South West
LOCAL HEALTH INTEGRATION NETWORK

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Aging at Home (2008/09)

Health System Improvement Proposal (H-SIP) Form

The Aging at Home Strategy has a strong focus on innovation and prevention in addition to enhancing existing services for seniors to enable them to stay healthy and live with independence and dignity in their homes. Proposals should be strategic demonstrating a comprehensive client-centered bundling of services that also address caregiver needs to improve access to a coordinated continuum of services for seniors aging at home.

Section 1: Name of lead organization and participating partners

Section 2: Proposed improvement summary

Section 3: Project description

Section 4: Service details and financial impact

Tip: Use TAB key to move from field to field.

Area Provider Table Alignment
(check all that apply)

☒ Grey Bruce Integrated Health Coalition (GBIHC)
☒ Huron Perth Providers Council (HPPC)
☒ South Service Providers Council (SSPC) *

***SSPC Only: Please indicate sub-group**

☒ London Health Providers Alliance
☒ Middlesex Providers Alliance
☒ Oxford Health System Integration Task Force
☒ Elgin Health Systems Planning Group

Ontario

Section 1 – Name of lead organization and participating partners

1.a Proposal Title

Specialized Community Stroke Rehabilitation Teams

1.b Name, address and email of Lead Organization

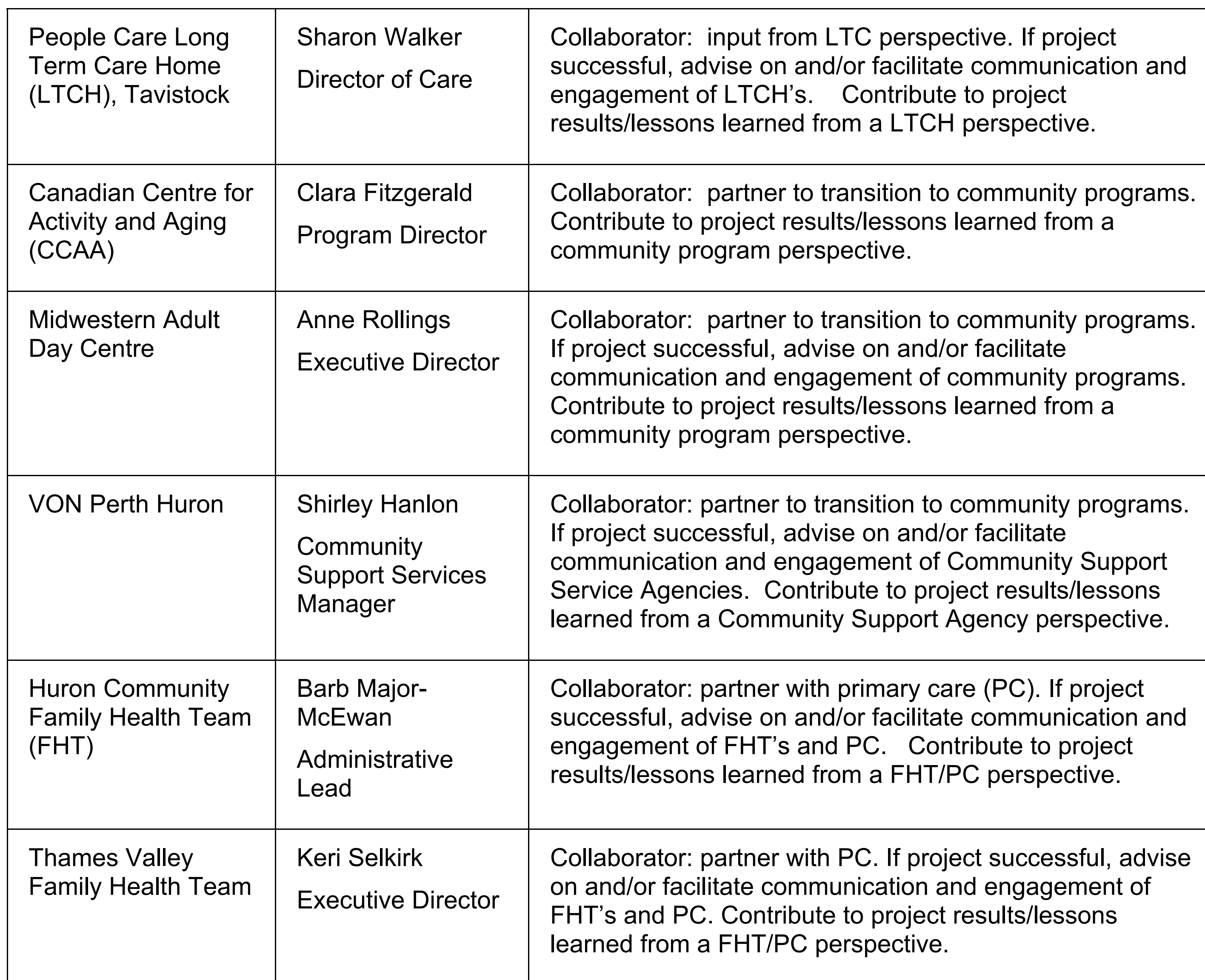
Contact	Christina O'Callaghan, Regional Program Manager
Org name	Southwestern Ontario Stroke Strategy (SWOSS)
Address	London Health Sciences Centre, 339 Windermere Road, London
E-mail	Chris.O'Callaghan@lhsc.on.ca
Telephone	519-685-8500 ext 32214

1.c Other Health Service Providers and Partners

Identify Health Service Providers that have collaborated in developing this proposal and the role of each partner organization.

