gap Analysis informed directional recommendations
At the workshops in October 2016, significant progress was made in solidifying the structures required to support this new vision of community rehabilitation & recovery and secondary stroke prevention with the teams defining next steps to prepare the directional recommendations.

Best practices provided the foundation to create the directional recommendations. In addition, data was imperative to inform the directional recommendations including the estimated number of people with stroke and TIA who will require the services; geo-mapping to determine where the critical mass of people with stroke and TIA live; and potential locations for outpatient/satellite rehabilitation clinics and Community Hubs.

5.6 Patient Experience
At various times throughout the project, stroke survivors and care givers were engaged to ensure their voices were heard to help inform the directional recommendations. The activities involved in incorporating the patient experience included: confirming privacy processes, using experience-based design principles, determining a representative sample for interviews with people with stroke and TIA and their caregivers, and recruiting individuals for interviews and focus groups. Patient advisors participated in the gap analysis events. See 6.1 below for more patient experience information.

5.7 Engagement
Groups engaged in consultations included South West LHIN providers who deliver stroke care, physician groups and other key stakeholders for Community Rehabilitation & Recovery and Secondary Stroke Prevention, as well as people with stroke and TIA and their loved ones/caregivers (See 6 Stakeholder Consultations for more details).

5.8 Prioritization - Impact and Effort Matrix
The Phase II leadership team completed a prioritization exercise by working through a process of analyzing the effort required to implement each of the proposed draft recommendations, and the impact of each recommendation on stroke care in the South West LHIN. Through this exercise, the leadership team determined which proposed draft recommendations were high effort and high impact versus low effort and low impact. The results of the exercise will help to form an implementation plan. Financial implications were not considered as part of this exercise. See Appendix H for the prioritization matrix.

The top initiatives identified through the prioritization exercise:

- SIRTs
- Adult day programs
- Urgent TIA clinics
- Follow-up phone calls
5.9 Communication

Creating a robust communication plan involved working closely with the project teams and a communication advisory group to create the materials required to execute the plan including a creating a toolkit of communication materials, building web pages, circulating a monthly electronic newsletter to a broad range of stakeholders, and drafting the directional recommendation document for submission to the South West LHIN. More informal communication occurred on a regular basis through information sharing at various tables such as stroke advisory groups, Area Provider Table meetings, etc.

5.10 Accountability & Sustainability

Funding for Phase II’s implementation stage will be considered during the South West LHIN’s next Priorities for Investment funding cycle in July 2017. Any additional project funding would be used to either implement parts of these recommendations (i.e., equity of adult day programs) and/or develop a project team that would be responsible to further define the implementation details that would support these directional recommendations. Within that work a sustainability and evaluation framework will be created.

6. Stakeholder Consultations

Stakeholder consultations were a significant part of the project to ensure all voices were heard. Groups consulted to help inform the project included people with TIA and stroke, families, physicians, providers who offer stroke care including staff from community rehabilitation & recovery and secondary stroke prevention services, and a host of community support services.

See Appendix F for a list of stakeholders engaged for each Phase II project team.

6.1 Stroke Survivors and Families

Common trends/themes were captured during patient and family interviews across the South West LHIN. In total, 22 interviews were conducted, and two focus groups were held which included over 30 people with stroke and TIA and several of their family members/caregivers. The following characteristics were represented: various age groups, a variety of stroke deficits, rural/urban dwelling, comorbidities, and length of time since stroke. Facets of stroke and TIA care explored included private rehabilitation, outpatient/home based rehabilitation, community support services and secondary stroke prevention clinics.

Themes emerging from interviews with stroke survivors and families

- People with stroke and TIA want:
  - type of and length of rehabilitation therapy to be based on individual needs and goals
  - a choice between where services are provided (in-home or outpatient rehabilitation)
  - someone to go to as a long term resource when issues or concerns arise
• the ability to access ongoing recovery and navigation services once formal rehabilitation is completed, e.g., in home, by phone, Community Hub or adult day program
• the future state to include sufficient support for caregivers
• greater access to day programs and ongoing support and therapy groups including peer/caregiver/aphasia/conversation groups (especially for younger stroke survivors).
• assistance with the process to return to driving (including financial support)
• availability of vocational rehabilitation and recreational therapy to help return to work and/or meaningful activities
• those providing stroke care and support in the community to have stroke specific knowledge
• smooth transitions of care (‘warm handoffs’/referrals) between services and service providers
• partners in care to communicate and share information with one another, so people are not telling their story over and over again.

How these themes informed the directional recommendations
These themes highlighted the need for specialized rehabilitation teams (SIRTs) who provide services that are flexible and based on client needs and goals. Clients identified the need for ongoing recovery services beyond the formal rehabilitation period, such as flexibility of SIRTS to provide rehabilitation outside of the typical 8-12 week period, and/or some services starting at different points in the recovery journey. The recommendation for multiple methods to access services and navigation, such as those offered via the Community Hub, telephone follow-up, and the rehabilitation facilitator role, reflect the themes of client choice and services provided based on individualized needs. The enhanced support groups and addition of stroke specific adult day programs in each county speak to the desire of stroke survivors who spoke very passionately about the need for sufficient support for their family/caregivers.

Themes emerging from interviews - Secondary Stroke Prevention

People with stroke and TIA want:
• Knowledgeable staff with stroke expertise
• The cause of their stroke to be identified
• The ED physicians to correctly identify TIA, regardless of age
• To review their individual risk factor profile and unique prevention needs with qualified staff
• Immediate and longer term access to secondary stroke prevention education including the latest information and evidence
• Availability of staff to answer questions as needed
• Support to implement stroke prevention strategies
• To be on the correct medications at the lowest effective dose possible to avoid stroke while minimizing the cost and side effect burden
• Access to prevention resources in primary care, such as regular blood pressure monitoring, etc.
• To have access to medical management when they don’t have a primary care provider (orphan patient).
How these themes informed the directional recommendations
These themes highlighted the need for ongoing, easily accessible and coordinated secondary stroke prevention services led by qualified staff. Individuals identified the need for efficient diagnosis of TIA (including cause) and the creation of an appropriate, specialized medical management plan. The consistent emphasis on knowledge gaps, both on a short and long-term basis, stresses the importance of ongoing access to secondary stroke prevention education and support. Orphan patients experience unique challenges to accessing ongoing services which increase their anxiety and risk of recurrent stroke if left medically unmanaged.

6.2 Stroke Experts Engagement
Please refer to Appendix F for a complete list of stakeholders

Stroke Experts Engagement - Community Rehabilitation & Recovery

Themes emerging from engagement

- Timely and individualized access to post-hospital rehabilitation: Access to rehabilitation services in the community (in-home and ambulatory) is limited and wait times exist.
- Limited duration & intensity of rehabilitation: Therapy is time-limited but needs to be more flexible and based on patient need.
- Need for creation of exit strategies: There must be sufficient community services in place to ensure timely flow through the system of care
- Support to transition to community services after intensive rehabilitation: A “warm hand off” increases the likelihood of adherence to community programs.
- Variety of ways to access long term community services: Stroke survivors vary in how they prefer to access services and interact over their recovery journey (i.e. in-home, in community, by phone/email/text).
- Support for the caregiver: Caregivers require sufficient opportunities for respite and ongoing support for coping with caregiver duties.
- Build on existing resources: Opportunities should be explored to build upon existing services such as partnering with Community Health Centres, adult day programs, etc.
- Re-access to consults: People with stroke and TIA need to be able to re-access the system for short term consultations throughout their recovery journey.

How these themes informed directional recommendations
These themes highlighted the need to include the ability for stroke survivors to access formalized rehabilitation that is flexible in location, intensity and duration, and that is provided by staff with stroke expertise. The recommendations developed include a variety of methods to receive rehabilitation and ongoing recovery services including: in home and community based services, Community Hubs and the rehabilitation facilitator role. Additionally, these themes highlighted the need to create services that not only support the stroke survivor, but also their caregiver, such as stroke specific adult day programs, support groups and the community hubs.
Stroke Experts Engagement - Secondary Stroke Prevention (SSP)

**Themes emerging from engagement**

- **Timely diagnostic results:** Timely diagnostics expedite the rapid diagnosis and creation of a secondary stroke management plan.
- **Stroke/TIA expertise:** Stroke expertise facilitates the correct and timely diagnosis of TIA/stroke, creation of a specialized secondary stroke management plan, and supports the effective implementation of secondary stroke prevention strategies. Sufficient critical mass is required to ensure staff expertise and optimize a service’s operating hours.
- **SSP Clinic resource needs:** Sufficient staffing and resources are required to meet the current and anticipated increased demand for services.
- **Orphan patients:** Timely and coordinated medical management of orphan patients was consistently identified as a concern by patients and service providers.
- **Build upon existing services:** Opportunities should be explored to build upon existing vascular-based prevention services to avoid duplication.
- **Holistic approach to care:** Stroke and stroke risk is one component of an individual’s overall health/medical profile. Secondary stroke prevention should be viewed holistically from a vascular health perspective.
- **Inconsistent access to services:** Support for SSP in primary care is variable depending on the primary care setting. Services vary amongst Family Health Teams and Community Health Centres, while primary care providers in independent practice have limited, if any, access to organized multi-factorial health care services such as dietitian, nursing, social work, diabetes education, hypertension programs, etc.

**How these themes informed directional recommendations**

These themes highlighted the need for timely access to specialized services as well as building upon existing vascular services to provide equitable care while avoiding duplication. The challenges for the orphan patient, this time being raised from a health care provider perspective, strengthened the need for a recommendation targeting this population.

**6.3 Physician and Other Referral Sources Engagement**

The physician survey captured feedback from physicians on Community Stroke Rehabilitation & Recovery and Secondary Stroke Prevention. Three physician focus groups provided a venue for primary care providers and physicians with stroke expertise to provide feedback on the draft future state components for Community Stroke Rehabilitation & Recovery and Secondary Stroke Prevention needs.

See **Appendix G** for a summary of physician feedback

**Themes emerging from engagement - Community Stroke Rehabilitation & Recovery**

Through this survey, comments surfaced indicating barriers such as transportation to access services, wait times, multiple referral processes, and lack of awareness about community stroke rehabilitation and recovery services available. Physicians recommended longer duration for community rehabilitation, more occupational therapy, physiotherapy and counseling services.
Themes emerging from engagement - Secondary Stroke Prevention

- Appreciation of Expertise: Primary care providers who refer to the Urgent TIA/Secondary Stroke Prevention Clinic appreciate the specialized assessment and development of a management plan, especially for complex patients.

- Strong Need to Strengthen Communication/Collaboration: Gaps consistently exist in timely communication between primary care providers and specialized stroke services. Critical gaps include awareness of referrals to the stroke prevention clinics and timely discharge/consultation summaries. Specialized stroke services were identified as excellent but functioning in a parallel stream to primary care, requiring the need to bridge collaboration and communication gaps. Technology and enhancing processes were identified as enablers.

- Improved Standardization of Care: Primary care providers prefer standardized care at the Urgent TIA/Secondary Stroke Prevention Clinics, including more consistent physician practice in clinics that are served by more than one physician.

- Travel and Cost Concerns: A strong concern about patient travel and cost burden (due to gas and parking) to attend the Urgent TIA/Secondary Stroke Prevention Clinics was frequently raised, particularly when multiple clinic visit are required.

- Role Clarity and Scope of Practice: Primary care providers identified a professional practice scope overlap in the identification of TIA and provision secondary stroke prevention, especially in non-complex patients. It was questioned whether all individuals with TIA need to be referred to the Urgent TIA/Secondary Stroke Prevention Clinics.

- Documentation: Strategies to reduce documentation were requested, especially duplicate documentation. Excessive documentation was identified in the survey as a barrier and strategies to maximize use of existing electronic medical records was identified. The need for timely discharge and consultation reports was requested to support efficient continuity of care.

- Access Challenges: Rapid access limitations to the Urgent TIA/Secondary Stroke Prevention Clinics is when rapid access is reduced due to part time hours, volume issues, and when physicians are not available. It was suggested that clinics be available 24/7 as stroke/TIA is a 24/7 condition. Primary care providers also expressed an interest in having rapid access to diagnostics and felt that this would improve equitable access.

- Emergency Department Volumes: Physicians at Designated Stroke Centres expressed concern at the anticipated increased emergency department visits if their EDs became the destination for all individuals with suspected TIA.

- Holistic Approach to Care: The option of two-way consultation between primary care and physician with stroke expertise be explored, when applicable, to avoid the potential recommendation/ prescription of contraindicated medications for a patient as part of the stroke prevention management plan.

- Lack of Awareness: A number of physicians identified a lack of awareness of the Urgent TIA/Secondary Stroke Prevention Clinics in the physician survey.

- Timely Diagnostics Result in Timely Specialized Care: The importance of diagnostic imaging and investigations being completed in the ED (i.e., prior to the appointment in the clinic) was emphasized to minimize delays for rapid specialized assessment in the SSPCs (future state name - urgent TIA clinics). Surgeons request a CTA at the time of referral for carotid revascularization consultation necessitating timely access to CTA.
How these themes informed directional recommendations
This engagement highlighted the need to emphasize improved communication and collaboration with the primary care provider and physicians with stroke expertise. As well, it spoke to the importance of addressing the needs of the referral source when implementing a referral process to the Urgent TIA/Secondary Stroke Prevention Clinics and Carotid Clinics. The importance for timely access to diagnostics was again emphasized as it is an enabler of rapid access to specialized secondary stroke prevention services.

7. Detailed directional recommendations

Please see:
- Appendix B - detailed directional recommendations including limitations (service, system, human resources, policy)
- Appendix I – Proposed Stroke Services Model - a visual of all the components of the draft recommendations for Community Rehabilitation & Recovery and Secondary Stroke Prevention in the proposed future state.
- Pathway diagram illustrating Directional Recommendations (under development).

8. Next steps

The South West Stroke Project Phase II Directional Recommendations will be presented to the South West LHIN Board of Directors in April 2017 for acceptance.

If funded, the next phase of the project a task force will plan, prioritize and operationalize the recommendations. This will include creating a detailed implementation plan which will be developed in collaboration with newly formed sub-LHIN integration tables and require review and endorsement by the South West LHIN Board of Directors prior to operationalization.

9. Implementation

Concurrent while draft Directional Recommendations were presented to numerous leadership groups for comment and review, the Project Team developed data to support high level implementation planning. This work is provided in Appendix J to support future phases of the Stroke Project. It is important to note that the high level implementation plans will need to be validated and supported by various leadership tables during future phases of work.

10. Appendices

Please see following pages.
10.1 Appendix A – Definitions

Note: The terms community based clinic/outpatient/satellite clinic services are interchangeable.

