



BC Stroke Strategy

Providing Optimal Stroke Rehabilitation and Community Reintegration in British Columbia:

Addendum

May 2010

Final



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1.0 ADDENDUM

The process that resulted in the creation of the BC Rehabilitation and Reintegration Service Delivery Framework (SDF) considered many factors important to stroke rehabilitation and community reintegration that were not central to the description of the SDF. The Expert Advisory Group did not want this material lost to their clinical counterparts across the country and other groups who will read the Service Delivery Framework as a clinical decision tool for stroke care.

The supplementary material in the "Addendum" document is arranged topically with planning considerations being followed by clinical factors. It is hoped that this material will form part of the growing body of knowledge that is informing and improving stroke care and specifically, rehabilitation and community reintegration service delivery across Canada.

1.1 Health Planning Frameworks in BC

The health care planning context for stroke rehabilitation and reintegration is shaped by policy and planning models that are supported by the BC Ministry of Health. Among the key frameworks that have been developed for integrating health care delivery for chronic disease populations are the Integrated Health Networks Strategy (IHN), the Expanded Chronic Care Model (ECCM) and the Service Frameworks Matrix Model (SF).¹

1.1.1 Frameworks for Stroke/ACVS Care in BC

In addition to the three provincial planning models, the Canadian Stroke Strategy (CSS), initiated under the leadership of the Canadian Stroke Network and the Heart and Stroke Foundation Canada, is working towards the goal of developing and implementing a coordinated and integrated approach to stroke care in every Province and Territory in Canada. In 2006 the CSS Best Practices and Standards Working Group produced the "Canadian Recommendations for Stroke Care". This document was updated in 2008 and complements further work done by the same group, the Implementation of Stroke Units (2009).² Both documents were used to inform the work of the BC Stroke Rehabilitation and Community Reintegration Working Group. The Service Delivery Framework closely relates to the recently completed British Columbia Acute Cerebrovascular Syndrome (ACVS) Clinical Leadership Consensus Statement (December 2008) and the Accreditation Canada standards and guidelines for acute and rehabilitation stroke care (under development).³

¹ Barr, V.J., Robinson, S., Marin-Link, B. et al. "The Expanded Chronic Care Model: An Integration of Concepts and Strategies from Population Health Promotion and the Chronic Care Model." *Hospital Quarterly*, Vol. 7(1):73-82, 2003.

² Canadian Stroke Strategy, Best Practices and Standards Working Group, *Implementation of Stroke Units* (2009).

³ Heart & Stroke Foundation, BC & Yukon, *Providing Optimal Stroke/Acute Cerebrovascular Syndrome Care in British Columbia: A Clinical Leadership Consensus Statement* (December 2008).

1.2 Stroke Rehabilitation Treatment Considerations

1.2.1 Low Tolerance Long Duration Stroke Rehabilitation

The Greater Toronto Area Rehab Network conducted several Low Tolerance Long Duration (LTLTD) stroke demonstration projects to show the characteristics and outcomes of stroke survivors following LTLTD stroke rehabilitation.⁴ The pilot projects were conducted with no external funding added to participating facilities. Data was collected on patients admitted to LTLTD stroke rehab programs from October 1, 2004 to September 30, 2005 in three types of settings: stand-alone complex continuing care (CCC), acute care with designated rehab beds and complex continuing care beds, and a long-term care home (LTCH). Information on demographics and functional outcomes were collected using the data sets included in the National Rehabilitation Reporting System (NRS-FIM™ and Continuing Care Reporting System (MDS).

The MDS tool is used Canada-wide in CCC facilities to provide information about the resources that are required to care for stroke patients in LTLTD and to underpin the funding formula for stroke patients in complex continuing care facilities.