Organization	Contact Information	Role of your organization
St. Joseph's Health Care, Parkwood Hospital (SJHC-PH)	Sharon Jankowski Director Rehabilitation Program	Partner: The specialized community stroke rehabilitation team for the south planning area will be based out of St. Joseph's Health Centre as part of the District Stroke Team. Provide experience and expertise in creating an innovative model for delivery of stroke rehabilitation in the community. Partner with SWOSS to provide education for the specialized team members and participate on the project advisory committee.

Huron Perth Healthcare Alliance (HPHA)	Mary Cardinal Program Director CCC and Rehabilitation	Partner: The specialized community stroke rehabilitation team for central planning area will be based out of Huron Perth Healthcare Alliance as part of the District Stroke Team. The partner will provide leadership for the central planning area implementation and participate on the project advisory committee.
Grey Bruce Health Services (GBHS)	Mark Landy Program Director Rehabilitation and Oncology	Partner: The specialized community stroke rehabilitation team for the north planning area will be based out of Grey Bruce Health Services as part of the District Stroke Team. The partner will provide leadership for the north planning area implementation and participate on the project advisory committee.
South West Community Care Access Centre (CCAC)	Nancy Dool-Kontio Senior Director, Strategic Planning and Integration	Collaborator: Collaborate on creating the proposal for a community team. In future, will support the community team by linking with CCAC support services (homemaking, personal care, respite etc.). Facilitate communication of program, referral processes etc within the organization. Contribute to project results/lessons learned from a CCAC perspective.
Tillsonburg Hospital	Julie Gilvesy Senior Executive Leader & Chief Nursing Executive	Collaborator: provide input to the proposal from the perspective of a small rural hospital. Facilitate communication of program, referral processes etc within the organization. Contribute to project results/lessons learned from a community hospital perspective.
COTA Health	Joanne Hardy Manager Client Services	Collaborator: provide input from community therapy provider perspective. If project successful, advise on and/or facilitate communication and engagement of community providers. Contribute to project results/lessons learned from a community provider perspective.
University of Western Ontario (UWO)	Dr. Dianne Bryant Director of the Facility for the Advancement of Musculoskeletal Health Research, Assistant Professor	Collaborator: provide evaluation support component (forms design, format, measurement timing, implementation), database design (specifications, testing, training, implementation), analyses (statistical planning, procedures, interpretation) and review of reports.



People Care Long Term Care Home (LTCH), Tavistock	Sharon Walker Director of Care	Collaborator: input from LTC perspective. If project successful, advise on and/or facilitate communication and engagement of LTCH's. Contribute to project results/lessons learned from a LTCH perspective.
Canadian Centre for Activity and Aging (CCAA)	Clara Fitzgerald Program Director	Collaborator: partner to transition to community programs. Contribute to project results/lessons learned from a community program perspective.
Midwestern Adult Day Centre	Anne Rollings Executive Director	Collaborator: partner to transition to community programs. If project successful, advise on and/or facilitate communication and engagement of community programs. Contribute to project results/lessons learned from a community program perspective.
VON Perth Huron	Shirley Hanlon Community Support Services Manager	Collaborator: partner to transition to community programs. If project successful, advise on and/or facilitate communication and engagement of Community Support Service Agencies. Contribute to project results/lessons learned from a Community Support Agency perspective.
Huron Community Family Health Team (FHT)	Barb Major-McEwan Administrative Lead	Collaborator: partner with primary care (PC). If project successful, advise on and/or facilitate communication and engagement of FHT's and PC. Contribute to project results/lessons learned from a FHT/PC perspective.
Thames Valley Family Health Team	Keri Selkirk Executive Director	Collaborator: partner with PC. If project successful, advise on and/or facilitate communication and engagement of FHT's and PC. Contribute to project results/lessons learned from a FHT/PC perspective.

Please list any additional contacts here:

Southwestern Ontario Stroke Strategy: Deborah Willems, Rehabilitation Coordinator; Paula Gilmore, LTC and Community Coordinator; Mary Solomon, District Stroke Coordinator Grey Bruce; Doris Noble, District Stroke Coordinator Huron Perth; Sharon Mytka, District Stroke Coordinator Thames Valley; Gina Tomaszewski, Regional Education Coordinator

St. Josephs Health Care, Parkwood Hospital: Eileen Britt, Coordinator Stroke Rehabilitation Program; Anna Bluvol, Clinical Nurse Specialist Rehabilitation

Section 2 – Proposed improvement summary

2.a Key directions addressed (check all that apply)

☒ Promoting wellness and healthy living;

☒ Supporting and caring for caregivers; and

☒ Supporting individuals at risk of hospitalization or long term care home placement.