Adult day programs: Adult day programs offer a variety of social, recreational and therapeutic activities for seniors and adults with physical (or cognitive impairment). Adult day programs allow participants to socialize with their peers and often acts as a support for family caregivers who provide day-to-day care. They include planned social and recreational activities, meals, assistance with the activities of daily living and minor health care assistance; e.g. monitoring essential medications. These activities are provided in a congregate setting.

Assisted Living: Offers the provision of support to people with special needs who require services at a greater frequency or intensity than home care, but without the medical monitoring or supervision that would be provided in a long-term care home. Services can be provided “on demand” as clients require, (e.g., in response to issues related to incontinence). A typical assisted living facility resident would usually be for those people who do not need the level of care offered by a nursing home but require some assistance in day-to-day living. Age groups will vary with every facility/program.

Carotid Imaging: Carotid imaging is used to evaluate the blood flow in the large carotid arteries in the neck and to measure any narrowing of the artery due to plaque build-up. Two procedures can be used for carotid imaging: carotid doppler or computed tomography angiography (CTA). Carotid dopplers are a non-invasive procedure and use ultrasound technology to visualize the blood flow in the carotid arteries. CTA is an invasive procedure using specialized x-ray combined with an injectable dye which provides a very specific picture (see full definition for CTA below).

Carotid Revascularization: Carotid Revascularization refers to procedures to improve the blood flow through carotid arteries in the neck which have narrowed (stenosis), most likely due to plaque build up. Two specialized surgical interventions are used open the space and increase this blood flow are carotid arteries: carotid endarterectomy and carotid stenting. In carotid endarterectomy, a surgeon removes the plaque from the artery. Whereas, for carotid stenting, a small mesh tube is inserted into the artery and provides support to keep it open. Research has demonstrated that these interventions are very effective in the prevention of stroke in people with stenosis and recent TIA or stroke. Maximum benefit occurs when the intervention takes place within two weeks of symptom onset.

Community Reengagement: “The reorganization of physical, psychological and social characteristics so that an individual can resume well-adjusted living after illness (stroke)” (Wood-Dauphinee and Williams, 1987).

Community Support Services (CSS): CSS organizations provide a wide variety of health and wellness services which help a wide range of clients, including seniors and people with disabilities, remain independent. CSS services help individuals to live comfortably and safely in their homes and communities and include services such as: Meals on Wheels, adult day programs, assisted living and transportation.
**Computed Tomography (CT):** A CT uses specialized x-ray equipment to produce a detailed image of the body's interior.

**Computed Tomography Angiography (CTA):** A CTA combines the special x-ray equipment used for CT scan with an injection of dye to provide an picture of the arteries and veins. The contrasting dye highlights and provides a detailed image of the blood vessels.

**Early Supported Discharge (ESD):** Early Supported Discharge is defined as “a form of rehabilitation designed to accelerate the transition from hospital to home through the provision of rehabilitation therapies delivered by an interprofessional team, in the community. It is intended as an alternative to a complete course of inpatient rehabilitation and is most suitable for patients recovering from mild to moderate stroke.” ESD has been further defined to include services that are provided by a well-resourced, specialized, interprofessional team whose work is coordinated through regular team meetings. Services should be provided five days per week at the same level of intensity as would have been delivered in the inpatient setting in order to address individual patient needs.

**Electrocardiogram (EKG or ECG):** An EKG or ECG is a test that uses electrodes placed on the body to measure the electrical activity of a heartbeat. The measurement is recorded as line tracings on a piece of paper.

**Orphan Patients:** Orphan patients are individuals who do not have a personal primary care provider.

**Quality Based Procedures (QBP):** Clusters of patients with clinically related diagnoses or treatments who have been identified using an evidence-based framework as providing an opportunity for process improvements, clinical redesign, improved patient outcomes, enhanced patient experience, potential health system savings.

**Recovery:** is the process by which people who have had a stroke recover to the best of their ability; improve their independence and quality of life and have respect, inclusion and support as they become reintegrated into their home community. This requires long-term community based support and the availability of stroke recovery programs which fulfill the essential requirements for optimal community reintegration.

**Specialized Intensive Rehabilitation Team (SIRT):** A coordinated, interprofessional team with stroke expertise who provide specialized, intensive, individualized stroke rehabilitation services in the community using a combined model of care in which the same team offers early supported discharge, in-home and/or outpatient services (including satellite locations), or a combination, depending on patient needs. This blended model allows for flexibility, continuity of care, improved transitions and cost savings as patients are transitioned from home based care to ambulatory care. These teams are affiliated with the Designated Stroke Centre and include core rehabilitation professionals as outlined in the QBP Clinical Handbook for Stroke.

**Urgent TIA Clinics:** Designated urgent TIA clinics offer a rapid, integrated, time-limited approach to secondary stroke prevention for patients who have had a TIA or minor stroke. The clinics provide rapid access to physicians with stroke expertise to complete an assessment and the creation of a stroke prevention management plan. This includes facilitating timely access to specialized diagnostics, prescribing or recommending medication adjustments to reduce stroke risk, and provide timely communication to the primary care providers. The urgent TIA clinics
also facilitate referrals of appropriate patients to additional physician specialists, including rapid referrals to neurosurgeons or vascular surgeons to assess for eligibility for carotid endarterectomy or carotid stenting. Members of the urgent TIA clinic specialized interprofessional team (Nursing/Physician) will provide urgent secondary stroke prevention education as appropriate. Referrals will be made from the urgent TIA clinics to the Community Hubs for non-urgent secondary stroke prevention education and support implementing the risk factor management plan. It is anticipated that all patients with TIA and stroke will be referred to the Community Hub. For designated urgent TIA clinics, the host hospital will sustain the infrastructure and roles for stroke prevention focusing on those individuals at risk for subsequent stroke within its geographical catchment area, according to the Ministry of Health and Long term Care (MOHLTC) Ontario Stroke Strategy (OSS) Service Guidelines for Stroke Prevention Clinics (Sections A, B, and C) which is referenced in the 2016-17 HAPS Guidelines (Appendix A).

**Warm hand off:** is an introduction/referral to another program or service where the current (familiar) health care provider arranges the appointment and accompanies the stroke survivor on the initial visit.

**Warm referral:** is where the individual making the referral makes first contact on behalf of the stroke survivor/client, (phone call or faxed referral) and explains to the referral organization or team the client’s circumstances and the reason they believe they would benefit from the service.
10.2 Appendix B - Directional Recommendations

10.2.1 Specialized Intensive Rehabilitation

Expand and integrate existing Community Stroke Rehabilitation team and stroke outpatient rehabilitation services to provide specialized, intensive stroke rehabilitation teams (SIRT) in the community (Quality Based Procedure (QBP) 9.4) using a combined model of care, in which the same team offers:

- early supported discharge (QBP 7.2),
- in-home rehabilitation services
- outpatient services

This blended model enables flexibility of service delivery based on patients’ needs and provides continuity of care by allowing clinicians to follow the patient through their transitions. This model will also allow for cost effectiveness as patients are transitioned out of acute care more quickly with Early Supported Discharge, and from home based to ambulatory care in the future state.

Considerations

Integral to this work will be:

- the need to create an early supported discharge process that ensures the teams’ ability to provide timely access, and
- that the teams partner closely with Designated Stroke Centres and community organizations.

Early supported discharge process:

- Early Supported Discharge (ESD) Services should be provided in the community five days per week at the same level of intensity as stroke survivors would have received in the inpatient setting (QBP 7.3.2).
- ESD should be staffed sufficiently to allow timeliness.

Specialized Intensive Rehabilitation Teams:

- The SIRT team will connect with the client and inpatient team prior to the client’s discharge from the inpatient setting and set up community appointments before the patient leaves the hospital.
- Team will complete in-home assessment prior to discharge as needed
- Teams will use a standardized referral form (preferably electronic) and use standardized outcome measures.

Integrated interprofessional team

- Team will include team members with stroke expertise (QBP 9.4.3, 10.4.1) who meet on a regular basis (QBP 9.4.2) at minimum weekly.
- Team will include at a minimum an occupational therapist (OT), nurse, physiotherapist (PT), speech-language pathologist (SLP), social worker, recreation therapist, rehabilitation therapists/facilitators, administrative assistant, patients, and the family and/or caregivers. On a consult basis, access should also be available to a dietitian, pharmacist, psychologist and physician. (QBP 9.4.1)
- OT, PT and SLP (supported by rehabilitation therapist) will provide therapy 2 - 3 times/week for 8 - 12 weeks (QBP 9.5.1, 9.6.2, 9.31) for a maximum of 20 weeks.
• Every SIRT client will be seen by the team nurse to tailor and support the implementation of individualized stroke prevention strategies.
• Outpatient and/or community-based rehabilitation services should be available within 48 hours of discharge from an acute hospital, or within 72 hours of discharge from inpatient rehabilitation (QBP 9.2.2). Staffing needs to be resourced at a sufficient level to ensure there are no wait times.
• Warm hand-offs (accompanied visits) between hospital and intensive rehabilitation services, and intensive rehabilitation services and community programming, such as adult day programs, should be provided.

In Home or Clinic Services
• Community-based clinic/outpatient services (including hospitals) are preferred. These may include satellite clinics. Where clinic services are inaccessible or do not address a patient’s individual needs, then home-based rehabilitation should be provided. (QBP 9.3.4).
• Access to best practice stroke rehabilitation services should be available to all stroke survivors regardless of their place of residence including Long Term Care Homes. (Consensus)

Client-Centred Treatment Plans
• Timing of individual services will be flexible based on the patient’s needs. This could include rehabilitation therapy, recreation therapy and social work whose services could begin later and extend beyond the 12 weeks provided by the core team as needed, and the 12 weeks may not be consecutive. (QBP Module 9 page 130)

Short-Term Consultations
• Every stroke survivor should have the ability to re-access SIRT throughout their stroke journey for short term consults.

Note regarding navigation
Stroke survivors and their caregivers in the South West LHIN should have access to assistance with health system navigation (QBP 10.5.2). Navigation services will be provided in various ways in this model based on individual needs and preferences, and may change over time.

Options include navigation services provided by:
• Specialized, intensive rehabilitation teams
• Community Hubs (by appointment and/or call/drop in)
• Telephone follow-up
• Rehabilitation facilitators providing in home support

10.2.2 Ongoing Support and Recovery
The Canadian Stroke Best Practice Recommendations indicate that the post-discharge period is consistently reported by stroke survivors and their families to be a stressful and challenging time as they adjust to new roles and potentially altered functional and cognitive abilities.
Also, family and caregivers are often expected to assume roles, tasks and responsibilities that may be beyond their skills and knowledge. This can increase caregiver burden, which has the potential to result in depression (as high as 60 percent reported for caregivers of stroke and similar post-stroke depression rates occur in patients and are linked to poorer recovery outcomes). The Canadian Stroke Best Practice Recommendations reports that “when there is coordination of care beyond the inpatient setting and community support services are provided, patient outcomes and patient and caregiver satisfaction improves.” (CSBPR, Transitions).

The following recommendations were created to support stroke survivors during this transition, following more formalized rehabilitation.

**Stroke-Specific Adult Day Programs**

Ensure adult day program stroke-specific days are appropriately situated and resourced to support equitable access to stroke services and respite for caregivers across the South West LHIN.

**Considerations**

- Stroke-specific day programs will be created based on Clinton’s model, using warm hand offs from SIRT teams
- Stroke day programs will be required to have appropriate equipment and staff training in order to facilitate the rehabilitation needs of clients (e.g. Nu-Step)
- Programs to partner with SIRTs and Southwestern Ontario Stroke Network to ensure best practice standards are in place.
- Program to be transitional. Clients who have met their goals or who are no longer able to participate in rehabilitation due to declining health or cognition will be discharged.

**Therapy Groups**

Create ongoing support (QBP 10.5) and therapy groups across the geography of the South West LHIN to ensure equity in access. To include the following groups:

- Stroke Survivor Peer Support (QBP 9.13.4)
- Caregiver Support (9.13.4)
- Aphasia and Conversation (QBP 9.22.2)

**Considerations**

- Aphasia groups are led by a speech language pathologist (SLP), conversation groups can be led by volunteers or health care providers working in the community who have been trained by an SLP. (QBP 9.22.3)

**Rehabilitation Facilitator**

Build a stroke rehabilitation facilitator role, modeled on a similar role currently serving acquired brain injury clients, to provide navigation and support ongoing stroke recovery and maintenance in the home/community. This service provides additional rehabilitation/recovery support to a small percentage of stroke survivors and their caregivers following discharge from SIRT, and/or for those requiring additional rehabilitation/ recovery support beyond what can be provided or accessed through the Hub.
Considerations
- Services provided by a rehabilitation facilitator include functional and vocational skills training, service coordination, community reintegration and self-management education.
- Based on feedback from stroke survivors, they found this type of support lacking in the current system, and felt it would address their desire to continue to receive individualized support past their term with more formal rehabilitation services such as SIRT.

Stroke Support Fund
Support a fund to enable stroke survivors to meet unexpected and/or transitional needs. This fund could be used for home renovation, equipment needs, driving assessment (QBP 8.1.3) or vocational rehabilitation (QBP 9.14) that extends beyond what is available through private insurance or community supports.

Considerations
- This fund will be specific to the stroke population.
- Equipment needs of the stroke survivor should be re-assessed throughout the recovery journey. (QBP 9.56)

10.2.3 Community Hubs
The Ontario Hospital Association publication Redefining Health Care: A Dialogue on Health Policy (Issue I, Fall 2016) speaks to the benefits of the health hub model including greater responsiveness, improved access, more efficient transitions, reduced travel costs based on care closer to home, more robust patient and family engagement, shared (common) client intake processes, comprehensive supports for seniors, better system navigation and shared electronic patient records.

Develop and implement a model for Community Hubs based on the “no wrong door” concept which will serve as a one stop shop providing multifactorial interventions, partnering with vascular and chronic disease services. Services in the Community Hubs will include navigation, education, peer/caregiver support, risk factor and lifestyle management, self-management, counseling, supervised exercise and services that support leisure and community re-engagement. Wherever possible and feasible, the Community Hubs will be built upon existing services/resources and tailored to the geography served. (QBP 10.5.2)

For people with stroke and TIA as well as their caregivers, these hubs will provide access to:
- a community facilitator (stroke system services worker) with stroke specific knowledge on site including navigation as one of their roles
- a nurse with stroke expertise
- a nurse practitioner to provide temporary medical management for orphan patients
- a computer and resource library (QBP page 133 Module 10 Home)
- a community client database
- office space for staff to see individuals one-on-one and a group/communal space

Considerations
- Visits to access services may be self-referral, drop in or appointment based.
- Processes to re-access/re-enter the specialized stroke care system need to be established.
- Hubs should provide services to caregivers and families (including children) of individuals with TIA and stroke. (QBP 10.6)
The community facilitator will ensure warm hand-offs (accompanied visits/warm referrals) to ongoing support and recovery services.