The key findings of the project included the following:

1. The patients admitted were medically complex with an average of 5 to 7 co-morbidities. The most frequently occurring co-morbidities were hypertension, hemiplegia, coronary artery disease, ischemic heart disease, diabetes and osteoarthritis.
2. Despite differences in service delivery models among facilities, the majority of patients (88%) showed functional improvement and a reduction in burden of care. Functional gains were also seen in patients who had extended wait times in acute care; however, it should be noted that the degree of functional gain made by these patients had they entered LTLTD rehab earlier could not be determined.
3. Almost half (46%) of the patients were able to return home. An additional 20% of patients were discharged from the LTLTD program to a regular rehabilitation program. Further, the limited MDS data available indicated that some patients required fewer care resources at the time of discharge, resulting in an overall reduction in health care costs.
4. Greatest functional gains were seen during the first 3 months of rehabilitation, but substantial gains were also seen during the 3 – 6 month period. Waitlist information suggested that the demand for LTLTD stroke rehab beds exceeded the number of beds available.
5. The FIM™ instrument may not always be sensitive enough to capture smaller changes in functional levels for patients with very severe stroke.

⁴ GTA Rehab Network, Low Tolerance Long Duration (LTLTD) Stroke Demonstration Project, Final Report (2006).

Challenges:

The absence of designated funding presents a significant barrier for most health regions to make programming designations such as LTLD rehabilitation programs that require investment in specialized teams. Also, LTLD stroke rehabilitation is a slower-paced program, geared towards the older stroke patient who may exhibit a lower tolerance with a longer length of stay. As a result, LTLD stroke rehabilitation does not conform to the funding formula established for regular rehabilitation beds. The GTA pilot project witnessed long wait times for stroke patients who wished to access the LTLD beds. Appendix A presents a summary of the key elements included in Low Tolerance Long Duration Stroke programs.

British Columbia does not have any LTLD rehabilitation beds in its current bed stock and when necessary, refers stroke patients requiring specialized LTLD rehabilitation to the Halvar Johnson Brain Injury Rehabilitation Centre in Ponoka, Alberta. The Centre serves clients with non-progressive brain injury between the ages of 16 and 65 years of age who are medically stable. The 48-bed inpatient program is located within the Centennial Centre for Mental Health and Brain Injury. The typical length of stay is between nine to 18 months depending on the severity of injury and needs of the client.

The benefits of developing these resources for British Columbia could match the positive outcomes of the Toronto demonstration project and the Halvar Johnson Brain Injury Rehabilitation Centre in Alberta. If a similar project was to go ahead in British Columbia, the challenges faced by the Toronto participating facilities would have to be met by the funding bodies and project developers.⁵

1.2.2 A Word on Patient Flow

For severe strokes, there is Level A evidence of the benefits of inpatient rehabilitation. However, it is sometimes difficult in the case of a severe stroke to determine with certainty whether the stroke survivor is rehab ready or not. There is concern that the stroke survivor may not be admitted to an inpatient rehabilitation program for a trial period and the rehab team may not continue to assess rehab readiness.

The Working Group expressed concerns that many older survivors of severe stroke were discharged to Continuing Care facilities without the benefit of a trial in stroke rehabilitation. The Working Group believes that all stroke survivors “should have timely (rapid) access to the appropriate intensity and duration of rehabilitation services,” as stated in the vision of the BC Stroke Strategy.

The discharge of stroke survivors to a Continuing Care facility without a trial period of stroke rehabilitation should only happen as an exception, if, for example, the person has severe cognitive or behavioural impairments that interfere with that person’s ability to participate and learn immediately after the stroke event. The stroke survivor should be assessed by relevant rehabilitation professionals who possess the necessary skills to determine the needs and rehab

⁵ GTA Network, *Low Tolerance Long Duration (LTLD) Stroke Demonstration Project*. Final Report (2006).

readiness of the stroke survivor. For example, stroke survivors with a speech problem should be assessed by a speech-language pathologist (SLP); survivors with a mobility problem should be assessed by a physiotherapist (PT). An interdisciplinary team assessment is required for all cases.

The Working Group recognizes that some inpatient stroke rehabilitation units are reluctant to accept a stroke survivor if there is a risk that the patient will not be discharged home at the end of the rehabilitation program, and there might be a delay in securing a Continuing Care bed when the rehabilitation services are completed. Barriers to accessing these downstream resources are currently limiting access to inpatient rehabilitation for this population for whom the evidence shows there would be benefits. These policy barriers need to be addressed at the regional level.

1.2.3 Special Needs for Stroke Survivors with Aphasia

Aphasia affects each individual differently depending on the extent and location of the brain damage resulting from the stroke. Stroke survivors with mild aphasia experience some difficulty with self-expression; whereas, stroke survivors with severe aphasia have a much greater difficulty with self-expression.