2.b Type of improvement being proposed (check all that apply)

☒ Expansion/enhancement of existing service

☒ New service to community

☒ Improved service coordination for client

☒ Training/education

☐ Other (specify) [Enter here]

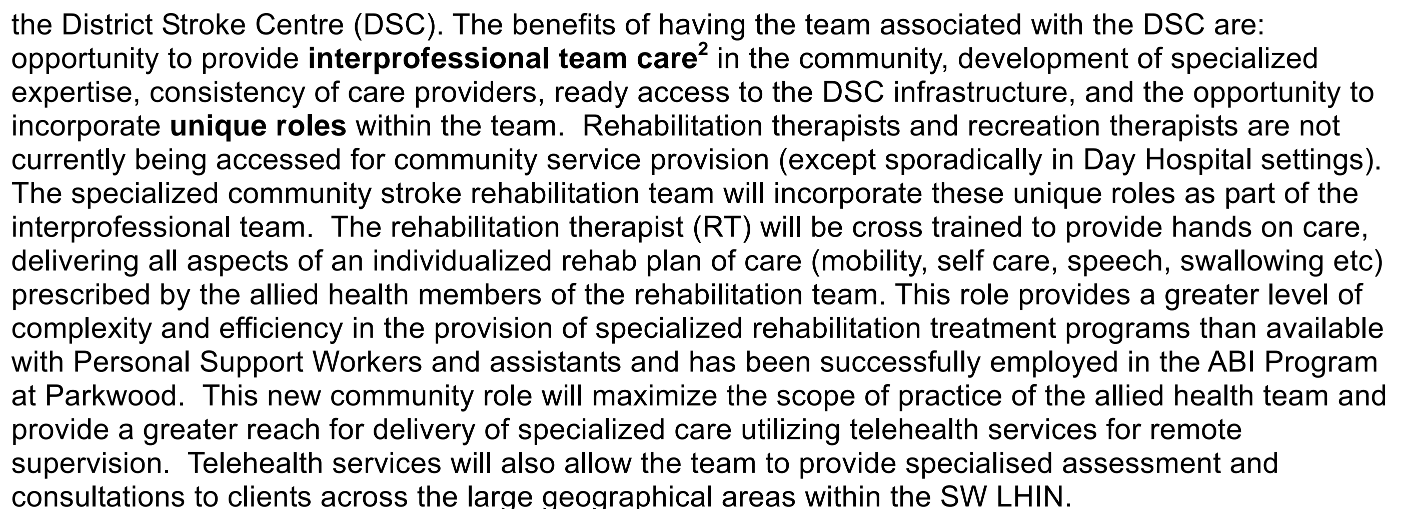
2.c Alignment with South West LHIN Integrated Health Service Plan (IHSP) and Aging at Home directions

South West LHIN Integrated Health Service Plan (IHSP): One of the IHSP priorities is "Building Linkages Across the Continuum – All Seniors and Adults with Complex Needs". Within this IHSP a specific Rehabilitation Priority Action Team (PAT) has been established addressing the rehabilitation needs of seniors and adults with complex needs. This project will also support the IHSP priorities of: Preventing and managing chronic illness; Accessing the right services, in the right place, at the right time, by the right provider.

The objective of the Rehabilitation PAT is to "Enhance rehabilitation services for seniors and adults with complex needs by examining and improving what rehabilitation services we deliver and how we deliver them by 2009/10". through:

Defining system requirements: The SWOSS held an Action Planning Day for Stroke Rehabilitation in November 2006 at which the following was identified as the **number one strategic priority** to address gaps in stroke rehabilitation for the South West (SW) LHIN
⇒ Create a regional plan for adequate ambulatory and community rehabilitation services post-stroke to ensure an efficient rehabilitation system[1].
Encouraging innovation: **New model of care:** A community stroke rehabilitation team will be hired as part of the District Stroke team, addressing the community portion of the care continuum and creating a fully integrated and coordinated model of stroke care. Building on the successful Ontario Stroke System model of a network of regional and district centres, the specialized community team will be affiliated with

[1] Willems D. SWO Stroke Rehabilitation Action Planning Day November 28, 2006 Summary Report, 2007



the District Stroke Centre (DSC). The benefits of having the team associated with the DSC are: opportunity to provide **interprofessional team care**[2] in the community, development of specialized expertise, consistency of care providers, ready access to the DSC infrastructure, and the opportunity to incorporate **unique roles** within the team. Rehabilitation therapists and recreation therapists are not currently being accessed for community service provision (except sporadically in Day Hospital settings). The specialized community stroke rehabilitation team will incorporate these unique roles as part of the interprofessional team. The rehabilitation therapist (RT) will be cross trained to provide hands on care, delivering all aspects of an individualized rehab plan of care (mobility, self care, speech, swallowing etc) prescribed by the allied health members of the rehabilitation team. This role provides a greater level of complexity and efficiency in the provision of specialized rehabilitation treatment programs than available with Personal Support Workers and assistants and has been successfully employed in the ABI Program at Parkwood. This new community role will maximize the scope of practice of the allied health team and provide a greater reach for delivery of specialized care utilizing telehealth services for remote supervision. Telehealth services will also allow the team to provide specialised assessment and consultations to clients across the large geographical areas within the SW LHIN.