Due to the changing needs of stroke survivors, equipment required on a temporary basis should be available by loan from an equipment pool accessed through the Hub. This may require an inventory of existing equipment loan services to ensure availability and maintenance of safety standards.

Community Hub staff will ensure communication with primary care providers will be maximized and sustained, and they will function as an extended part of the primary care team.

**Follow-up phone calls**
Develop a centrally coordinated strategy from the Community Hub to provide stroke survivors with a follow-up phone call (or contact) after hospital discharge at one week, 30 days, 90 days and yearly for up to five years to assess for needs (QBP 10.1.3), possible referral and/or re-entry into system, and to collect outcomes

**Considerations**
- Call to be made by Hub Community Facilitator who will have knowledge of stroke and community services as well as be able to access a comprehensive resource listing and client record/community client database/registry in order to navigate services appropriately. For clients with aphasia, contact may be made through a primary informal caregiver or alternate arrangements made (i.e. visit), based on client preference.

**Education**
An education strategy will be developed and facilitated out of the Community Hub to provide standardized, foundational stroke education to community front line service providers, e.g., municipal recreation staff, and community support service staff and volunteers who work with stroke survivors, at minimum annually. (QBP Module 10 pg. 133)

**Remote Access to Specialized Consul**
Develop the capacity, using existing and emerging technology, to ensure equitable access to specialized consults for stroke survivors across the South West LHIN (QBP 9.3.2) Cost of transportation is a considerable barrier, especially for those in rural areas who are required to travel to urban centres for specialist appointments.

- Specialized consults include, but are not limited to, physiatry, neurology, geriatrics, cardiology, neuro-psychiatry, neuro-optometry, neuro-psychology, specialized wheelchair and seating clinic.

**Medical Management of Orphan Patients**
A nurse practitioner (NP) will provide medical management for orphan patients until a primary care provider can be found. The NP supports the implementation and supervision of treatment recommendations provided by the urgent TIA clinics, carotid revascularization services, or specialized inpatient care.

**Considerations**
- Align with Patients’ First Legislation and implementation where appropriate
10.2.4 Rapid Specialized Medical Services

All recommendations related to Secondary Stroke Prevention (including recommendations for Community Hubs) align with provincial and national core elements documents and an evaluation will be developed as part of the implementation considerations, including accessing and building upon the Phase 1 Evaluation Dashboard.

Emergency Department Management

Individuals with TIA or minor stroke will have core diagnostic investigations (i.e., CT, EKG, Carotid Imaging) completed at a regional or district stroke centre prior to discharge from emergency department (ED), according to the Canadian Stroke Best Practice Recommendations (QBP 1.6 and 2.4; CSBPR Secondary Stroke Prevention 1.0, 1.1, 1.2)

Individuals with suspected TIA or minor stroke not admitted to hospital will be referred to an urgent TIA clinic (QBP Module 1 Implementation Considerations; Module 5a Implementation Considerations; CSBPR Secondary Stroke Prevention 1.1)

Considerations

- **Individuals with TIA and non-disabling stroke will have the core investigations completed at a regional or district stroke centre (QBP Module 1 Implementation Considerations).** This will overcome access variability to CT across the South West LHIN and support a system wide and standardized approach in the ED for stroke and TIA
- **Non-designated EDs will transfer the person as soon as TIA/stroke is suspected to a Designated Stroke Centre ED for the completion of any remaining diagnostics, including CT scan.**
- **Regional and District Stroke Centre EDs will be adequately resourced (human, diagnostic imaging, structural resources) to meet the increased volume of patients presenting in the EDs (QBP Module 1 Implementation Considerations)**
- **Communication between the EDs at the Regional and District Stroke Centres and the Non-designated Hospitals will be strengthened to avoid any unnecessary duplication of diagnostics.**

Urgent TIA Assessment and Management

Individuals with suspected TIA or non-disabling stroke will be seen at an urgent TIA clinic at a Regional or District Stroke Centre within recommended urgency timelines for a comprehensive assessment and the creation of a recommended management plan, and referral to other specialized assessments as required (QBP 2.4; 5.10.1; 5.10.2).

Considerations

- **Create and implement a LHIN-wide standardized referral form while optimizing the use of technology (i.e., electronic health records, Electronic referral form)**
- **The existing Secondary Stroke Prevention Clinics will all become urgent TIA clinics focusing on the rapid assessment, diagnosis, and creation of a management plan with consistent standards of care and practice.**
- **Non-urgent secondary stroke prevention education and support, regarding implementing patients’ risk factor management plan, will take place in the Community Hubs.**
The clinics will be adequately staffed and resourced and will continue to be located at the 4 Designated Stroke Centres in the LHIN.

Where-ever possible, strategies should be implemented to reduce the travel and cost burden of individuals coming to the clinics.

Patients preference will be considered in where to access services.

For designated urgent TIA clinics, the host hospital will sustain the infrastructure and roles for stroke prevention focusing on those individuals at risk for subsequent stroke within its geographical catchment area, according to the Ministry of Health and Long term Care (MOHLTC) Ontario Stroke Strategy (OSS) Service Guidelines for Stroke Prevention Clinics (Sections A, B, and C) which is referenced in the 2016-17 HAPS Guidelines (Appendix A).

Timely Carotid Revascularization
Assessment and appropriate interventions will occur within the recommended timelines for all potential carotid revascularization candidates. (QBP 5.1.7; CSBPR Secondary Stroke Prevention 8.0)

Considerations

- Individuals with stroke and TIA requiring an assessment for carotid revascularization surgery will be referred to a neurosurgeon or vascular surgeon for rapid assessment and triaged to interventionalist or surgeon
- Sufficient human and structural resources (i.e., OR time, staff) are required to support carotid endarterectomy or stenting within best practice recommended timelines
- The CTA report will accompany all referrals; Rapid access to CTA (computed tomography angiography) will be easily accessible to all patients referred for possible revascularization surgery (CSBPR Secondary Stroke Prevention 8.1.1; Consensus).

Follow-up with Physician with Stroke Expertise
Individuals with a stroke or TIA who are admitted to hospital and require additional specialist care will be seen by a physician with stroke expertise for consultation after discharge (QBP 5.10.1).

Considerations

- When the discharge has occurred before all of the diagnostics/investigations have been completed or interpreted, a referral to the urgent TIA clinic should be considered (QBP 5.10.1).
- The need for a follow-up consultation will be determined by the physician with stroke expertise and the extended stroke team prior to patient discharge

Decision Algorithm for Primary Care
Create and implement a decision algorithm for primary care providers directing them to the most appropriate referral destination for patient who present to the office identifying symptoms of TIA/minor stroke (i.e., urgent TIA clinic, ED, Community Hub, etc.). (Consensus)

Considerations

- The algorithm should be simple and streamlined, and updated at regular intervals in alignment with best practices.
Communication and Transitions
A strategy is created and implemented to optimize timely communication between and within primary care providers, specialized stroke services, and the Community Hub throughout the patient journey in secondary stroke prevention (QBP 5.10.1).

Considerations
Strategies to improve communication with primary care providers include:
- Notification of ED visits and diagnostics results
- Referral to urgent TIA clinic
- Referral to the carotid clinic
- Exploring options for bi-directional communication and consultation (i.e., optimizing use of e-consult)
- Timely discharge summaries and consultation notes for all services

Key Enablers
- Standard training for all stroke system staff to include: Indigenous Cultural Competency Training and Supported Conversation for Adults with Aphasia™ Training
- Transportation
- Technology
- Cross Continuum Care Plan (QBP 9.4.6)
- Communication
- Relationship building
- Existing infrastructure
- Implementation and Sustainability Plan
- Evaluation

Considerations
a. Stroke system staff (SIRT members, Community Hub staff, Rehabilitation Facilitator etc.) should have Indigenous Cultural Competency training and Supported Conversation for Adults with Aphasia™ training.

b. Accessible, timely, low-cost transportation options should be available to people with TIA and stroke. Transportation should not be a barrier to receiving necessary services.

c. Build on the information technology infrastructure in the South West LHIN (cSWO) to support a common electronic health record that is shared across the continuum and accessible to all service providers who are part of the circle of care.

d. A comprehensive shared care plan should be in place that is accessible to all members of the interprofessional care team. Opportunities to partner with Health Links and Primary Care should be considered whenever possible. (QBP 9.4.4 and 9.4.6)

e. Create a centralized electronic referral process to support timely access to services and facilitate transitions.
f. Communication and relationship building between partners and across sectors will be key to the success of the future stroke system of care. Considerations should include warm referrals and warm hand-offs during transitions for people with TIA and stroke. For professionals, this could include collaboratively developing communication processes that reflect the needs of all parties.

g. Building upon existing infrastructure fosters client-centred partnerships, minimizes duplications and costs, and optimizes critical mass.

h. Establish local transition teams in each stroke sub-region to support the implementation of recommendations. These implementation teams will work together with the Sub LHIN Integration tables to implement the transition plan, where applicable.

i. An evaluation framework should be developed using specific standardized outcome measures for all components outlined in the directional recommendations.

**Limitations**

**Service Limitations**

**Assisted Living**
Assisted Living in the South West LHIN is currently offered in areas where there is a critical mass people requiring this service. There is the need to expand the availability of Assisted Living services to provide support for stroke survivors to continue to live independently in their own homes, thereby avoiding premature placement in long term care. Future consideration should be given to address the inequity of assisted living services especially for those younger stroke survivors.

**Critical Mass and Geography**
Sufficient critical mass is required to ensure staff expertise and optimize a services’ operating hours. In rural areas, where the population density is lower, there may be a need to draw upon a broader geography to establish such a critical mass.

**Access to Specialized Assessments**
Access delays to some specialized assessments result from system challenges beyond stroke. For example, long wait lists exist in the South West LHIN for polysomnography (sleep study), psychiatry and specialized seating and positioning clinic assessments.

**System Limitations**

**Transportation**
The need for transportation was identified as a significant barrier to service—particularly for those programs that rely on transportation as a means of ensuring access to care. It is a considerable barrier in rural areas where clients are required to travel to urban centres to access these services.
**Technology** There are limitations in the quality and consistency of the technology required to share patient information and enable accessible and timely services and communication.

**Infrastructure**
EDs, diagnostic imaging, urgent TIA clinics, and carotid revascularization services should be resourced to meet the anticipated increased volumes and demand. There is a need to develop and build upon community-based infrastructure to create the Community Hub model.

**Human Resource Limitations**

**Health Human Resources**
Implementation will require adequate health human resourcing (in SIRTs, ED, Community Hubs, urgent TIA clinics, carotid revascularization services, adult day programs and other ongoing support and recovery services) to ensure timeliness and efficiencies, and support system flow across the stroke system of care.

**Policy Limitations**

**Access to services for residents of long term care homes**
This project did not address the inadequate rehabilitation resources for stroke survivors in long term care. The provision of rehabilitation services that meet best practice standards, and utilization of community recovery programs, such as adult day programs, while residing in long term care contravenes current legislation. Future consideration should be given to address this legislative barrier.

**Access to community-based prevention services**
Legislature places restrictions on individuals who can access existing multi-factorial services available in Family Health Teams and, to a much lesser extent, Community Health Centres. This could pose a barrier building upon this existing infrastructure to form a Community Hub and could also result in unintended duplication of services.

**Ontario Drug Benefits**
To minimize dispensing costs, the Ontario Drug Benefits requires a minimum number of medications be dispensed for those over 65, regardless of the number identified on the prescription. This could result in a cost burden for medications prescribed at an urgent TIA clinic which need to be adjusted for any reason by the primary care provider. Where an urgent TIA clinic does not prescribe medications, an urgent follow-up with the primary care is required to avoid the risk of recurrent stroke.
Appendix C – Governance Structure

Governance Structure for Phase II

**Executive Sponsor**
- Roy Butler, VP Patient Care and Quality, SIHC

**Executive Sponsor**
- Kelly Gillis, Senior Director, Systems Design & Integration, SW LHI N

**Steering Committee**
- Co-Chair, Roy Butler (SIHC)
- Co-Chair, Anne Campbell (PHPA)
- Project Sponsor, Carol Walters (LHSC)
- SWOSN Project Solution Lead, Paula Gilmore
- SW LHI N Lead, Doug Bickford
- Grey Bruce Health Services, Jane Kappy
- CCAC, Gwen Vanderheyden
- Co-medical Director SWOSN, Dr. Alexander Khaw
- Physician, Dr. Robert Twissel (SIHC)
- Community Support Service (CSS) Council,
  Sue Hills (Dale Brain Injury), Judi Fisher (Cheshire)
- Project Manager, Bonnie Wooten (LHSC)
- Ad Hoc: Kelly Gillis (SW LHI N)

**Project Leadership/Support**
- Project Sponsor: Carol Walters,
  Project Solution Lead: Paula Gilmore,
  SW LHI N Lead: Doug Bickford
- Project Evaluation Specialist: Matthew Meyer,
  Project Communications Manager, Anne Kay
- Process Improvement Consultant: Emily Latour
- District Stroke Centre Managers/Coordinators (GB: Joan Ruston Berge HP,
  Bonnie Thompson, TV: Gwen Stevenson),
- SWOSN Chairs of Secondary Prevention: Gwen Stevenson,
- Community Project teams: Deb Williams, Margo Collier
- Regional Education Coordinator: Lindsey Butler
- Project Manager: Bonnie Wooten

**Secondary Prevention Project Team**
- SWOSN Chairs: Gwen Stevenson,
  Project Manager: Bonnie Wooten
  Project Team: Anne Kay, Matthew Meyer, Maureen Rydal,
  Judy Winter, Christine Thompson, Corbin Laper, Lori
  Manner, Louise Flanagan, Diana Williamson, Joan Ruston
  Berge, Bonita Thompson, Sandi Pincombe, Lindsey Butler
  (may change to full members depending on evolving needs
  of working group), Diagnostic Imaging, ED, OHCs, PHTs,
  Stroke Follow-Up Clinics, IT, LHIN, Physicians as required

**Community Rehabilitation Stroke Survivor Project Team**
- SWOSN Chairs: Margo Collier, Deb Willers
  Project Manager: Bonnie Wooten
  Project Team: Anne Kay, Matthew Meyer, Susan Davis
  Bailey, Eileen Britt, Shawn Willis, Joan Ruston Berge,
  Sandi Pincombe, Bonita Thompson, Maureen Rydal,
  Karen Atkin, Gwen Vanderheyden, Holly Leger, Jo-
  Anne Cook, Brenda Campese, Adriana Hurst, Jeanette
  Masso, Christine Thompson, Ad Hoc: LHIN, Physicians
  as required
### Appendix D – Outcome Measurement Metrics/Success Criteria

|------------------|----------------------------------------------------------------------------|------------------|---------------------------------------|---------------------------------------------|--------------------------------------------------------|--------------------------|
| 1.               | Develop a Future State for post-hospital care stroke services across the South West LHIN based on Best Practice recommendations, QBP requirements and the current state of services currently in place. This Future State is aligned with project objective | Future State Assessment & inclusion in Recommendations | Completion of Current State assessment, Future State definition and Gap Analysis report | N/A | N/A | • Process Improvement Consultant/ data consultant and Project Teams on bi-weekly frequency (June – September)  
• Monthly Steering Committee updates |
| 2.               | Engagement - Engage key partners in the recommendation process | Discussions: 1. Stroke Steering Committee 2. Stroke Network 3. CEO/CCAC Leadership Forum 4. Respective BOD’s/CEO of hospitals if there is a shift in services 5. HSFRL Partnership | Organization works with Project Lead(s) to have stakeholder engagement and to detail stakeholder impact | N/A | Stakeholder engagement | Sponsor(s) and/or Solution Lead with meeting forum and frequency to be mutually determined: April – December 2016 |
| 3.               | Directional Recommendations completed and delivered | Recommendation presented for approval to the Steering Committee & LHIN Board | • Current, Future State Maps and Gap Analysis Reports  
• Provincial Economic Analysis and South West LHIN Analysis | N/A | N/A | • Project Team Bi-Weekly  
• Present preliminary recommendations to Steering Committee Monthly  
• Final recommendations in Feb 2017 |
10.5 **Appendix E – Health Equity Impact Assessments**

**Community Rehabilitation & Recovery**

HEIA is a flexible and practical assessment tool that can be used to identify and address potential unintended health impacts (positive or negative) of a policy, program, or initiative on specific population groups.