Some stroke survivors lose the ability to speak because of aphasia, but are still able to write down what they want to say. Others may lose the ability to both write and speak. Some people with aphasia no longer understand what you are saying to them. Or, they may understand when you speak in their first language but not in a second language that they should know how to speak. To better understand how someone with aphasia is functioning - think about being alone in a foreign country where you do not understand the language. You cannot make your needs understood and when people speak to you and you don't understand them.

It is important to remember that someone with aphasia can retain many of the cognitive and social skills he or she had prior to the stroke. However, these skills may be hidden or masked by the language disorder. So, individuals with aphasia may appear to be less competent, and as a result, may be treated as though they are less competent. This can result in decreased participation in all aspects of social and community life, with potentially devastating consequences to self-esteem and quality of life.

Speech-language therapy can be effective in treating aphasia; however, research confirms that timing and intensity of treatment are very important.⁶ Often, patients spend a short time in treatment and return home where they do not receive speech therapy. It is important to continue with therapy for extended periods so that the person who has had a stroke can continue to improve. Research has shown that both individual and group therapies are effective, but the goals of each type of therapy differ. Individual therapy may be the best format for restoring speech, while group therapy addresses conversational abilities and social skills.

⁶ Teasell, R, et al EBSR, <http://www.heartandstroke.ca/profed>

Aphasia is stressful for the whole family. Some research shows that participating in educational sessions is beneficial for family members and friends, since it can help to gain awareness and knowledge about aphasia.

1.2.4 Timing It Right

Cameron and Gignac⁷, present a 5-phased approach to providing support and education to the stroke survivor and their caregivers, throughout the care continuum. This “Timing It Right” approach to caregiver support recognizes that there are different learning needs and capacities at different points in the stroke survivor’s journey back to community reintegration. The “Timing It Right” approach:

- Considers timing, setting, support needs, modifiable outcomes
- Is used with other theoretical approaches (e.g., social learning theory)
- Addresses phase-specific needs to enhance caregiver preparedness and ease transitions across care environments

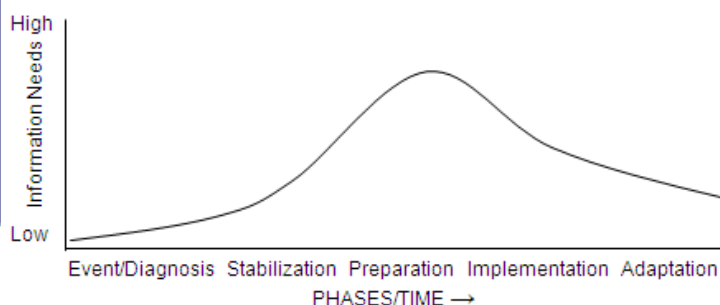
The five phases of support and education include:

1. Event/diagnosis } Acute Care
2. Stabilization } Acute Care
3. Preparation } Acute/Rehab
4. Implementation } Home
5. Adaptation } Home

This phased approach to community reintegration support needs is reflective of the differing levels of ongoing education, care and support required initially following the stroke episode, in acute care, in rehabilitation, immediately post-discharge and ongoing.

⁷ Cameron, JI, Gignac, MA, “Timing It Right: A Conceptual Framework for Addressing the Support Needs of Family Caregivers and Stroke Survivors From the Hospital to Home.” *Patient Educ Couns* 2008, Mar 70(3):305-14, 2007.

Growing Information Needs



Department of Occupational Science and Occupational Therapy

Source: Cameron, Jill: "Timing It Right: Giving Family and Caregivers the support they need when they need it." Conference presentation (2008)

1.3 Key Indicators for Stroke Rehabilitation Evaluation

At this time, a uniform provincial stroke rehabilitation database does not exist. The development and use of indicators to monitor stroke rehabilitation services is challenged by significant gaps in the availability of useful data. Table 1 identifies six indicators that can provide a quick summary of progress against key standards. For ambulatory and other community settings, standardized data is not readily available.