The recreation therapist will assist clients and families with successful transition to full community reintegration by facilitating return to previous roles or establishing new roles and activities. Evidence supports the effectiveness of this role for stroke[3].

This team will **partner** closely with CCAC and Primary Care to provide an integrated, individualized plan of care for the stroke survivor in the community. Where the team provides direct care, service provision will be coordinated with CCAC support services (homemaking, personal care, respite etc.). Where CCAC is the primary provider of therapeutic interventions, the team will provide consultation and build capacity with CCAC service providers as needed.

Evidence informing practices: Specialized interprofessional stroke rehabilitation teams are a best practice. (Canadian Best Practice Recommendations for Stroke Care 2006)

Improving system navigation: The team will support the stroke survivor and caregiver with system navigation, problem solving and advocacy. The integrated model allows stroke survivors to be followed throughout the continuum of care.

Aging at Home directions:

Promoting Wellness and Healthy Living: Linking with primary care teams, CCAC providers and stroke prevention clinics to optimize secondary stroke prevention strategies will be a key function of the nurse on the team. The nurse will assess, coordinate and monitor strategies which may include medication management and education/support for risk factor reduction (smoking cessation, blood pressure control, exercise, diet, stress management, etc.). The team will also monitor and assess for depression in both the stroke survivor (33% experience depression[4]) and family caregiver. Team interventions will support

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[2] Interprofessional Care: A Blueprint for Action in Ontario *HealthForce Ontario* 2007

[3] Desrosiers J, Noreau L, Rochette A, Carbonneau H, Fontaine L, Viscogliosi C, Bravo G. "Effect of a Home Leisure Education Program After Stroke: A Randomized Controlled Trial" *Arch Phys Med Rehabil* 88:1095-1100, September 2007

[4] Hackett, M.L., Yapa, C., Parag, V. and Anderson, C.S. Frequency of depression after stroke. A systematic review of observational studies. *Stroke* 36:1330-1340, 2005

[5] Huijbregts MPJ, Teasell RW, Streiner DL, Myers AM. The Stroke Self-Management Program is associated with increased participation in community-dwelling stroke survivors. *Stroke* 36:476, 2005.

[6] Jankowski S, O'Callaghan, C. Stroke Rehabilitation Pilot Project Southwestern Ontario, A Regional Stroke Rehabilitation System: From Vision to Reality. December 2004

fuller re-engagement in the community facilitating access to existing community-based health promotion, fitness and prevention services.

Supporting and Caring for Caregivers: The Social Worker will provide caregiver support in the form of counselling and assistance with care coordination and advocacy. The team will support the caregiver by providing practical problem solving, education, self management strategies, system navigation, and connecting the survivor and caregiver with existing community supports and services. Such programs will include stroke recovery programs, caregiver support groups and adult day services. The team will also promote/assist with the uptake of evidence based community reintegration programs specific to stroke such as Living With Stroke and Moving On After Stroke[5].

Supporting individuals at risk of hospitalization or long term care home placement: Optimizing the rehabilitation that stroke survivors receive will optimize functional outcomes resulting in fewer long term care home placements. The Southwestern Ontario Stroke Rehabilitation Pilot Project (SWOSRPP)[6] demonstrated the ability of outpatient stroke rehabilitation services to reduce the number of discharges to LTC facilities and to help individuals successfully return home from LTC. Stroke is a chronic disease that leaves people at risk of multiple complications (cardiovascular, pressure ulcers, pneumonia, osteoporosis, balance impairment, fall/fracture risk, etc). Prevention of complications is best managed by a coordinated model of team care that follows the individual across the continuum of care. Supporting the caregiver and teaching the client and family to manage at home is expected to reduce hospitalization and long term care placement of stroke survivors living in the community.

2.d Alignment with innovation funding component

Please indicate if this proposal, or a component within, meets the following ***criteria for innovation*** *and therefore should be considered for innovation funding? (check all that apply)*

☒ Unusual, different or new concept;

☐ May not be proven; could have an element of risk;

☒ Variation on an existing service that includes a new method of service delivery, a new target population, or a service provider that has not traditionally provided health care services to the LHIN;

☒ May include a program that has demonstrated effectiveness in another jurisdiction, but has not yet been used in the LHIN;

☒ May include a program that has been tried on an informal basis, but not been formally funded or evaluated;

☐ May involve a process or technology from another discipline (such as education) that has not previously been used in health care or senior care;

☒ May require adjustments or innovations in other aspects of the system, such as policy, legislation, procedures;

☒ Intuitive, i.e. likely to provoke the reaction “That’s a good idea!” from both funders and consumers.