**NOTE:** The HEIA Template is designed to be used alongside the accompanying HEIA Workbook, which provides definitions, examples, and more detailed instructions to help you complete this template.

**Date:** April 2016

**Organization:** South West LHIN and Southwestern Ontario Stroke Network

**Name and contact information for the individual or team that completed the HEIA:** Bonnie Wooten (519) 685-8500 Ext. 72025

**Project Name:** Stroke Current State Assessment and Best Practice Recommendations for Post-Hospital Care

**Project Summary:** To create future state directional recommendations addressing gaps in secondary stroke prevention, outpatient/community rehabilitation, and community support services.

In February, 2015, HQO and the MOHLTC released an updated Quality Based Procedures: Clinical Handbook for Stroke that includes both acute and post-acute care including recommended practices for TIA or minor (non-disabling) stroke. Quality Based Procedures (QBP) have been identified using evidenced based frameworks that provide opportunities for process improvement, enhancement of the patient experience, improvement of patient outcomes and a potential cost savings to the health system. (Health Quality Ontario; Ministry of Health and Long-Term Care, 2015).

Best practices outlined in the QBP Clinical Handbook for Stroke highlight and advance the models of care provided in Urgent TIA/Secondary Stroke Prevention Clinics (SSPC), as well as the need for specialized stroke outpatient/community rehabilitation services in achieving a high quality stroke care system. The Stroke CSP - Phase II will ensure success of Phase I of the Stroke Capacity Assessment & Best Practice Implementation Project by addressing current gaps in the system of care for stroke patients discharged from hospital.

The Phase II Secondary Stroke Prevention and Community Rehabilitation Directional Recommendations Project will include a system level current state review, future state identification and gap analysis leading to recommendations for achieving timely access to urgent TIA/secondary stroke prevention services (such as clinics, and risk factor and lifestyle management programs), specialized stroke rehabilitation in the community (such as specialized stroke outpatient programs, Community Stroke Rehabilitation Teams (CSRT)), as well as ongoing recovery opportunities through community programming (such as Adult Day Programs, exercise programs and support groups). All of these services provide robust “exit” strategies for stroke survivors, enabling early discharge from hospital and reducing admissions/readmissions. Effective delivery of rehabilitation in the community
will address the need for stroke rehabilitation services in providing post hospital care that is responsive to the diverse needs of both rural and urban populations. The key deliverable in the Regional Stroke Project Phase II is the creation of future state directional recommendations to meet post hospital care needs for people with TIA or stroke including secondary stroke prevention and community stroke rehabilitation and recovery.

**Objectives for Completing the HEIA**

1. To inform the future state recommendations for stroke care, it is important to understand the needs of all people with TIA or stroke to provide equitable access to high quality secondary stroke prevention, outpatient/community rehabilitation, and community support services.
2. Ensure that the needs of all determinants of health are represented and assessed throughout Phase II of the Regional Stroke project.
3. Create awareness of the potential impacts and unintended consequences to all populations.
4. Create mitigation plans to optimize the deliverables of the project and remove barriers that inhibit equitable access to high quality care

**Conclusions:**

When creating the Phase II Recommendations, consequences of proposed services/programs to vulnerable and marginalized populations were taken into consideration. In order to minimize risk, the recommendations developed reflected the mitigation strategies outlined in the HEIA.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCOPING</strong></td>
<td><strong>POTENTIAL IMPACTS</strong></td>
<td><strong>MITIGATION</strong></td>
</tr>
<tr>
<td>a) Populations*</td>
<td>b) Determinants of Health</td>
<td>Unintended Positive Impacts.</td>
</tr>
</tbody>
</table>

**a) Populations**
- Using evidence, identify which populations may experience significant unintended health impacts (positive or negative) as a result of the planned policy, program or initiative.
- Identify determinants and health inequities to be considered alongside the populations you identify.

**Aboriginal peoples** (e.g. First Nations, Inuit, Métis, etc.)
- Social Support Networks
- Health Services
- Culture
- Improved partnerships between Traditional Healing and specialists partners
- Positive experiences may mean increased trust in health care system
- Some people may not be comfortable hosting strangers in their home
- Visiting outpatient clinics in hospital setting may be uncomfortable for some
- Will need to consider the provision of choice as to where services are provided
- Including organizations who support Indigenous population as part of stakeholder engagement
- Emphasize a patient centred approach to care

**Age-related groups** (e.g., children, youth, seniors, etc.)
- Social Support Networks
- Education & Literacy
- Physical Environments
- Social Environments
- In home services may identify potential safety hazards
- Support for the stroke survivor would mean that caregiver is also being provided with informal support and education
- In-home services may mean limited opportunities for social interaction
- When developing recommendations, will need to consider that accessing the internet for information is not always possible with this population
- Youth are out of scope for this project
- Ensure written information/materials are written with a Health Literacy lens - at a level that can be easily understood
### Step 1. SCOPING

- **a) Populations***
  
  Using evidence, identify which populations may experience significant unintended health impacts (positive or negative) as a result of the planned policy, program or initiative.

- **b) Determinants of Health***
  
  Identify determinants and health inequities to be considered alongside the populations you identify.

<table>
<thead>
<tr>
<th>Determinants</th>
<th>Unintended Positive Impacts</th>
<th>Unintended Negative Impacts</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural/remote or inner-urban populations</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Step 2. POTENTIAL IMPACTS

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Step 3. MITIGATION

- **Disability (e.g., physical, D/deaf, deafened or hard of hearing, visual, intellectual/developmental, learning, mental illness, addictions/substance use, etc.)**
  - Social Support Networks
  - Personal Health Practices & Coping Skills
  - Social Environments
  - Physical Environments
  - Health Services
  - Transportation *

  - Provision of in home services reduces need for accessible transportation and environments
  - Support for the stroke survivor would mean that caregiver is also being provided with informal support and education

  - Some groups may not be comfortable receiving service in home (e.g., mental health/addictions)

  - Provide warm hand offs to ensure comfort with process and services
  - Provide choice as to in-home or visit to hub etc.
  - Engage with mental health organizations to provide additional support for identified individuals
  - Leverage OTN for conferencing where appropriate/comfortable for the individual
  - Use of aphasia friendly materials for those with hearing loss or communication challenges

- **Rural/remote or inner-urban populations (e.g., geographic or social isolation, under-serviced areas, etc.)**
  - Income & Social Status
  - Social Support Networks
  - Education & Literacy
  - Employment/Working Conditions
  - Health Services
  - Gender

  - Providing in home services limits need for and cost of transportation
  - In home visits will allow for informal support of caregiver who may also be socially isolated.

  - In-home services may mean limited opportunities for social interaction
  - Technology eg wireless capability may make some services difficult to provide eg ipad apps for SLP

  - Home as preferred location for visits for those who are unable or have no access to transportation
  - Engage with partner organizations who provide services to seniors to increase awareness and
### Step 1: Scoping

**a) Populations**
Using evidence, identify which populations may experience significant unintended health impacts (positive or negative) as a result of the planned policy, program or initiative.

- Culture
- Physical Environments
- Transportation *

### Step 2: Potential Impacts

**Unintended Positive Impacts.**

**Unintended Negative Impacts.**

- When developing recommendations, will need to consider that accessing the internet for information is not always possible

### Step 3: Mitigation

Identify ways to reduce potential negative impacts and amplify the positive impacts.

**Response #1:** In some populations (i.e., Aboriginals, Mennonites, low income/homeless) pre-existing limitations exist, i.e., no phone or method of transportation, which may impair access to clinic based services.

**Response #2:** Review of post-hospital stroke care services creates an opportunity to better serve the stroke patient population through more expert stroke resources, services that provide quality best practices in stroke care being more readily available across the LHIN, and evaluation of population based needs including. The evaluation will include consideration of transportation issues and the need for in-home care. Interpreters and/or greater resources could respond to cultural sensitivities and language barriers including greater opportunity to assess larger population needs including the potential to publish educational material in different languages.

Increased referrals to urgent TIA/secondary stroke prevention clinics, will increase patient awareness of stroke prevention practices and need for follow up with primary care. Access to Health Links through CCAC could be provided to stroke patients who do not have a primary care provider.

**Response #3:** Increased services may increase awareness and knowledge of stroke services which may potentially increase demand and quality of care.
Health Equity Impact Assessment

- Secondary Stroke Prevention

HEIA is a flexible and practical assessment tool that can be used to identify and address potential unintended health impacts (positive or negative) of a policy, program, or initiative on specific population groups.

NOTE: The HEIA Template is designed to be used alongside the accompanying HEIA Workbook, which provides definitions, examples, and more detailed instructions to help you complete this template.

Date: April 2016

Organization: South West LHIN and Southwestern Ontario Stroke Network

Name and contact information for the individual or team that completed the HEIA: Bonnie Wooten (519) 685-8500 Ext. 72025

Project Name: Stroke Current State Assessment and Best Practice Recommendations for Post-Hospital Care

Project Summary:
To create future state directional recommendations addressing gaps in secondary stroke prevention, outpatient/community rehabilitation, and community support services.

In February, 2015, HQO and the MOHLTC released an updated Quality Based Procedures: Clinical Handbook for Stroke that includes both acute and post-acute care including recommended practices for TIA or minor (non-disabling) stroke. Quality Based Procedures (QBP) have been identified using evidenced based frameworks that provide opportunities for process improvement, enhancement of the patient experience, improvement of patient outcomes and a potential cost savings to the health system. (Health Quality Ontario; Ministry of Health and Long-Term Care, 2015).

Best practices outlined in the QBP Clinical Handbook for Stroke highlight and advance the models of care provided in Urgent TIA/Secondary Stroke Prevention Clinics (SSPC), as well as the need for specialized stroke outpatient/community rehabilitation services in achieving a high quality stroke care system. The Stroke CSP - Phase II will ensure success of Phase I of the Stroke Capacity Assessment & Best Practice Implementation Project by addressing current gaps in the system of care for stroke patients discharged from hospital.

The Phase II Secondary Stroke Prevention and Community Rehabilitation Directional Recommendations Project will include a system level current state review, future state identification and gap analysis leading to recommendations for achieving timely access to urgent TIA/secondary stroke prevention services (such as clinics, and risk factor and lifestyle management programs), specialized stroke rehabilitation in the community (such as specialized stroke outpatient programs, Community Stroke Rehabilitation Teams (CSRT)), as well as ongoing recovery opportunities through community programming (such as Adult Day Programs, exercise programs and support groups). All of these services provide robust “exit” strategies for stroke survivors, enabling early discharge from hospital and reducing admissions/readmissions. Effective delivery of rehabilitation in the community will address the need for stroke rehabilitation services in providing post hospital care that is responsive to the diverse needs of both rural and urban populations.
The key deliverable in the Regional Stroke Project Phase II is the creation of future state directional recommendations to meet post hospital care needs for people with TIA or stroke including secondary stroke prevention and community stroke rehabilitation and recovery.

**Objectives for Completing the HEIA:**
1. To inform the future state recommendations for stroke care, it is important to understand the needs of all people with TIA or stroke to provide equitable access to high quality secondary stroke prevention, outpatient/community rehabilitation, and community support services.
2. Ensure that the needs of all determinants of health are represented and assessed throughout Phase II of the Regional Stroke project.
3. Create awareness of the potential impacts and unintended consequences to all populations.
4. Create mitigation plans to optimize the deliverables of the project and remove barriers that inhibit equitable access to high quality care.

**Conclusion:**
The marginalized groups identified in this document as high risk populations were considered throughout the project and their needs specifically addressed in the recommendations and/or proposed implementation considerations.
### Step 1. SCOPING

**a) Populations**
Using evidence, identify which populations may experience significant unintended health impacts (positive or negative) as a result of the planned policy, program or initiative.

### Step 2. POTENTIAL IMPACTS

**b) Determinants of Health**
Identify determinants and health inequities to be considered alongside the populations you identify.

### Step 3. MITIGATION

Identify ways to reduce potential negative impacts and amplify the positive impacts.

---

**Age-related groups** (e.g., children, youth, seniors, etc.)

**2005/06 Rates for Acute Hospitalization by Age for Canada**

<table>
<thead>
<tr>
<th>Age</th>
<th>Rate Women</th>
<th>Rate Men</th>
<th>Rate Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 25-35</td>
<td>8.1</td>
<td>8.1</td>
<td>8.1</td>
</tr>
<tr>
<td>Age 34-44</td>
<td>22.4</td>
<td>24.8</td>
<td>23.6</td>
</tr>
<tr>
<td>Age 45-54</td>
<td>48.9</td>
<td>64.5</td>
<td>56.7</td>
</tr>
<tr>
<td>Age 55-64</td>
<td>107.9</td>
<td>180.8</td>
<td>143.8</td>
</tr>
<tr>
<td>Age 65-74</td>
<td>296.0</td>
<td>441.0</td>
<td>365.0</td>
</tr>
<tr>
<td>Age 75-84</td>
<td>796.1</td>
<td>953.1</td>
<td>861.6</td>
</tr>
</tbody>
</table>

---

- Increased public awareness of stroke warning signs and risk factors
- Potential duplication of services provided by primary care provider (must actively engage PCP at all stages)
- Some primary care providers may not use online services creating a need for multi-modal resources
- Information/materials are written with a Health Literacy lens - at a level that can be easily understood
- Ensure written information is available in multiple languages
- Actively engage primary care providers at all stages

---

**Social Support Networks**
**Education & Literacy**
**Physical Environments**
**Social Environments**
**Personal Health Practices and Coping Skills**
**Biology and Genetic Endowment**
**Health Services**
**Gender**
**Culture**
### Step 1. SCOPING

**a) Populations***  
Using evidence, identify which populations may experience significant unintended health impacts (positive or negative) as a result of the planned policy, program or initiative.