Table 1: Key Performance Indicators for System Evaluation

	Standard	Dimension	Indicator
1	Screening and assessment	Median time from hospital admission for acute stroke to initial rehabilitation assessment by relevant rehabilitation professionals during inpatient acute stay.	
2	Screening and assessment	Percentage change in standardized outcome measurement tools from admission to inpatient rehabilitation or other rehabilitation rehabilitation setting/program.	
3	Needs Definition	Frequency, duration and intensity of therapies received from rehabilitation professionals while in an inpatient, outpatient or community rehabilitation setting following stroke.	
4	Access to In-patient rehab	Percentage of acute stroke patients discharged or transferred to inpatient rehabilitation.	
5	Access to Out-patient rehab	Proportion of patient who are discharged from acute care who receive a referral for outpatient rehab, home-based rehab or community supportive services.	
6	System Planning	Provincial and regional stroke rehabilitation service provision models are in place.	

A Stroke Standards Evaluation Tool (SSET) has been developed to assist the health regions to assess their present capacity in stroke rehabilitation services against the best practice standards. The SSET lists the 18 best practice standards produced for BC Stroke Strategy's Stroke Rehabilitation and Reintegration services. The scale accompanying the evaluation tool should be used as a guide to indicate the extent to which each standard is met. The template has been partially reproduced in Table 2 for viewing; however, the complete table is located in a separate companion document: "Service Provision Model Decision Tools" in Appendix B

Table 2: Stroke Rehabilitation Standards Evaluation Tool

Standard	Scoring Scale			Standard Summarized
1.0				Patients admitted to hospital because of an acute stroke or transient ischemic attack should be treated in an interdisciplinary stroke unit
2.0				All patients admitted to hospital with acute stroke and transient ischemic attack (TIA) will have an early initial rehabilitation assessment by relevant rehabilitation professionals as soon as possible after admission within the first 24-48 hours
3.0				Appropriate management strategies should be implemented for areas of concern identified during screening. Discharge planning should also be included as part of the initial assessment and ongoing care of acute stroke patients
4.0				All stroke survivors (excluding TIAs) who are not admitted to hospital or who are discharged home from acute care will undergo an ambulatory or home-based screening assessment, which includes a medical, functional and cognitive assessment, by professionals with expertise in stroke, preferably within two weeks
5.0				Education that is integrated and coordinated should be provided in a timely manner at all stages of care across the care continuum for all patients with stroke or at risk for stroke, as well as their families and caregivers
Inpatient Stroke Rehabilitation				
6.0				All patients admitted to hospital with acute stroke will have an early initial rehabilitation assessment by relevant rehabilitation professionals as soon as possible after admission within the first 24-48 hours. Weekends will not limit "time to assessment"
7.0				Survivors of a severe or moderate stroke who are not initially considered eligible for inpatient stroke rehabilitation, once rehabilitation ready, will be reassessed by a primary care practitioner, case manager, physiatrist or relevant rehabilitation professional at regular intervals (six weeks, three months, one year and as needed) for their rehabilitation needs
8.0				Stroke survivors should have a mechanism to access or reaccess the rehabilitation environment, if clinically indicated, regardless of the time that has elapsed since the stroke
9.0				All patients who are admitted to hospital and who require rehabilitation should be treated in a comprehensive or regional rehabilitation stroke unit by an interdisciplinary team
10.0				Stroke survivors will receive the appropriate intensity and duration of clinically relevant therapies across the care continuum based on individual need and tolerance
11.0				Therapy will include repetitive and intense use of novel tasks that challenge the stroke survivor to acquire necessary skills during functional tasks and activities. The interdisciplinary team, along with the family/caregivers will promote the practice of skills gained in therapy into the stroke survivor's daily routine and will reinforce increased stroke survivor participation and activity
12.0				All stroke survivors, regardless of where they live, will have equitable access to the same standard of care at the appropriate intensity and duration
Standard Scoring Scale Standard Summarized				
Community and Home-Based Stroke Rehabilitation				
13.0				Stroke survivors who are discharged to the community will have access to specialized stroke rehabilitation services provided, according to their needs, as per evidence-based guidelines
Community Reintegration				
14.0				Interdisciplinary stroke teams will facilitate linkages for stroke survivors and their family/caregivers after discharge to