2.e Funding request:

	Year 1	Year 2	Year 3
Base	$1,242,500	$2,068,000	$2,126,500
One-time	$ 35,900	$ 1,200	$ 6,200

Section 3 – Project description (Maximum of 3 to 5 pages)

3.a Brief Description

A specialized community stroke rehabilitation team in **each** SW LHIN planning area will provide:

- Patient specific consultation
- Direct patient care in the appropriate setting
- Caregiver support
- System navigation and community re-integration
- Outreach education

We propose that a community stroke rehabilitation team be hired as part of each District Stroke team, addressing that part of the care continuum, thus creating a fully integrated and coordinated model of stroke care. The purpose is to enhance access to post hospital rehabilitation treatment, facilitate optimal recovery, promote secondary stroke prevention, facilitate transition and integration into the community and support the caregiver. This team will provide rehabilitation and prevention services in the community in a multitude of settings including homes, clinics, outpatient facilities and LTC homes based on the client's individual needs as well as outreach education/consults to build capacity in the region as requested (e.g. within community hospitals).

This project will build on the experience of the SWOSRPP[6] and incorporate a successful and innovative model used by the Acquired Brain Injury (ABI) Rehabilitation services (stroke has similar complexity of rehab needs as ABI).

This team will consist of:
Nursing, Physical Therapy (PT), Occupational Therapy(OT), Speech Language Pathology(SLP), Social Work (SW), Recreation Therapy, and Rehabilitation Therapy(RT). One coordinator and an administrative assistant will support the three teams. The team will have a strong partnership with family physicians. It will also facilitate access via consult with other services including dietary, pharmacy and physiatry as needed.
Model: A team of rehabilitation professionals with stroke expertise that includes two rehabilitation therapists per team. RTs are trained to provide a single plan of care utilizing a full scope of interprofessional practice that incorporates all aspects of care (mobility, self care, speech, swallowing etc) based on the recommendations of the rehabilitation team. In this way, individualized programs of care can be provided in the setting that best meets the client's needs. The use of RTs allows the reach of the allied health team to be extended, optimizing use of health human resources. This model also supports the use of videoconferencing for delivery of specialized care.

We are proposing a model of community stroke rehabilitation with the following attributes:

- Custom-tailored to each patient's need.
- Flexible frequency, duration, intensity and combinations of services
- Flexible environment in which to conduct interventions – home, community, work, clinic, outpatient setting.
- Collaborative goal setting and rehabilitation plan development with the client and their family
- Interprofessional team care delivered by professionals with expertise in stroke rehabilitation
- Evidence and measurement-based
- Outreach and consultation services that would build capacity and expertise in the region for post stroke care
- Accessible and responsive transportation would be required for some.

Population: Post hospital care for persons with a diagnosis of stroke who have ongoing rehabilitation needs. In FY 20005-06 in the SW LHIN there were 1374 stroke patient admissions to hospital[7]. It is estimated that up to 40% will be referred to this program. Outreach/consultation may also be provided in hospital where specialized rehabilitation services are not available.

Catchment area: A team in each planning area North, Central and South will be created based on the needs of that area. Catchment will then include the geographic region of that planning area so that the entire SW LHIN region will be served.

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[7] Ontario Stroke Evaluation Report 2006: Technical report, Table 1.5, CIHI Discharge Abstract Database, 2007

3.b Rationale

- Stroke is a disease of the elderly. The risk of stroke doubles every 10 years over the age of 55[8]. Projected growth in seniors in SW LHIN 2006-2016 is 31%.
- Stroke is the leading cause of adult disability in Canada. The Canadian Community Health Survey (2003) reported over 9,000 stroke survivors living in the SW LHIN. Up to 87% of stroke survivors returning to the community are left with functional limitations.
- Post-acute rehabilitation services have been eroded creating a fragmented and inequitable delivery system. Significant variability exists in access to service across the LHIN such that in some communities private services are the only option.
- Functional scores on admission to inpatient rehabilitation[9] are much higher than in the USA[10] (78 vs 61). The need to admit individuals for rehabilitation with higher levels of functioning likely reflects the lack of rehabilitation services available in the community.
- Recovery post stroke occurs rapidly for the first 3 months and continues beyond that. Shortened hospital lengths of stay (both acute and inpatient rehabilitation), combined with a lack of publicly funded post hospital rehabilitation services means that stroke survivors are not receiving services at an intensity beneficial for recovery in the critical period of time during which recovery can be optimized.
- A survey of publicly funded ambulatory services for stroke confirmed that access to interdisciplinary team care for stroke rehabilitation services is not widely available in the SW LHIN.
- CCAC data for LHIN 1 & 2 indicates low levels of service of therapies for stroke survivors: 66% do not receive Occupational Therapy, 75% do not receive Physical Therapy, 90% do not receive Speech Language Pathology[11].
- Therapy based rehabilitation services for patients living at home after stroke reduces the odds of a poor outcome i.e. death or deterioration in ability to perform activities of daily living, and has a beneficial effect on a patient's ability to perform personal activities of daily living and extended activities of daily living[12].
- Research has shown that training care givers during patients' rehabilitation reduced costs and caregiver burden while improving psychosocial outcomes in care givers and patients at one year[13].