<table>
<thead>
<tr>
<th>Age 85+</th>
<th>Low income (e.g., unemployed, underemployed, etc.)</th>
</tr>
</thead>
</table>
| - Women: 1,457.9  
- Men: 1,513.9  
- Both: 1,475.3 | - Incidence of stroke and case-fatality rates increases with decreasing socioeconomic status  
  o Highest in low income and with manual labour work conditions, but also with early retired and unemployed  
  o Link between socioeconomic status and stroke incidence is stronger in women  
  o 28-day and 1 year fatality rates, respectively, increased linearly with a decreasing annual income in men  
- For men and women aged 75-74, lower socioeconomic status was associated with higher stroke incidence for both education and income. |

### Step 2. POTENTIAL IMPACTS

**b) Determinants of Health**  
Identify determinants and health inequities to be considered alongside the populations you identify.

| Social Support Networks  
- Education and Literacy  
- Employment and working conditions  
- Social Environments  
- Physical Environments  
- Physical Health Practices and Coping Skills  
- Biology and Genetic Endowment  
- Health Services  
- Gender  
- Culture | Closer to home services will reduce economic burden of travel  
- Closer to home services will reduce loss of income through avoidance of missing work  
- Services closer to home will decrease risk to work stability due to absenteeism  
- Centralized stroke prevention services increase socialization/decrease social isolation  
- Develop a collaborative approach to vascular health | Increased economic burden of clients purchasing high cost medications  
- Travelling to central Urgent TIA/SSPCs potentially provide economic burden | Identify ways to reduce potential negative impacts and amplify the positive impacts. |

*Public Health Agency of Canada (2009) Tracking Health Disease and Stroke in Canada, p. 96
<table>
<thead>
<tr>
<th>Step 1. SCOPING</th>
<th>Step 2. POTENTIAL IMPACTS</th>
<th>Step 3. MITIGATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a) Populations</strong></td>
<td><strong>b) Determinants of Health</strong></td>
<td><strong>Identify ways to reduce potential negative impacts and amplify the positive impacts.</strong></td>
</tr>
<tr>
<td>Using evidence, identify which populations may experience significant unintended health impacts (positive or negative) as a result of the planned policy, program or initiative.</td>
<td>Identify determinants and health inequities to be considered alongside the populations you identify.</td>
<td></td>
</tr>
</tbody>
</table>

- Policies to improve social and economic resources at early old age, and interventions to improve diabetes management, depression, social networks and functioning in disadvantaged elderly and contribute to reduce stroke disparities. (Avendano et al. (2006), Socioeconomic status and stroke incidence in US Elderly. Stroke. 37:1368-1373.

<table>
<thead>
<tr>
<th><strong>Rural/remote or inner-urban populations</strong> (e.g., geographic or social isolation, under-serviced areas, etc.)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>In Alberta, the incidence of stroke per 10,000 is similar between urban (13.24) and rural (13.82) areas.</td>
<td></td>
</tr>
<tr>
<td>Rural residents frequently report their incident stroke episode to urban emergency departments.</td>
<td></td>
</tr>
<tr>
<td>Rural dwellers die more frequently in the ED whereas urban dwellers die more frequently as inpatients (Yiannakowlias et al, 2004)</td>
<td></td>
</tr>
<tr>
<td>Generally, rural Canadians report poorer health than their urban counterparts, yet when more comparisons are made between rural designations, residents of the most isolated rural areas report poorer health than the least rural areas. (Kulcsar and Curtis.</td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income &amp; Social Status</strong></td>
<td><strong>Closer to home services limit need for and cost of transportation</strong></td>
<td><strong>No change to Urgent TIA/SSPC referrals due to travel/geography</strong></td>
</tr>
<tr>
<td><strong>Social Support Networks</strong></td>
<td><strong>Closer to home services fosters relationship building with primary care provider</strong></td>
<td><strong>Travelling to central Urgent TIA/SSPCs potentially provide economic burden</strong></td>
</tr>
<tr>
<td><strong>Education &amp; Literacy</strong></td>
<td><strong>Closer to home services provide opportunity for socialization and support</strong></td>
<td><strong>Insufficient critical mass to develop stroke expertise for community prevention services closer</strong></td>
</tr>
<tr>
<td><strong>Employment/Working Conditions</strong></td>
<td><strong>Develop a collaborative approach to vascular health</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Health Services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Culture</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Physical Environments</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closer to home services limit need for and cost of transportation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closer to home services fosters relationship building with primary care provider</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closer to home services provide opportunity for socialization and support</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop a collaborative approach to vascular health</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Consider travel and access when completing recommendations
- Link with primary care
- Consider collaborating with other vascular conditions to provide sufficient critical mass for services
### Step 1. SCOPING

**a) Populations**
Using evidence, identify which populations may experience significant unintended health impacts (positive or negative) as a result of the planned policy, program or initiative.

**b) Determinants of Health**
Identify determinants and health inequities to be considered alongside the populations you identify.

### Step 2. POTENTIAL IMPACTS

**Unintended Positive Impacts.**

**Unintended Negative Impacts.**

### Step 3. MITIGATION

Identify ways to reduce potential negative impacts and amplify the positive impacts.

---

| In Ontario, 1 year survival rates after an index stroke are higher for those from the richest compared to the least wealthy areas, which was only partly explained by age, sex, comorbid conditions and other baseline risk factors. (Kapral et al. 2012). Neighbourhood income and stroke care and outcomes. Neurology. 79 (12) 1200-1207 |

---

**Response #1:** In some populations (i.e., Aboriginals, Mennonites, low income/homeless) pre-existing limitations exist, i.e., no phone or method of transportation, which may impair access to clinic based services.

**Response #2:** Review of post-hospital stroke care services creates an opportunity to better serve the stroke patient population through more expert stroke resources, services that provide quality best practices in stroke care being more readily available across the LHIN, and evaluation of population based needs including. The evaluation will include consideration of transportation issues and the need for in-home care. Interpreters and/or greater resources could respond to cultural sensitivities and language barriers including greater opportunity to assess larger population needs including the potential to publish educational material in different languages.

Increased referrals to urgent TIA/secondary stroke prevention clinics, will increase patient awareness of stroke prevention practices and need for follow up with primary care. Access to Health Links through CCAC could be provided to stroke patients who do not have a primary care provider.

**Response #3:** Increased services may increase awareness and knowledge of stroke services which may potentially increase demand and quality of care.
10.6 Appendix F – Stakeholder Engagement

Community Stroke Rehabilitation
- Specialized outpatient or in-home community stroke rehabilitation services
- Referral sources – hospital teams & physicians
- CCAC
- Area Health Service Provider Tables
- Community support service agencies (VON, OneCare, Home and Community Support Services)
- Primary care (family health teams, physicians)
- District stroke managers/coordinators
- Long term care homes
- Retirement homes/lodges
- Specialized stroke outpatient follow-up clinic (driving, spasticity, vision, physiatry, etc.)
- Stroke survivors
- Care givers
- Mental health services
- Acquired brain injury services
- Government funded community-based recreation providers (e.g., YMCA/YWCA, arenas, seniors’ centres, community centres, etc.)
- OT/PT/SLP networks
- March of Dimes
- Vocational rehabilitation
- Southwestern Ontario Aboriginal Health Access Centre

Secondary Stroke Prevention
- Specialized outpatient or in-home community stroke rehabilitation services
- Hospital sites with Secondary Stroke Prevention Clinics
- Tertiary Hospitals that specialize in Stroke Care
- Diagnostic Imaging
- Transportation services
- Primary Care Providers
- District Stroke Managers/Coordinators
- Physicians (Specialists)
- Community Health Centres
- Stroke Follow-up Clinics
- CCAC
- Diabetes Education
- Emergency Department (physicians, nurses*, manager)
- Specialized stroke outpatient follow-up clinics (driving, etc.)
- People with TIA and stroke
- Care givers
- Stroke prevention clinic nurses
- Government funded community-based recreation providers (i.e., YMCA/YWCA, arenas, recreation centres, senior centres, community centres etc.)*
- Family Health Teams
- Cardiac rehabilitation
- Public Health
- Southwestern Ontario Aboriginal Health Access Centre

*Invitations extended to stakeholders to engage – either did not respond or declined invitation
Appendix G – Physician Survey Results

Community Rehabilitation and Recovery for Stroke Survivors

Physician Survey Results

Note: These results were stratified by county, but are summarized South West LHIN – wide for purposes of this document.

Do you refer to the Community Stroke Rehabilitation Team?

NP (Nurse Practitioner) GP (General Practitioner)
- Yes: 23 (3 NPs, 20 GPs)
- No: 30 (9 NPs and 21 GPs)

For those stating they do refer to the CSRT - what are the barriers to accessing rehabilitation services for people in the community?

- Distance, ability to travel
- Travel and costs
- Too many forms, sharing on system site would be great, make process easier
- Geographic – access a challenge for those living in rural settings
- I often refer through CCAC and this is not a timely process
- None that I have experienced
- Fairly short duration of service in my experience
- Knowing how to access this service
- Co-ordination with hospital – communication getting to all relevant parties
- Communication back to the family doctor:
- Referrals
- None
- Waiting time

Are there any needs for persons living in the community that are not currently being met?

- Not that I am aware of
- Easily available, low cost transport
- Yes, there are lots of need for people with chronic disability that cannot fully be met
- Education done at the hospital, funding went there. Not sure why/ should be a primary care issue
- Acute rehab is of poor quality
- Limited time for in-home physio; limited resources for caregivers over time:
- Limited OT and PT
- Absolutely – need for local care, especially imaging, risk management and rehab
- Respecting their autonomy to access and receive local individualized care in their home community instead of poorly conceived centralized stroke care in the city
- More help with independent living
For providers stating they did not refer to the CSRT - if you do not refer to the CSRT, why not?

- Unaware of CSRT
- Usually done in the hospital prior to discharge
- I’m a new practitioner and haven’t had the opportunity yet
- No perceived need – OT and PT are the only need
- Primary young family practice – no need
- Unaware of how to refer - TIA Clinic usually does this as well
- Tend to be referred by other physicians
- There is none in our community – Aylmer – that I know of

What are the barriers to accessing rehabilitation services for people in the community?

- Knowing where they are and how to reach them, and the patient’s ability to get there
- Transportation; too many cooks in the kitchen at times
- Rural location, especially in winter
- Possibly lack of provider awareness
- Long wait times
- Education what it offers
- Travelling, mobility
- Unsure of what is available
- Not aware
- Value to patient
- Rehab closer to home – often separated from family
- Free transportation to available resources
- Unclear referral process
- Access
- Location of services
- Nothing available
- Coverage
- I’m not aware of services available in Elgin
- Wait time and cost

Are there any needs for persons living in the community that are not currently being met?

- Possibly quick evaluation of a suspected case by a specialist
- Rehab program
- Physiotherapy
- Counseling services as depression sets in stroke patients
- YES! Access and rehab
- PT, OT, transportation
- Definite need for greater access to rehab outside London
- Unsure, based on lack of clarity re: available services
- More home care, cost of drugs
- Case coordination; transportation; education around expectations
- Access to physiotherapy for patients without ODP, or private benefits $$$, access to psychosocial support (social workers) for patients outside of FHTs or CHCs, access to peer support, caregiver supports
## Appendix G (cont’d) – Physician Survey Results – Secondary Stroke Prevention

<table>
<thead>
<tr>
<th>Responses by Specialty</th>
<th>Practice Location</th>
<th>Do you refer to the clinic?</th>
<th>Advantages to refer to clinic (Themes)</th>
<th>Disadvantages of referring to clinic (Themes)</th>
<th>Barriers to Referring to Clinic (Themes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Medicine</td>
<td>City of London: 13 (38%)</td>
<td>Yes: 31 (91%) No: 3 (9%)</td>
<td>• Rapid access for specialized assessment and management plan</td>
<td>London: • Travel for patient</td>
<td>London: • Travel for patient</td>
</tr>
<tr>
<td>Hospitalists</td>
<td>Bruce County: 2 (6%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>Elgin County: 4 (12%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neurologist</td>
<td>Grey County: 6 (18%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Huron County: 3 (9%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Middlesex County: 0 (0%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oxford County: 1 (3%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Perth County: 2 (6%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>West Norfolk County: 0 (0%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other: 5 (9%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>- family Medicine/ED</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Public Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- general practice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 2 spoiled</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Medicine</td>
<td>London: • Quick specialist assessment</td>
<td>Yes: 52 (83%) No: 11 (17%)</td>
<td>London: • Travel</td>
<td>London: • Travel for patient</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stratford: • Quick specialist assessment</td>
<td></td>
<td>• Slow communication back</td>
<td>• Not available 24/7; at times no physician coverage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Owen Sound: • Rapid and thorough assessment</td>
<td></td>
<td>• Disjointedness for patients</td>
<td>Stratford: • Travel for patient</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Owen Sound: • Patient travel</td>
<td></td>
<td></td>
<td>Owen Sound: • Lack of physician awareness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Owen Sound: • One stop shop</td>
<td></td>
<td></td>
<td>Owen Sound: • Patient travel</td>
<td></td>
</tr>
<tr>
<td>Hospitalists</td>
<td>Owen Sound: • Paperwork</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>Owen Sound: • Too few neurologists</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neurologist</td>
<td>Owen Sound: • Don’t have 24/7 care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Owen Sound: • Not available 24/7; at times no physician coverage</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Medicine</td>
<td>Owen Sound: • Limited collaboration with primary care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse Practitioner</td>
<td>Owen Sound: • Clarity as to appropriate referral</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Owen Sound: • Patient travel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Owen Sound: • Don’t have 24/7 care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Owen Sound: • Lack of physician awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Owen Sound: • Patient travel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Owen Sound: • One stop shop</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Owen Sound: • Slow communication back</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Owen Sound: • Disjointedness for patients</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Owen Sound: • Not available 24/7; at times no physician coverage</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Yes: 31 (91%)
- No: 3 (9%)

- London:
  - • Rapid access assessment and management plan
  - • Travel for patient

- Stratford:
  - • Rapid specialized assessment and management plan
  - • Travel for patient
  - • Not available 24/7

- Owen Sound:
  - • Comprehensive work-up
  - • Access to diagnostics
  - • Wait times
  - • Paperwork
  - • Limited collaboration with primary care
  - • Clarity as to appropriate referral
  - • Patient travel