APPENDIX A: LOW TOLERANCE LONG DURATION STROKE REHABILITATION PROGRAMS

Elements	Low Tolerance Long Duration Stroke Program
Services Provided	<ul style="list-style-type: none"> ▪ Low to moderately intensive rehabilitation of a minimum of 1 hour of therapeutic activity (including activities with nursing and allied health) as tolerated by patient. ▪ Expectation is that patients will receive a minimum of 1 hour total therapeutic activity per day, 3-5 days per week. This may include OTA/PTA services under the guidance of OT/PT; however no more than half of the therapy time should be provided by an OTA/PTA. Staffing ratios should support, at minimum, the amount of therapy recommended.# ▪ Nurses will participate in the therapeutic process outside of formal therapy time. ▪ Patients have the opportunity to participate in as much therapeutic activity as is appropriate to their needs and as they are able and willing to tolerate. ▪ A dedicated interdisciplinary team with expertise in stroke rehab. Core team has competency in stroke care and typically includes: Physician, Nursing, Physiotherapy, Occupational Therapy, Social Work, Pharmacy Consultation Speech-Language Pathology, Clinical Dietician, Therapeutic Recreation, and Chaplaincy/Pastoral Care. ▪ Staffing ratios should support the minimum amount of therapy recommended. Inpatient stroke rehabilitation services should be available within 2 business days from the time of referral. ▪ Access to consultation from Neuropsychology, Neurology, Geriatrician, and Psychiatry is preferred ▪ Services include screening for cognitive function, depression/mood, swallowing, behavioural issues and falls.
Specialization	<ul style="list-style-type: none"> ▪ LTLD stroke rehab specializes in persons with severe disability arising from Stroke and other neurological conditions (e.g. ABI, MS, Guillian-Barre, Spinal Cord Injury, West Nile virus). ▪ Rehab providers must have expertise in stroke rehab although they may assess/ treat a variety of other diagnostic population groups on the unit (e.g. patients who have experienced a recent multi-system illness or fractured hip). # ▪ A critical mass of 8 beds within the unit is required to support the development and maintenance of clinical expertise among nursing, allied health and medical staff and the acquisition of special equipment or resources required to treat stroke patients. In general, for patients with early FIM™ scores < 40 assessed during 1st week post onset (i.e. “lower band” patients).

Elements	Low Tolerance Long Duration Stroke Program
Differential Criteria	<ul style="list-style-type: none"> ▪ For elderly patients (>75) with early FIM™ score of 40-60 (Note: Age criteria are to be used as guidelines rather than applied rigidly to each patient to allow for individual differences among patients). ▪ Patients require a slower-paced rehab program for a longer duration to maximize rehab potential as these patients are typically more medically complex due to the presence of multiple co-morbid conditions. ▪ Coordinated team approach with regular team meetings/conferences. There should be at least one formal meeting per week to discuss progress, goals, discharge plans. The expectation is that patients will return to home or a community residential setting following LTLD rehab.
Elements	Low Tolerance Long Duration Stroke Program
Typical Duration	<ul style="list-style-type: none"> ▪ On average: 4 – 6 weeks. Typical duration is usually around 3 months
Key Activities	<p>Suitable for individuals in need of interdisciplinary stroke rehab, who require an extended period of rehab to maximize recovery.</p> <ul style="list-style-type: none"> ▪ LTLD rehab is typically offered in complex continuing care; however, it may also be available in rehab hospitals or long-term care. ▪ Interdisciplinary team to assess patient within 24-48 hours of admission and develop comprehensive rehab plan. ▪ Patients may also have a chronic and a complex condition that requires care over an extended period of time and who are expected to benefit from low intensity, long duration rehabilitation. ▪ Augmentative communication services to address communication needs. ▪ Stroke-specific wellness interventions that provide health education, goal setting, behaviour change principles and practices to promote health and wellbeing. Secondary prevention may be offered. ▪ Information and education should be provided to all patients and their families/caregivers at each stage of recovery. Education should include information about the nature of the stroke, signs and symptoms, impairments and their impact/management, risk factors, planning and decision making, resources and community support. ▪ Initiation of rehab referral to inpatient or outpatient/community-based rehab as is appropriate.