Stroke Rehabilitation Pilot Project Southwestern Ontario, A Regional Stroke Rehabilitation System: From Vision to Reality 2004[5] A Stroke Rehabilitation Outpatient Service was created for stroke survivors with severe disability.

Key Benefits of the Outpatient Service :

- Improvement was demonstrated in all functional measures at follow-up 6 months post-discharge.
- The comparison group, on average, declined in function and rated their quality of life significantly less than the pilot group.
- Caregivers showed improvement in their quality of life.
- Consumer satisfaction results (% positive) were ≥ 90%
- Average cost savings to the health care system per client (annual cost of LTC – total cost of OT, PT, SLP treatment provided) of $41,152 per year each for the 7 clients that avoided institutionalization and $35,000

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8 Heart and Stroke Foundation of Ontario. Towards An Integrated Stroke Strategy for Ontario: Report of the Joint Stroke Strategy Working Group. *Ministry of Health and Long-Term Care.* June 2000

9 Ontario Stroke Evaluation Office. Integrated Stroke Care in Ontario: Stroke Evaluation Report 2006. July 2007

10 Gassaway J, Horn S, DeJong G, Smout R, Clark C, James R. Applying the Clinical Practice Improvement Approach to Stroke Rehabilitation: Methods Used and Baseline Results *Arch Phys Med Rehabil.* 86(Supp 2):S16-S33, Dec 2005

11 Ontario Stroke Evaluation Report 2006: Technical Report, Home Care Database, 2007

12 Outpatient Service Trialists. Therapy-based rehabilitation services for stroke patients at home (Review). *The Cochrane Library 2007*, Issue 1

13 Kalra L , Evans A, Perez I, Melbourn A, Patel A, Knapp M, Donaldson N. Training carers of stroke patients: randomized controlled trial. *BMJ* 328:1099-1104 May 2004

each for the 4 clients returned home from LTC placement.

Outreach Service:
Demonstrated the value of "just-in-time" access to client specific consultation for stroke survivors and education/training related to stroke rehabilitation. Evaluation of the education component showed significant improvement in self-ratings by the participants which were sustained after three months.

Canadian Best Practice Recommendations for Stroke Care 2006:
5.6 Stroke survivors should continue to have access to specialized stroke care and rehabilitation after leaving hospital (acute and/or inpatient rehabilitation). (Evidence Level A)
6.1 People living in the community who have difficulty with ADL should have access, as appropriate, to therapy services to improve, or prevent deterioration in ADL. (Evidence Level 1)

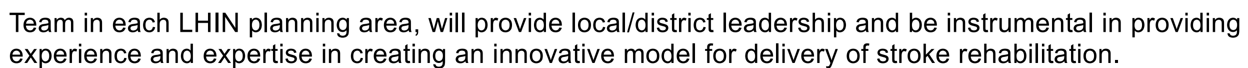
Ontario Consensus Panel on the Stroke Rehabilitation System 'Time is Function' 2007
Standard 7: Stroke survivors will receive the appropriate intensity and duration of clinically relevant therapies across the care continuum based on individual need and tolerance. (Evidence Level 1) Mild stroke: Stroke survivors discharged to the community will be provided with ambulatory services for one hour of each appropriate therapy, two to five times per week, as tolerated by the patient and as indicated by patient need.

3.c Benefit to the community

Benefits of a specialized community stroke rehabilitation team:
- earlier discharge from inpatient settings
- reduced dependence on hospital services
- integrated model of care across the continuum
- more efficient, cost effective rehabilitation system
- timely access to appropriate care and service
- improved functional outcomes; more discharges home with reduced long term reliance on the health care system resulting in cost savings
- coordinated, interprofessional care that optimizes utilization of health human resources
- individualized management of secondary prevention and health promotion strategies and reintegration into the community
- improved system navigation and integration of services between hospitals, primary care, CCAC, community support services and LTCH
- increased access to assistive devices
- support provided to caregivers through specialized team services
- adoption of best practices and capacity building
- specialized services available in the setting that best meets the clients' needs
- increase in client and family satisfaction and quality of life

3.d Collaboration

- A project advisory committee consisting of the key stakeholders involved with the development of this proposal will continue with a focus on implementation and evaluation.
- SWOSS in partnership with SJHC-PH will lead the implementation of the Specialized Community Stroke Rehabilitation Teams (SCSRTs), assisting the Coordinator to develop and implement an innovative model for delivery of stroke rehabilitation in the community including the development of policies and procedures, forms, tools, a communication strategy and an evaluation framework to ensure consistency across the SW LHIN. The SWOSS and SJHC-PH will also provide educational support to enhance the expertise of the interprofessional team members in all three planning areas. Support for the three teams to network, share information, tools and lessons learned will be provided by the SWOSS.
- SJHC-PH, HPHA and GBHS will provide space and manage the three SCSRTs as part of the District Stroke



Team in each LHIN planning area, will provide local/district leadership and be instrumental in providing experience and expertise in creating an innovative model for delivery of stroke rehabilitation.