- Owen Sound:
  - • Lack of physician awareness
  - • Patient travel

- Owen Sound:
  - • Slow communication back
  - • Disjointedness for patients

- London:
  - • Quick specialist assessment
  - • Travel
  - • Limited collaboration with primary care
  - • Clarity as to appropriate referral

- Owen Sound:
  - • Comprehensive work-up
  - • Access to diagnostics
  - • Wait times
  - • Paperwork
  - • Too few neurologists
  - • Don’t have 24/7 care
  - • Limited collaboration with primary care
  - • Clarity as to appropriate referral
  - • Patient travel

- Owen Sound:
  - • Rapid access for specialized assessment and management plan
  - • Travel for patient

- Owen Sound:
  - • Comprehensive work-up
  - • Access to diagnostics
  - • Wait times
  - • Paperwork
  - • Too few neurologists
  - • Don’t have 24/7 care
  - • Limited collaboration with primary care
  - • Clarity as to appropriate referral
  - • Patient travel

- Owen Sound:
  - • Travel for patient
  - • Not available 24/7; at times no physician coverage

- Owen Sound:
  - • Travel for patient
  - • Limited collaboration with primary care
  - • Clarity as to appropriate referral
  - • Patient travel

- Owen Sound:
  - • Slow communication back
  - • Disjointedness for patients

- Owen Sound:
  - • Not available 24/7; at times no physician coverage

- Owen Sound:
  - • Limited collaboration with primary care
  - • Clarity as to appropriate referral
  - • Patient travel

- Owen Sound:
  - • Slow communication back
  - • Disjointedness for patients

- Owen Sound:
  - • Not available 24/7; at times no physician coverage

- Owen Sound:
  - • Limited collaboration with primary care
  - • Clarity as to appropriate referral
  - • Patient travel

- Owen Sound:
  - • Slow communication back
  - • Disjointedness for patients

- Owen Sound:
  - • Not available 24/7; at times no physician coverage

- Owen Sound:
  - • Limited collaboration with primary care
  - • Clarity as to appropriate referral
  - • Patient travel

- Owen Sound:
  - • Slow communication back
  - • Disjointedness for patients

- Owen Sound:
  - • Not available 24/7; at times no physician coverage

- Owen Sound:
  - • Limited collaboration with primary care
  - • Clarity as to appropriate referral
  - • Patient travel

- Owen Sound:
  - • Slow communication back
  - • Disjointedness for patients

- Owen Sound:
  - • Not available 24/7; at times no physician coverage

- Owen Sound:
  - • Limited collaboration with primary care
  - • Clarity as to appropriate referral
  - • Patient travel
## Appendix H – Prioritization Matrix

<table>
<thead>
<tr>
<th>Stream</th>
<th>Structure</th>
<th>Sub-Component</th>
<th>Effort</th>
<th>Impact</th>
<th>Dependencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR</td>
<td>SIRT</td>
<td>SIRT team is one team providing both outpatient and in-home care</td>
<td>M</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>SIRT</td>
<td>SIRT is an Interprofessional Team</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>SIRT</td>
<td>Service available within 48 hours (acute) and 72 hours (rehab). *No wait time. (ESD)</td>
<td>L</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>SIRT</td>
<td>Some services could start later &amp; extend beyond 12 weeks.</td>
<td>L</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>SIRT</td>
<td>OT, PT, SLP to provide 2-3 sessions/week for 8-12 weeks (20 weeks max); key is flexibility based on patient needs.</td>
<td>L</td>
<td>H</td>
<td>Staffing SIRTs</td>
</tr>
<tr>
<td>CR</td>
<td>SIRT</td>
<td>Patients can re-access SIRT/Hub based on need</td>
<td>L</td>
<td>H</td>
<td>Staffing SIRTs</td>
</tr>
<tr>
<td>CR</td>
<td>SIRT</td>
<td>ESD available 5 days/week</td>
<td>L</td>
<td>H</td>
<td>Staffing SIRTs</td>
</tr>
<tr>
<td>CR</td>
<td>SIRT</td>
<td>In-home assessment pre-discharge</td>
<td>L</td>
<td>H</td>
<td>Staffing SIRTs</td>
</tr>
<tr>
<td>CR</td>
<td>SIRT</td>
<td>Team presence on acute or inpatient rehab unit and in-home appointment made before discharge</td>
<td>L</td>
<td>H</td>
<td>Staffing SIRTs</td>
</tr>
<tr>
<td>CR</td>
<td>SIRT</td>
<td>Single admin/intake person for SIRT</td>
<td>L</td>
<td>H</td>
<td>Establishing SIRTs</td>
</tr>
<tr>
<td>CR</td>
<td>SIRT</td>
<td>LTC considered a person’s “home”, so can receive SIRT service (if otherwise eligible)</td>
<td>H</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>SIRT</td>
<td>SIRT/ESD - physician attached to SIRT teams</td>
<td>H</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>Follow-up Call</td>
<td>Follow up phone call 7, 30, 90 days and annually post discharge.</td>
<td>L</td>
<td>M</td>
<td>Could start before SIRTs/Hub established</td>
</tr>
<tr>
<td>CR</td>
<td>SIRT</td>
<td>Centralized referral process to SIRTs (one team providing both clinic and in-home care).</td>
<td>L</td>
<td>H</td>
<td>Establishing SIRTs</td>
</tr>
<tr>
<td>CR</td>
<td></td>
<td>Fund for stroke survivors for unexpected/transitional needs (e.g. vocational skills)</td>
<td>M</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>ADPs</td>
<td>Adult Day Programs (stroke specific)</td>
<td>L</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>Survivor “Fund”</td>
<td>Fund 3 months of free equipment rental</td>
<td>L</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>Education</td>
<td>Education Strategy</td>
<td>M</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>All</td>
<td>Sustainability Framework</td>
<td>M</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>Rehab Fac.</td>
<td>Rehabilitation facilitator - SIRTs would refer or part of Hub</td>
<td>L</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>CR/SSP</td>
<td>Hub</td>
<td>Community Hub</td>
<td>H</td>
<td>H</td>
<td>Larger Hub strategy</td>
</tr>
<tr>
<td>SSP</td>
<td>Specialized Assessments</td>
<td>Access to specialized assessments (sleep clinic, barium swallow, etc.)</td>
<td>M</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>SSP</td>
<td>Primary Care Algorithm</td>
<td>Decision algorithm to support primary care physicians re: &quot;destination&quot; for TIA/mild stroke patients</td>
<td>H</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>SSP</td>
<td>ED</td>
<td>Diagnostic Imaging at ED</td>
<td>H</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>SSP</td>
<td>Stroke MD</td>
<td>Post-inpatient follow-up with physician with stroke expertise for secondary stroke prevention</td>
<td>H</td>
<td>M</td>
<td>ESD</td>
</tr>
<tr>
<td>SSP</td>
<td>Stroke MD</td>
<td>Post-rehab follow-up with physician with stroke expertise for secondary stroke prevention</td>
<td>H</td>
<td>M</td>
<td>ESD</td>
</tr>
<tr>
<td>SSP</td>
<td>ED</td>
<td>All TIA/minor stroke patients referred to Urgent TIA clinic</td>
<td>M</td>
<td>H</td>
<td>Imaging at ED</td>
</tr>
<tr>
<td>SSP</td>
<td>Carotid Clinics</td>
<td>Carotid Clinics; access to CTA, standard referral process</td>
<td>M</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>SSP</td>
<td>Community Nurse</td>
<td>Community Nurse with stroke expertise available to support TIA/mild stroke patients</td>
<td>L</td>
<td>H</td>
<td>SIRT</td>
</tr>
<tr>
<td>SSP</td>
<td>Referral system Clinics</td>
<td>Standardized referral form to Urgent TIA clinics</td>
<td>L</td>
<td>H</td>
<td>Imaging being done</td>
</tr>
<tr>
<td>SSP</td>
<td></td>
<td>Individuals seen by person with stroke expertise when they come into the clinic</td>
<td>H</td>
<td>H</td>
<td></td>
</tr>
</tbody>
</table>
Appendix I – Proposed Stroke Services Model

Proposed Phase II SW Stroke Project: Stroke Care Services Model

Community Hub:
- Follow-up Phone Call
- Risk Factor/Diet/Life Style Management
- Non-Urgent Risk Factor Assessment
- Hospice
- Leisure
- NP/Nurse Education
- Past/Caregiver Support
- Aphasia Groups
- Stroke Recovery Groups
- Community Exercise
- Adapted Cardiac Rehab
- Supervised Exercise
- Education & Counseling, Self Management
- Navigation:
  - General, vocational, driving
  - Build on Existing Vascular Services
  - ON utilization

Assisted Living

Equipment/Transportation/Community Database/Electronic Health Record
11. Appendix J – Considerations for High Level Implementation Planning

The following pages outline high level implementation planning including:

- Existing resources and stroke services
- Directional recommendations, including implementation considerations
- Key enablers
- Capacity planning - modeling assumptions
- Capacity planning - flowchart
11.2 Existing Resources and Stroke Services

Where possible, the recommendations will build on existing resources and stroke services, some of which include:

- Urgent TIA/Secondary Stroke Prevention Clinics (SSPC)
  - Grey Bruce Health Services – Owen Sound Hospital
  - Huron Perth Healthcare Alliance – Stratford General Hospital
  - London Health Sciences Centre – University Hospital
  - St. Thomas Elgin General Hospital

- Carotid Clinic
  - London Health Sciences Centre – University Hospital

- Community Stroke Rehabilitation Teams (CSRT)
  - Grey Bruce
  - Huron Perth
  - Thames Valley

- Intensive outpatient rehabilitation programs
  - Comprehensive Outpatient Rehabilitation Program (CORP) at St. Joseph’s Parkwood Institute
  - Intensive Outpatient Rehabilitation Program (IROP) at Woodstock Hospital

- Community support services
  - Adult day programs
  - Community exercise programs including stroke specific classes
  - Peer support and conversation groups

- Potential partners for Community Hubs
  - Diabetes education
  - Cardiac rehabilitation services
  - Family Health Teams and Community Health Centres
  - Adult day programs (have existing exercise classes and transportation)
  - Other community partners

11.3 Directional Recommendations and Implementation Considerations

11.3.1 Specialized Intensive Rehabilitation Teams

Expand and integrate existing stroke rehabilitation services to provide specialized, community stroke rehabilitation teams and outpatient intensive stroke rehabilitation teams (SIRT) in the community (Quality Based Procedure (QBP) 9.4) using a combined model of care, in which the same team offers:
- early supported discharge (QBP 7.2),
- in-home rehabilitation services
- outpatient services

This blended model enables flexibility of service delivery based on patients’ needs and provides continuity of care by allowing clinicians to follow the patient through their transitions. This model will also allow for cost effectiveness as patients are transitioned out of acute care more quickly with Early Supported Discharge, and from home based to ambulatory care in the future state.

Integral to this work will be:

a) the need to create an early supported discharge process that ensures the teams’ ability to provide timely access, and

b) that the teams partner closely with Designated Stroke Centres and community organizations.

For projected client volumes see South West LHIN Capacity Planning Document.

**SIRT Implementation Considerations**

**Early supported discharge process**

- Early Supported Discharge (ESD) Services should be provided in the community five days per week at the same level of intensity as stroke survivors would have received in the inpatient setting (QBP 7.3.2).
- A pilot focusing on the ESD process is recommended in one rural and one urban setting to gain a better understanding of need.
- ESD should be staffed sufficiently to allow timeliness.
- ESD services must be given in 48 hours of discharge from an acute hospital or within 72 hours of discharge from rehabilitation (QBP 7.3.1)
- A process needs to be established for medical oversight.

**Specialized Intensive Rehabilitation Teams**

- The most responsible SIRT member will connect with the client and inpatient team prior to the client’s discharge from the inpatient setting and set up community appointments before the patient leaves the hospital.
- Team will complete in-home assessment prior to discharge, and ensure equipment is in place upon discharge, and ensure all equipment needs are addressed prior to discharge from SIRT. Note: recommendation to investigate the ability for clients to access one month free equipment rental as per CCAC service if discharged home with SIRT but not requiring CCAC services.
- Each SIRT will have an administrative/intake person to accept and direct referrals and schedule patients in a timely manner to appropriate teams/team members. (QBP 7.2.2)
- Teams will use a standardized referral form (preferably electronic) and use standardized outcome measures.
Integrated interprofessional team

- Team will include team members with stroke expertise (QBP 9.4.3) who meet on a regular basis (QBP 9.4.2) at minimum weekly.
- Members of the interprofessional stroke team should receive education and training to promote stroke expertise (QBP 10.4.1)
- Team will include at a minimum an occupational therapist (OT), nurse, physiotherapist (PT), speech-language pathologist (SLP), social worker, recreation therapist, rehabilitation therapists/facilitators, administrative assistant, patients, and the family and/or caregivers. On a consult basis, access should also be available to a dietitian, pharmacist, psychologist and physician. (QBP 9.4.1)
- OT, PT and SLP (supported by rehabilitation therapist) will provide therapy 2 - 3 times/week for 8 - 12 weeks (QBP 9.5.1, 9.6.2, 9.31) for a maximum of 20 weeks.
- Every SIRT client will be seen by the team nurse to tailor and support the implementation of individualized stroke prevention strategies.
- Outpatient and/or community-based rehabilitation services should be available within 48 hours of discharge from an acute hospital, or within 72 hours of discharge from inpatient rehabilitation (QBP 9.2.2, 7.3.1). Staffing needs to be resourced at a sufficient level to ensure there are no wait times.
- Warm hand-offs (accompanied visits) between hospital and intensive rehabilitation services, and intensive rehabilitation services and community programming, such as adult day programs, should be provided.

Client-Centred Treatment Plans

- Timing of individual services will be flexible based on the patient’s needs. This could include rehabilitation therapy, recreation therapy and social work whose services could begin later and extend beyond the 12 weeks provided by the core team as needed, and the 12 weeks may not be consecutive. (QBP Module 9 page 130)

Short-Term Consultations

- Every stroke survivor should have the ability to re-access SIRT throughout their stroke journey for short term consults.

In Home or Clinic Services

- Community-based clinic/outpatient services (including hospitals) are preferred. These may include satellite clinics. Where clinic services are inaccessible or do not address a patient’s individual needs, then home-based rehabilitation should be provided. (QBP 9.3.4).
- Minimal volumes to warrant outpatient services (combined staff with in-home e.g. Monday, Wednesday and Friday in-home and Tuesday and Thursday in clinic) include providing a minimum of twice a week clinic services. Where sufficient volumes do not warrant outpatient services, volumes should be monitored for potential viability in the future and/or options sought to build viability. Options to consider include half day clinic services or combining staffing with inpatient rehabilitation services.
- Consider partnering with stroke-specific adult day programs for clinic sites where possible to make use of existing program equipment and transportation services.
Long Term Care Home Services
- Access to best practice stroke rehabilitation services should be available to all stroke survivors regardless of their place of residence including Long Term Care Homes. (Consensus)

Data regarding stroke volumes for potential outpatient/satellite clinic services for SIRT indicated that, at present, volumes for therapy to be provided in a clinic setting for a minimum of two days/week only exist in London.