APPENDIX B: STROKE REHABILITATION EVALUATION TOOL

Scoring Scale	
	Minimal engagement of the parties that should be involved, work may be occurring on the standard however less than 40% of the standard is being met
	Moderate engagement of the parties that should be involved, 40 to 80% of the standard is being met
	The majority of the parties are engaged and at least 80 to 90% of the standard is being met. Full compliance with the standard is scored at 100%
	Not applicable (NA)
Hyperacute/Acute Inpatient Stroke Care	

Standard	Scoring Scale				Standard Summarized
1.0					Patients admitted to hospital because of an acute stroke or transient ischemic attack should be treated in an interdisciplinary stroke unit
2.0					All patients admitted to hospital with acute stroke and transient ischemic attack (TIA) will have an early initial rehabilitation assessment by relevant rehabilitation professionals as soon as possible after admission within the first 24-48 hours
3.0					Appropriate management strategies should be implemented for areas of concern identified during screening. Discharge planning should also be included as part of the initial assessment and ongoing care of acute stroke patients
4.0					All stroke survivors (excluding TIAs) who are not admitted to hospital or who are discharged home from acute care will undergo an ambulatory or home-based screening assessment, which includes a medical, functional and cognitive assessment, by professionals with expertise in stroke, preferably within two weeks
5.0					Education that is integrated and coordinated should be provided in a timely manner at all stages of care across the care continuum of for all patients with stroke or at risk for stroke, as well as their families and caregivers
Inpatient Stroke Rehabilitation					
6.0					All patients admitted to hospital with acute stroke will have an early initial rehabilitation assessment by relevant rehabilitation professionals as soon as possible after admission within the first 24-48 hours.

Standard	Scoring Scale				Standard Summarized
					Weekends will not limit “time to assessment”
7.0					Survivors of a severe or moderate stroke who are not initially considered eligible for inpatient stroke rehabilitation, once rehabilitation ready, will be reassessed by a primary care practitioner, case manager, physiatrist or relevant rehabilitation professional at regular intervals (six weeks, three months, one year and as needed) for their rehabilitation needs
8.0					Stroke survivors should have a mechanism to access or reaccess the rehabilitation environment, if clinically indicated, regardless of the time that has elapsed since the stroke
9.0					All patients who are admitted to hospital and who require rehabilitation should be treated in a comprehensive or regional rehabilitation stroke unit by an interdisciplinary team

Standard	Scoring Scale				Standard Summarized
10.0					Stroke survivors will receive the appropriate intensity and duration of clinically relevant therapies across the care continuum based on individual need and tolerance
11.0					Therapy will include repetitive and intense use of novel tasks that challenge the stroke survivor to acquire necessary skills during functional tasks and activities. The interdisciplinary team, along with the family/caregivers will promote the practice of skills gained in therapy into the stroke survivor’s daily routine and will reinforce increased stroke survivor participation and activity
12.0					All stroke survivors, regardless of where they live, will have equitable access to the same standard of care at the appropriate intensity and duration
Community and Home-Based Stroke Rehabilitation					
13.0					Stroke survivors who are discharged to the community will have access to specialized stroke rehabilitation services provided, according to their needs, as per evidence-based guidelines
Community Reintegration					
14.0					Interdisciplinary stroke teams will facilitate linkages for stroke survivors and their family/caregivers after discharge to services in the community, including: a) Physical help, caregiver training and education, and psychosocial counselling, where needed b) Access to primary care practitioners, case management or other system navigation services, respite

Standard	Scoring Scale				Standard Summarized
					care, educational opportunities, wellness programs, vocational counseling, access to stroke resources, driving safety evaluation, transportation services, peer support groups, secondary stroke prevention clinics/services and financial support, where needed
15.0					Services between the health care system and the community should be integrated and coordinated. Eligibility criteria and referral processes should be established and transparent to allow stroke survivors to reaccess services if required
16.0					A coordinated care plan including a follow-up process should be developed for each stroke survivor. Community service providers should be able to access this information in an accurate and timely manner. Where possible, referrals can be made to a local Stroke Recovery Association BC branch or Brain Injury program and contacts between branch representatives and the stroke survivor/family facilitated in hospital or while receiving outpatient rehabilitation services
17.0					Each health region will be responsible for the development and maintenance of a stroke resource inventory, in partnership with key community stroke service agencies, such as the Stroke Recovery Association of BC and the Brain Injury Association of BC
18.0					Community stroke service providers will maintain a data collection system that includes key indicators that measure the effectiveness of its services. Ongoing self-monitoring and evaluation of these services will be completed on an annual basis and results will be available to the health region.