- SW CCAC will collaborate with the SCSRTs in each geographic area to develop a comprehensive care plan for the stroke survivors and caregivers and provide support services as required (e.g. homemaking, personal care and respite etc.). The SW CCAC will also assist with the navigation of the stroke survivor to other community services (e.g. Adult Day programs, community exercise programs etc.).
- If the proposal is accepted, our PC Partners have offered to provide a leadership role to facilitate communication and engagement of FHT's and PC, enabling linkages with the SCSRTs in each geographic area in order to provide comprehensive care for stroke survivors and their caregivers.
- It is expected that our LTC partners will work with each team to provide best practice stroke care to residents in LTC (including LTC staff receiving stroke education and outreach services from the teams). The teams will work with the restorative care staff and physical therapy providers in each LTC home to plan and provide the best care possible.
- It is expected that Community Support and Therapy Service providers will work with the SCSRTs to provide best practice stroke care and minimize duplication of services for each individual client as well as collaborate to transition stroke survivors to existing community services and programs.
- CCAA will provide input to the teams on how to transition stroke survivors into community programs as well as assist geographic areas to develop community exercise programs and provide training to leaders facilitating these programs.
- UWO will provide support to evaluate the program.

3.e Health system sustainability

Final Report of the Thematic Scan of Canadian and International Literature on Health System Responses to Aging Populations Hollander Analytical Services Ltd. March 2007
"Integrated care delivery systems provide better opportunities for seamless care and enable cost-effective trade-offs between, for example, home care and residential and acute care services. "

A Blueprint for Stroke Rehabilitation: Improving Outcomes and Maximizing Efficiencies[14]
Based on the results from three Randomized Controlled Trials, there is strong evidence that additional hospital-based outpatient therapy improves short-term functional outcomes compared to routine care. Outpatient therapy is an essential element of stroke care, yet it is often one of the first casualties of hospital cuts. Unfortunately, this is a shortsighted strategy, which ultimately increases costly inpatient length of stay. An outpatient stroke rehabilitation program could significantly improve outcomes with many more patients able to return home and improve FIM scores over time.
The cost-savings associated with the implementation of an outpatient stroke rehabilitation program are related to reduction of hospital and LTC services estimated at:
$750/day for acute care
$500/day for inpatient rehabilitation
$118/day ($43,000 per year) for LTC bed

Depression post-stroke often goes untreated. The economic impact of treating depression post-stroke is equivalent to that of treating hypertension post-stroke (approximately $17-18 million per annum in Canada).

Stroke Rehabilitation Pilot Project Southwestern Ontario, A Regional Stroke Rehabilitation System: From Vision to Reality 2004[5]
Average cost savings to the health care system per client (annual cost of LTC – total cost of OT, PT, SLP treatment provided) of $41,152 per year each for the seven clients that avoided institutionalization and $35,000 each for the four clients returned home from LTC placement.

Training care givers of stroke patients: economic evaluation (BMJ 2004) Total health and social care costs over one year for patients whose care givers received training were significantly lower.

[14] Teasell R, Foley N, Salter K, Ricci M, Pretty J, Moses M, Evans M, Jutai J. A Blueprint for Stroke Rehabilitation: Improving Outcomes and Maximizing Efficiencies. *Canadian Institutes for Health Research* April 2007

3.f Performance Measures and Evaluation

- Shorter hospital Length of Stay (both acute and rehabilitation)
- Fewer hospital readmissions
- Greater access to publically funded outpatient/community rehabilitation services
- Fewer admissions to LTC
- Reduction in stroke risk factors (smoking, diet, blood pressure, inactivity, stress, medication adherence)
- Greater functional recovery: Functional Independence Measure scores at three and six months post stroke that continue to increase
- Improvement in community reintegration: Reintegration to Normal Living Index and Leisure Satisfaction Scale
- Reduced caregiver burden: Caregiver Strain Index
- Reduced incidence of depression in stroke survivor and caregiver (Center for Epidemiological Studies Depression Scale (CES-D)).
- Improved health related Quality of Life: Stroke-Adapted Sickness Impact Profile (SA-SIP30)
- Cost analysis

The Ontario Stroke System (OSS) currently collects key indicators for stroke care and will provide CIHI administrative data.