### SIRT Locations

<table>
<thead>
<tr>
<th>Location</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>Average Per Year</th>
<th>SIRT Candidates</th>
<th>SIRT Outpatient</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grey Bruce</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owen Sound</td>
<td>119</td>
<td>117</td>
<td>148</td>
<td>128</td>
<td>63</td>
<td>31</td>
</tr>
<tr>
<td>&gt;45min</td>
<td>23</td>
<td>8</td>
<td>38</td>
<td>23</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>≤45min</td>
<td>96</td>
<td>109</td>
<td>110</td>
<td>105</td>
<td>51</td>
<td>26</td>
</tr>
<tr>
<td><strong>Walkerton</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;45min</td>
<td>80</td>
<td>72</td>
<td>107</td>
<td>86</td>
<td>42</td>
<td>21</td>
</tr>
<tr>
<td>≤45min</td>
<td>29</td>
<td>28</td>
<td>37</td>
<td>31</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td><strong>Huron Perth</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seaforth</td>
<td>51</td>
<td>76</td>
<td>80</td>
<td>69</td>
<td>34</td>
<td>17</td>
</tr>
<tr>
<td>&gt;45min</td>
<td>3</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>≤45min</td>
<td>48</td>
<td>70</td>
<td>74</td>
<td>64</td>
<td>31</td>
<td>16</td>
</tr>
<tr>
<td>Stratford</td>
<td>85</td>
<td>75</td>
<td>77</td>
<td>79</td>
<td>39</td>
<td>19</td>
</tr>
<tr>
<td>&gt;45min</td>
<td>10</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>≤45min</td>
<td>75</td>
<td>71</td>
<td>76</td>
<td>74</td>
<td>36</td>
<td>18</td>
</tr>
<tr>
<td><strong>London Middlesex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>London</td>
<td>347</td>
<td>372</td>
<td>425</td>
<td>381</td>
<td>187</td>
<td>93</td>
</tr>
<tr>
<td>≤45min</td>
<td>347</td>
<td>372</td>
<td>425</td>
<td>381</td>
<td>187</td>
<td>93</td>
</tr>
<tr>
<td>Stratroy</td>
<td>56</td>
<td>53</td>
<td>67</td>
<td>59</td>
<td>29</td>
<td>14</td>
</tr>
<tr>
<td>≤45min</td>
<td>56</td>
<td>53</td>
<td>67</td>
<td>59</td>
<td>29</td>
<td>14</td>
</tr>
<tr>
<td><strong>Oxford</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woodstock</td>
<td>134</td>
<td>114</td>
<td>148</td>
<td>132</td>
<td>65</td>
<td>32</td>
</tr>
<tr>
<td>&gt;45min</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>≤45min</td>
<td>133</td>
<td>113</td>
<td>146</td>
<td>131</td>
<td>64</td>
<td>32</td>
</tr>
<tr>
<td><strong>Elgin Norfolk</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St Thomas</td>
<td>91</td>
<td>102</td>
<td>121</td>
<td>105</td>
<td>51</td>
<td>26</td>
</tr>
<tr>
<td>&gt;45min</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>≤45min</td>
<td>87</td>
<td>99</td>
<td>120</td>
<td>102</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>963</td>
<td>981</td>
<td>1173</td>
<td>1039</td>
<td>509</td>
<td>255</td>
</tr>
</tbody>
</table>

Assumptions include physiotherapists, occupational therapists, and speech language pathologists providing one hour of treatment per day at least twice a week as per the QBP recommendations. This is based on a six hour work day (as 1.5 hours are non-patient care hours). Data for SIRT planning assumptions, volume tables and staffing projections is currently being gathered and analyzed.
11.3.2 Ongoing Support and Recovery

Stroke-Specific Adult Day Programs
Ensure adult day program stroke-specific days are appropriately situated and resourced to support equitable access to stroke services across the South West LHIN.

Middlesex, Grey, Bruce, and Perth counties currently have no access to stroke specific adult day program services.

For projected client volumes see South West LHIN Capacity Planning Document.

Implementation Considerations
- Stroke-specific day programs will be created based on Clinton’s model, using warm handoffs from SIRT teams.
- Offer stroke-specific day programs up to two days per week, starting with one day and building to two days as volumes and referrals increase and capacity requires (marketing is an important component of the addition of these days to build awareness and capacity.)
- Stroke day programs will be required to have appropriate equipment and staff training in order to facilitate the rehabilitation needs of clients (e.g. Nu-Step)
- Programs to partner with SIRTs and Southwestern Ontario Stroke Network to ensure best practice standards are in place.
- Program to be transitional. Clients who have met their goals or who are no longer able to participate in rehabilitation due to declining health or cognition will be discharged.
- Assistance in transitioning out of the stroke-specific rehabilitation program will be supported by SIRT team member (recreation therapist), rehabilitation facilitator or Hub staff.

Therapy Groups
Create ongoing support (QBP 10.5) and therapy groups across the geography of the South West LHIN to ensure equity in access. To include the following groups:
- Stroke Survivor Peer Support (QBP 9.13.4)
- Caregiver Support (9.13.4)
- Aphasia and Conversation (QBP 9.22.2)

Implementation Considerations
- Aphasia groups are led by a speech language pathologist (SLP), conversation groups can be led by volunteers or health care providers working in the community who have been trained by an SLP. (QBP 9.22.3)
- Each Designated Stroke Centre providing rehabilitation should have at least one SLP trained by the Aphasia Institute in Supported Conversation for Adults with Aphasia who will provide clinical expertise and support to the aphasia and conversation groups in their region.
- Groups can partner with adult day programs, Community Hubs, etc., depending on the geography and available resources.
- The South West Self-Management Program will be an important partner as it offers a variety of workshops, groups, tools and resources to support people with chronic conditions and their caregivers.

Rehabilitation Facilitator
Build a stroke rehabilitation facilitator role, modeled on a similar role currently serving acquired brain injury clients, to provide navigation and support ongoing stroke recovery and maintenance
in the home/community. This service provides additional rehabilitation/recovery support to a small percentage of stroke survivors following discharge from SIRT, or for those who require additional rehabilitation/recovery support beyond what can be provided or accessed through the Hub.

For projected client volumes see South West LHIN [Capacity Planning Document](#).

**Implementation Considerations**

- Services provided by a rehabilitation facilitator include functional and vocational skills training, service coordination, community reintegration and self-management education.
- Rehabilitation facilitators will be modeled on the existing role of rehabilitation counselors currently used in acquired brain injury services.
- Rehabilitation facilitators should be part of a Community Support Services (CSS) agency, have stroke-specific training, provide warm hand-offs between community services, and be closely affiliated with the Community Hub.
- Frequency and length of service will be based on client goals/needs (recommend 1 – 2 times per week for one year).
- Rehabilitation facilitators will re-assess clients at 6 month intervals to determine progress/need. It is expected that the majority of clients will require service for up to one year, with a small percentage requiring service for a greater length of time.
- Based on feedback from stroke survivors, they found this type of support lacking in the current system, and felt it would address their desire to continue to receive individualized support past their term with more formal rehabilitation services such as SIRT.

**Stroke Support Fund**

Support a fund to enable stroke survivors to meet unexpected and/or transitional needs. This fund could be used for home renovation, equipment needs, driving assessment (QBP 8.1.3) or vocational rehabilitation (QBP 9.14) that extends beyond what is available through private insurance or community supports.

**Implementation Considerations**

- This fund will be specific to the stroke population.
- This fund will include support for individuals not covered by private insurance for vocational rehabilitation services to regain skills, or develop new skills, to enable them to re-enter/join the workforce (paid/volunteer) and/or return to school, in addition to the vocational and/or avocational services provided by the SIRT and/or rehabilitation facilitator. For those returning to work, vocational rehabilitation should support stroke survivors from the assessment phase, to re-entry to work, to a successful return to full working capacity. (QBP 9.14)
- Equipment needs of the stroke survivor should be re-assessed throughout the recovery journey. (QBP 9.56)
- To meet the short term changing needs of stroke survivors in the community, the system must have the capacity to respond efficiently and effectively.

**11.3.3 Community Hubs**

Develop and implement a model for Community Hubs based on the “no wrong door” concept which will serve as a one stop shop providing multifactorial interventions, partnering with vascular and chronic disease services. Services in the Community Hubs will include navigation,
education, peer/caregiver support, risk factor and lifestyle management, self-management, counseling, supervised exercise and services that support leisure and community re-engagement. Wherever possible and feasible, the Community Hubs will be built upon existing services/resources and tailored to the geography served. (QBP 10.5.2)

These hubs will provide people with stroke and TIA, as well as their caregivers, access to:
- a community facilitator (stroke system services worker) with stroke specific knowledge on site including navigation as one of their roles
- a nurse with stroke expertise
- a nurse practitioner to provide temporary medical management for orphan patients
- a computer and resource library (QBP page 133 Module 10 Home)
- a community client database
- office space for staff to see individuals one to one and a group/communal space.

For projected client volumes see South West LHIN Capacity Planning Document.

**Implementation Considerations**
- All stroke/TIA patients will be connected to the Community Hub and entered into their community database for ongoing follow-up.
- Create strategies to access electronic records that meets all stakeholders’ needs and ease of access. Consider potential use of Connecting Southwestern Ontario (cSWO) clinical viewer.
- Visits to access services may be self-referral, drop in or appointment based.
- Persons with TIA/stroke should have lifelong access to services provided at the hub.
- Processes to re-access/re-enter the specialized stroke care system need to be established.
- Hub hours to be client and family friendly (i.e., evening and weekend times available).
- At least one Hub should be ideally located within 30 – 45 minutes driving distance based on geography, critical mass and existing resources. Planning services should not be restricted by sub LHIN boundaries and must be respectful of client choice.
- Hubs should provide services to caregivers and families (including children) of individuals with TIA and stroke. (QBP 6.3, 10.6)
- Hubs should provide services to assist the stroke survivor to develop problem solving skills in order to overcome barriers that are preventing them from accessing physical activity and leisure pursuits. (QBP 9.13)
• The community facilitator will ensure warm hand-offs (accompanied visits/warm referrals) to ongoing support and recovery services.

• Due to the changing needs of stroke survivors, equipment required on a temporary basis should be available by loan from an equipment pool accessed through the Hub. This may require an inventory of existing equipment loan services to ensure availability and maintenance of safety standards.

Potential Hub Areas

Annual anticipated volumes of potential hub users by recommended hub location for fiscal years 2013-2015 based on NACRS ED data, including adjustment for 6% in-hospital mortality

<table>
<thead>
<tr>
<th>Area</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>Avg Per Year</th>
<th>Avg Per Year Adjusted for Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bruce Peninsula Area</td>
<td>68</td>
<td>57</td>
<td>68</td>
<td>64</td>
<td>60</td>
</tr>
<tr>
<td>Owen Sound Area</td>
<td>117</td>
<td>141</td>
<td>157</td>
<td>138</td>
<td>130</td>
</tr>
<tr>
<td>Markdale/Meaford/Thornbury Area</td>
<td>139</td>
<td>111</td>
<td>137</td>
<td>129</td>
<td>121</td>
</tr>
<tr>
<td>Port Elgin/Southampton/Kincardine Area</td>
<td>127</td>
<td>124</td>
<td>123</td>
<td>125</td>
<td>117</td>
</tr>
<tr>
<td>Walkerton/Hanover/Durham Area</td>
<td>124</td>
<td>110</td>
<td>109</td>
<td>114</td>
<td>107</td>
</tr>
<tr>
<td>Listowel Area</td>
<td>78</td>
<td>96</td>
<td>93</td>
<td>89</td>
<td>84</td>
</tr>
<tr>
<td>Goderich/Seaforth/Clinton Area</td>
<td>172</td>
<td>225</td>
<td>221</td>
<td>206</td>
<td>194</td>
</tr>
<tr>
<td>Stratford Area</td>
<td>173</td>
<td>181</td>
<td>192</td>
<td>182</td>
<td>171</td>
</tr>
<tr>
<td>London Area</td>
<td>964</td>
<td>1113</td>
<td>1245</td>
<td>1107</td>
<td>1041</td>
</tr>
<tr>
<td>Woodstock/Ingersoll Area</td>
<td>250</td>
<td>299</td>
<td>300</td>
<td>283</td>
<td>266</td>
</tr>
<tr>
<td>Tillsonburg Area</td>
<td>105</td>
<td>118</td>
<td>139</td>
<td>121</td>
<td>113</td>
</tr>
<tr>
<td>St Thomas/Aylmer Area</td>
<td>225</td>
<td>242</td>
<td>280</td>
<td>249</td>
<td>234</td>
</tr>
<tr>
<td>Strathroy Area</td>
<td>123</td>
<td>121</td>
<td>146</td>
<td>130</td>
<td>122</td>
</tr>
<tr>
<td>West Lorne Area</td>
<td>44</td>
<td>51</td>
<td>54</td>
<td>50</td>
<td>47</td>
</tr>
<tr>
<td>Grand Total</td>
<td>2709</td>
<td>2989</td>
<td>3264</td>
<td>2987</td>
<td>2808</td>
</tr>
</tbody>
</table>

• Community Hub staff will ensure communication with primary care providers will be maximized and sustained, and they will function as an extended part of the primary care team.

• Engage a broad range of primary care providers for input into Community Hub nursing role and whether this role would be best filled by an RN-Extended Class with Certification or by a Nurse Practitioner.

Follow-up phone calls

Develop a centrally coordinated strategy from the Community Hub to provide stroke survivors with a follow-up phone call (or contact) after hospital discharge at one week*, 30 days, 90 days and yearly for up to five years to assess for needs (QBP 10.1.3), possible referral and/or re-entry into system, and to collect outcomes

*Research by Duane Bishop indicated follow-up should occur at baseline (48 hours, made by acute care facility; QBP 6.4.6) and 90 days. However, when stroke survivors and caregivers were engaged they reported that the time between 48 hours and 90 days...
Implementation Considerations

- A two-way service in which the stroke survivor or caregiver may call in with specific questions or needs as they arise (QBP 10.5.2).
- Call to be made by Hub Community Facilitator who will have knowledge of stroke and community services as well as be able to access a comprehensive resource listing and client record/community client database/registry in order to navigate services appropriately.
- For clients with aphasia, contact may be made through a primary informal caregiver or alternate arrangements made (i.e. visit), based on client preference. The Community Facilitator should be trained in Supported Conversation for Adults with Aphasia™.
- Follow-up contact at one week to include:
  a) provision of contact information so stroke survivors/caregivers have a contact for any questions/concerns arising prior to 30 day follow-up
  b) a question to ensure all expected services are in place or have made contact with the stroke survivor/caregiver
- In alignment with recommendations from the Assess and Restore approach to care, consider use of the Assessment Urgency Algorithm (AUA) screener tool as part of the follow-up phone call protocol to identify those at risk of loss of independence and need for enhanced community supports, and/or who may benefit from a more comprehensive geriatric-focused assessment, and/or re-referral to intensive community or bedded rehabilitative care.
- During these calls, clients who are unable to access the Hub and who may require ongoing support from a Rehabilitation Facilitator would be identified (consider AUA level of risk as an indicator). Stroke survivors to receive a screening call at three years to flag those at high risk in areas such as falls, decline in mobility, social isolation, and failure to thrive, who would benefit from continued follow up for up to five years.