3.g Implementation Challenges

- *Health Human resource shortages:* the role of the rehabilitation therapist will optimize the knowledge and reach of other allied health members. It is unclear whether the positions on this team will be permanent or not. This will affect our ability to recruit.
- *Competing priorities, loss of support of key stakeholders if other health system initiatives are a greater priority:* the SW LHIN will need to identify improvements in the rehabilitation delivery system as equal to current priorities e.g. wait time strategy, primary care reform.
- *Medical support:* our FHT partners have offered to provide a leadership role in engaging family physicians.
- *LTC 'double dipping':* The SW LHIN will be required to support the provision of specialised services in addition to current funded services in LTC Homes.
- *Patients can't access the system independently:* The Public Hospital's Act requires a physician referral for hospital based outpatient services. This will pose a problem for 'orphaned' patients wishing to access outpatient services. The intake process will develop strategies to facilitate access and address this issue.
- *Need is so great that the team services may not be sufficient to meet it:* the team will incorporate strategies to integrate their services with other services (private, CCAC, etc.)

3.h Communication and Knowledge Transfer

Involvement of the SWOSS will ensure knowledge transfer within the SW LHIN regarding uptake and monitoring of stroke best practices.
A partnership with the UWO will provide formal evaluation of outcomes as this initiative is implemented.
Linkages with the OSS will ensure sharing of project learnings across the province including broad dissemination to appropriate stakeholders, including health professionals, researchers, policy-makers, educators and the public.

Section 4 – Service details and financial impact

Service/volume details *		
Proposed service change (volume/outcome)	**Details** (i.e., additional number of visits, units of service, services provided or residents/clients served)	**Service code** (if applicable)
☐ No change	[Enter here]	
☒ Increase/New	550 new patients per year (estimated 40% of 1374 acute stroke admissions) with additional referrals from the current 9,000 living in the LHIN with stroke that is difficult to estimate	
☐ Decrease	[Enter here]	

Financial details				
	Details	**$ 2008/09**	**$ 2009/10**	**$ 2010/11**
☐ No new funding required	[Enter here]			
☐ Savings identified	[Enter here]			
☒ One-time project funding (ongoing funding not required)	Evaluation: Year 1 database programming Year 2 maintain database Year 3 maintain database (1,200) statistical analysis and report review (5,000)	6,000	1,200	6,200

☒ Start-up funding (one-time)	☐ Consultation/training ☐ Staff ☒ Other (specify) computers, IT, phone hookup	 29,900		
☒ Base operating	☒ Staffing (with 3% COL per year) ☒ Supplies ☒ Other (specify) travel	1,170,500 6, 000 66,000	1,952,000 6, 000 110,000	2,010,500 6, 000 110,000
☒ In-kind contributions	☒ training ☒ office space, equipment ☒ Staff indirect costs (heat, light, support services budgeted at 25%) ☒ SWOSS and key partner leadership	2,000 46,000 292,625 90,000	1,000 488,000 40,000	1,000 502,625 40,000

**Do not be constrained by existing service codes if not applicable to new strategies*

4.a Does the proposed improvement require capital? (check all that apply)

☐ Renovation

☐ Expansion

☐ Equipment investment

☒ Information technology (IT) investment

4.b If the proposed improvement involves a capital project, *provide a brief description of the capital project and indicate whether or not you have submitted a capital request to the Ministry of Health and Long-Term Care (MOHLTC).* Eleven Computers @ $2,000 each = $22,000. One each for the Coordinator and Program Secretary and 3 more per team for team members to share.

☒ **No**

☐ **Yes** *Please provide date and MOHLTC Capital Branch consultant assigned to your request (if known):*

[Enter here]

4.c Has this proposal form been submitted to other LHINs?

☐ **No**

☒ **Yes** *Please indicate which LHINs*

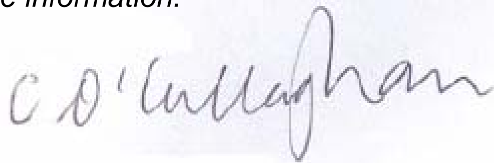
A similar proposal has been submitted to the Erie St Clair LHIN. This one has been adapted based on larger geographical areas in the South West LHIN.

4.d Please provide estimated timelines for project development and implementation from April 2008 to March 2009 and beyond if applicable.

The Project Advisory Committee will be reconvened to oversee the implementation and evaluation of the project. The team coordinator and administrative assistant will be hired when funds are received in April 2008. The coordinator, along with the regional Stroke Strategy team, SW LHIN partners and area District Stroke leads will develop intake procedures and a communication strategy, create necessary partnerships and linkages, organize workspace, equipment and IT support, draft job descriptions, job postings and coordinate interviews/hiring procedures for the rest of the team. The full treatment teams would then commence employment in September 2008.

Signature

I acknowledge that this submission is not formal notice of a proposed integration to the LHIN as contemplated by s. 27 of the Local Health System Integration Act, 2006 ("LHSIA"). Health service providers wishing to provide notice to the LHIN of a proposed integration under s. 27 of LHSIA should contact the LHIN for more information.

Signature: 

Name: Christina O'Callaghan

Title: Regional Program Manager, Southwestern Ontario Stroke Strategy

Date: 07/01/08

Please e-mail completed form to:

Cathy Ferrie cathy.ferrie@lhins.on.ca

Program Assistant, Planning, Integration and Community Engagement

South West LHIN

(519) 672-0445, ext. 211 / 1 866 294-5446