Education

An education strategy will be developed and facilitated out of the Community Hub to provide standardized, foundational stroke education to community front line service providers, e.g., municipal recreation staff, and community support service staff and volunteers who work with stroke survivors, at minimum annually. (QBP Module 10 pg. 133)

Implementation Considerations

- It is recommended the Community Hub be responsible for organizing these education sessions in partnership with the Southwestern Ontario Stroke Network.
- Education should be provided annually and as needed/requested.
- Education to include basic stroke care knowledge and Supported Conversation for Adults with Aphasia™ for front line service providers, recreation service providers (e.g., YMCA), home care and support service workers, and the general public etc.

Remote Access to Specialized Consults

Develop the capacity, using existing and emerging technology, to ensure equitable access to specialized consults for stroke survivors across the South West LHIN (QBP 9.3.2) Cost of transportation is a considerable barrier, especially for those in rural areas who are required to travel to urban centres for specialist appointments.
- Specialized consults include, but are not limited to, physiatry, neurology, geriatrics, cardiology, neuro-psychiatry, neuro-optometry, neuro-psychology, specialized wheelchair and seating clinic.

**Medical Management of Orphan Patients**
A nurse practitioner (NP) will provide medical management for orphan patients until a primary care provider can be found. The NP supports the implementation and supervision of treatment recommendations provided by the urgent TIA clinics, carotid revascularization services, or specialized inpatient care.

**Implementation Considerations**
- *Capture data on the number of orphan patients by sub-LHIN region;* according to the South West LHIN, over 90% of residents have a primary care physician. Assuming 9% of stroke patients do not have a primary care physician, then there would be approximately 300 patients annually who would at least temporarily require an NP to cover their primary care needs across the LHIN.
- *Access sub-LHIN Integration Table to determine distribution of caseload for orphan patients by geographic area*
- *Align with Patients’ First Legislation and implementation where appropriate*

### 11.3.4 Rapid Specialized Medical Services

All recommendations related to Secondary Stroke Prevention (including recommendations for Community Hubs) align with provincial and national core elements documents and an evaluation will be developed as part of the implementation considerations, including accessing and building upon the Phase 1 Evaluation Dashboard.

**Emergency Department Management**
Individuals with TIA or minor stroke will have all core diagnostic investigations (i.e., CT, EKG, Carotid Imaging) completed at a regional or district stroke centre prior to discharge from emergency department (ED), according to the Canadian Stroke Best Practice Recommendations (QBP 1.6 and 2.4; CSBPR Secondary Stroke Prevention 1.0, 1.1, 1.2)

All persons with suspected TIA or minor stroke not admitted to hospital will be referred to an urgent TIA clinic (QBP Module 1 Implementation Considerations; Module 5a Implementation Considerations; CSBPR Secondary Stroke Prevention 1.1)

**Implementation Considerations**
- *Individuals with TIA and non-disabling stroke will have the core investigations completed at a regional or district stroke centre (QBP Module 1 Implementation Considerations). This will overcome access variability to CT across the South West LHIN and support a system wide and standardized approach in the ED for stroke and TIA*
- *Non-designated EDs will transfer the person as soon as TIA/stroke is suspected to a Designated Stroke Centre ED for the completion of any remaining diagnostics, including CT scan.*
- *Regional and District Stroke Centre EDs will be adequately resourced (human, diagnostic imaging, structural resources) to meet the increased volume of patients presenting in the EDs (QBP Module 1 Implementation Considerations)*
• An automatic and/or electronic referral process to the urgent TIA clinics would help avoid potential missed referrals and streamline the workload of the ED physicians.

• Communication between the EDs at the Regional and District Stroke Centres and the Non-designated Hospitals will be strengthened to avoid any unnecessary duplication of diagnostics.

• Timely communication will be established to inform primary care provider of referral to urgent TIA clinic and key pieces of information regarding patient services received in ED.

• Standardized TIA assessment and treatment protocols should be developed and utilized (QBP Module 1 Implementation Considerations).

• Consider education or other strategies to support the emergency department physicians at Regional or District Stroke Centres on TIA recognition.

Urgent TIA Assessment and Management

Individuals with suspected TIA or non-disabling stroke will be seen at an urgent TIA clinic at a Regional or District Stroke Centre within recommended urgency timelines for a comprehensive assessment and the creation of a recommended management plan, and referral to other specialized assessments as required (QBP 2.4; 5.10.1; 5.10.2).

During the implementation stage, it is recommended that opportunities be identified for improving the operations of Urgent TIA/Secondary Stroke Prevention Clinics, and changes be implemented as required. Following that, Process Consultants will re-evaluate staff workloads to make the final recommendations for staffing at these clinics.

Implementation Considerations

• Create and implement a LHIN-wide standardized referral form while optimizing the use of technology (i.e., electronic health records, electronic referral form)

• The existing Secondary Stroke Prevention Clinics will all become urgent TIA clinics focusing on the rapid assessment, diagnosis, and creation of a management plan with consistent standards of care and practice.

• Non-urgent secondary stroke prevention education and support, regarding implementing patients’ risk factor management plan, will take place in the Community Hubs.

• The clinics will be adequately staffed and resourced and will continue to be located at the 4 Designated Stroke Centres in the LHIN.

• Where-ever possible, strategies should be implemented to reduce the travel and cost burden of individuals coming to the clinics

• Timely, active communication with primary care provider should be maximized, including the potential for 2-way communication

• A “best practice” time frame for the primary care provider to see a patient after consultation in the urgent TIA clinic needs to be developed in consultation with primary care and specialists. This would be especially important if medication has been recommended but not prescribed in the clinic.

• Patients preference will be considered in where to access services

• Developing a local strategy to support the rapid access to diagnostics for referrals originating from primary care providers

• The scope of practice and hours of operation will be communicated to the referral sources

• For designated urgent TIA clinics, the host hospital will sustain the infrastructure and roles for stroke prevention focusing on those individuals at risk for subsequent stroke within its geographical catchment area, according to the Ministry of Health and Long term Care
Timely Carotid Revascularization

Assessment and appropriate interventions will occur within the recommended timelines for all potential carotid revascularization candidates. (QBP 5.1.7; CSBPR Secondary Stroke Prevention 8.0)

Implementation Considerations

- Individuals with stroke or TIA requiring an assessment for carotid revascularization surgery will be referred to a neurosurgeon or vascular surgeon for rapid assessment and triaged to interventionalist or surgeon
- Sufficient human and structural resources (i.e., OR time, staff) are required to support carotid endarterectomy or stenting within best practice recommended timelines
- Rapid access to CTA (computed tomography angiography) and pre-requisite blood work will be easily accessible to all patients referred for possible revascularization surgery (CSBPR Secondary Stroke Prevention 8.1.1; Consensus).
- The CTA report will accompany all referrals
- Strategies for primary care providers to obtain a rapid CTA for their patients should be implemented to provide equitable services to patients who are referred to surgeons directly from primary care
- Remote and in-person pre-operation clinics should be explored to optimize patient-centred care.
- Timely communication will be established to inform primary care providers of referral to clinic and key pieces of information regarding patient services received

Follow-up with Physician with Stroke Expertise

Individuals with a stroke or TIA who are admitted to hospital and require additional specialist care will be seen by a physician with stroke expertise for consultation after discharge (QBP 5.10.1).

Implementation Considerations

- When the discharge has occurred before all of the diagnostics/investigations have been completed or interpreted, a referral to the urgent TIA clinic should be considered (QBP 5.10.1).
- The need for a follow-up consultation will be determined by the physician with stroke expertise and the extended stroke team prior to patient discharge

Decision Algorithm for Primary Care

Create and implement a decision algorithm for primary care providers directing them to the most appropriate referral destination for patient who present to the office identifying symptoms of TIA/minor stroke (i.e., urgent TIA clinic, ED, Community Hub, etc.). (Consensus)

Implementation Considerations

- A coordinated strategy to disseminate and promote the uptake of the algorithm by primary care providers in the LHIN needs to be established (i.e., physician education, utilizing
centralized strategies to disseminate such as OMA, etc.), including the development of a plan for sustainability

- Explore incorporating the algorithm into the physician electronic medical record (EMR), respecting that there is no single EMR.
- The algorithm should be simple and streamlined, and updated at regular intervals in alignment with best practices

Communication and Transitions

A strategy is created and implemented to optimize timely communication between and within primary care providers, specialized stroke services, and the Community Hub throughout the patient journey in secondary stroke prevention (QBP 5.10.1).

Implementation Considerations

- Strategies to improve communication with primary care providers include:
  - Notification of ED visits and diagnostics results
  - Referral to urgent TIA clinic
  - Referral to the carotid clinic
  - Exploring options for bi-directional communication and consultation (i.e., optimizing use of e-consult)
  - Timely discharge summaries and consultation notes for all services
  - The scope of practice and hours of operation will be communicated to the referral sources

11.4 Key Enablers

- Standard Training for all stroke system staff to include Indigenous Cultural Competency Training and Supported Conversation for Adults with Aphasia Training
- Transportation
- Technology
- Cross Continuum Care Plan (QBP 9.4.6)
- Comprehensive Communication Plan to keep stakeholders informed as implementation planning progresses, and to engage the community as needed
- Relationship Building
- Existing infrastructure
- Implementation and Sustainability Plan
- Evaluation CSWO

Considerations

a. Stroke system staff (SIRT members, Community Hub staff, Rehabilitation Facilitator etc.) should have Indigenous Cultural Competency and Supported Conversation for Adults with Aphasia™ training.

b. Accessible, timely, low-cost transportation options should be available to people with TIA and stroke. Transportation should not be a barrier to receiving necessary services.
c. Build on the information technology infrastructure in the South West LHIN (Connecting South West Ontario) to support a common electronic health record that is shared across the continuum and accessible to all service providers who are part of the circle of care.

d. A comprehensive shared care plan should be in place that is accessible to all members of the interprofessional care team. Opportunities to partner with Health Links and Primary Care should be considered whenever possible. *(QBP 9.4.4 and 9.4.6)*

e. Create a centralized electronic referral process to support timely access to services and facilitate transitions.

f. Communication and relationship building between partners and across sectors will be key to the success of the future stroke system of care. Considerations should include warm referrals and warm hand-offs during transitions for people with TIA and stroke. For professionals, this could include collaboratively developing communication processes that reflect the needs of all parties.

g. Building upon existing infrastructure fosters client-centred partnerships, minimizes duplications and costs, and optimizes critical mass.

h. Establish local transition teams in each stroke sub-region to support the implementation of recommendations. These implementation teams will work together with the Sub LHIN Integration tables to implement the transition plan, where applicable.

i. An evaluation framework should be developed using specific standardized outcome measures for all components outlined in the directional recommendations.

**11.5 Capacity Planning - Modeling Assumptions**

**Note:** These analyses were performed to assist with regional planning of secondary stroke prevention and community rehabilitation resources in the South West LHIN. Analyses only include residents of the South West LHIN and, therefore, does not account for South West LHIN resources accessed by patients from outside of the LHIN or outside of LHIN services accessed by South West LHIN residents.

1. **TIA Non-disabling Incidence/transition rates:**
   - Includes all ED patients with diagnosis of TIA and patients with diagnosis of stroke who were not admitted to acute care (non-disabling stroke)
   - Local stroke experts estimated that 25% of 2015 SSP Clinic patients were referred from Primary Care (PC). 2015 SSPC volume was estimated at approximately 1200,\(^1\) therefore, incidence has been adjusted to account for these stroke/TIA patients not seen in the ED.
   - This adjustment was used to generate the 13.6% anticipated annual arrivals to primary care.

2. **Primary Care to:**
   - ED – Local experts estimate that 15% of patients who present in primary care should be sent to the ED for assessment.
Carotid Revascularization Clinic – Local experts note that consideration for direct referral to the revascularization clinic be available, but that this would be extremely rare (<1%).

3. TIA ED to:
   - Acute - 2015 proportion of TIA ED separations admitted to acute care at a designated stroke centre in the SW LHIN1
   - Urgent Clinic - Remaining TIA ED discharges

4. TIA Acute Care to:
   - Urgent Clinic – 2015 TIA patients discharged from acute care with a LOS ≤ 2 days1
   - Carotid Clinic – Estimate to be based on referral rate to carotid revascularization clinic (TBD)
   - Physician with stroke expertise – Estimate to be derived based on local consensus (TBD)
   - Primary Care & Hub only – All remaining

5. TIA Urgent Clinic to:
   - Carotid Clinic – Referral rate to be determined
   - Primary Care & Hub only – All remaining

6. TIA Carotid Revascularization Clinic to:
   - Carotid Intervention – Rate to be determined.
   - Primary Care & Hub – All remaining

7. Stroke Incidence:
   - Observed 2015 ED separations with primary diagnosis of stroke (including Query stroke)1

8. Stroke Acute Care to:
   - ESD – 15% based on literature based estimate2
   - Rehabilitation – 40% based on approximation of research and OSN benchmark target3-5
   - Urgent Clinic – 2015 home discharges with LOS ≤ 2 days1
   - Physician with stroke expertise - Estimate to be derived based on local consensus (TBD)
   - LTC SIRT – Proportion of patients discharged from acute care to LTC directly (TBD)
   - Primary Care & Hub only – All remaining

9. Stroke Inpatient Rehabilitation to:
   - ESD – All surviving patients discharged home
   - LTC SIRT – 5.1% estimate derived from OSN report on discharge to LTC post inpatient rehabilitation3

10. Stroke Specialized Intensive Rehabilitation Team to:
    - ADP – Jan 2014-Sept 2015 CSRT discharges with FIM 80-1006
    - RF – Jan 2014-Sept 2015 CSRT FIM <80 at discharge6
    - Primary Care & Hub only – All remaining
References for Assumptions

1. Canadian Institute for Health Information (CIHI): National Ambulatory Care Reporting System (NACRS) and Discharge Abstract Database (DAD).
6. Community Stroke Rehabilitation Teams (CSRT) administrative dataset.
11.6 Stroke Capacity Planning Document