APPENDIX C: STROKE RECOVERY ASSOCIATION OF BC – COMMUNITY REINTEGRATION STANDARDS

The following section presents the key components and standards of a Community Reintegration service delivery framework. This work is seminal and adds to the national body of stroke care research and field work in community reintegration for stroke survivors.

Key components/standards:

Effective and client-centred pre-discharge needs assessment with planned follow-up:

- Standard Discharge Assessment Plan from transitional care/ discharge planning unit/family physician including:
 - Referral to Out-patient and community based services to increase patient self management in their rehabilitation program and preparation for full community reintegration
 - Home assessment conducted by Occupational Therapist prior to discharge
 - Referral to Stroke Recovery Association of BC or the Brain Injury Association of BC
 - Referral to other community agencies
- Outcomes: Effective information dissemination between professionals and clear care pathways to ensure a high level of management of community reintegration

A. Multi-level entry points to enter the stroke continuum and access stroke specific and community-led services including timely and uniform access to connect with stroke survivors at a) hospital discharge, b) post-hospital discharge and c) with stroke survivors using community resources and programs

- See Generic Community Reintegration System Navigation Algorithms (Section 3.6 Service Provision Model).

B. Interdisciplinary Community Linkage Coordination

- Develop and implement individualized client-centred community linkage plans superimposed on other care and community reintegration plans including discharge planning and rehabilitative goals, iConnect Health, Stroke Recovery Intake Assessment and Home and Community Care, etc.
 - Outcomes of community linkage plans include successful community reintegration, patient self management and secondary prevention

C. Standard Stroke Recovery Association of BC Intake Assessment

- stroke survivor and family caregiver's needs defined through SRABC intake assessment
- Assessment for selection of appropriate community programs and services including:
 - i. Referral to Stroke Recovery Branch, where available
 - ii. Referral to Peer Mentoring or One to One support
 - iii. Refer to or continue use of medical, rehabilitation, counselling and therapeutic services
 - iv. If no SRA branch available, referral to services related to stroke survivor needs and preferences such as leisure or recreation services, companion services, community rehab services etc.
 - v. If Long Term Care, ensure ongoing rehabilitative services are accessed by the client in long term care
 - vi. Transition beyond the Stroke Recovery programs to include services in the larger community

D. Standard Stroke Recovery Branch Assessment and Programming

- Each stroke survivor is assessed by a standard branch assessment form to determine stroke client and caregiver's needs and preferences accompanied by an action or service-care plan.
- Using the North Shore's model and outcome measures
 - Each Branch to provide a program that aims to:
 - reduce functional consequences of stroke;
 - promote participation and foster social roles;
 - increase functional capacity of activities of daily living (ADL's);
 - decrease external home care support through skills building.
 - Outcomes of a successful branch assessment and programming include:
 - Provision of a continuation of care to the stroke survivor discharged from hospital and outpatient service.
 - Enabling of stroke survivor to stay in their homes and community longer.
 - The maintenance or improvement in the level of functioning in areas of speech, mobility, and fitness.
 - Forming of new friendships which will lead to less isolation and depression and result in regained hope and optimism.
 - Provision of informal respite for the caregiver and family.
 - Referral of members to appropriate local agencies or volunteer services.

E. Collaboration and two-way communication between community-led programs and in-patient/out-patient rehabilitative programs

- Regular Health Provider Knowledge of Community Reintegration through community presentations
- Participation of community service providers on stroke care planning committees
- Regular and effective ongoing communication pathways between service providers

F. Up- to-date and accessible community network of resources for stroke survivors and their caregivers in BC

APPENDIX D: DEFINITIONS

The following definitions were crafted from a variety of sources. The main sources are listed at the end of Appendix D for reference.

Stroke Rehabilitation Definitions

Acute Stroke Care: Care provided in a hospital during the early stages following a stroke, including surgery, intensive care and rehabilitation. The focus is on making a diagnosis, preventing complications, initiating rehabilitation and achieving medical stability.

Adult Day Service: Provides recreation, socialization, respite and other related services for stroke survivors who reside in the community. The service does not include rehabilitation therapy (e.g., PT, OT, SLP).

Alternate Level of Care (ALC): A designation (while in an acute care hospital) made at the time when acute medical services are no longer required and the patient is ready for discharge to inpatient rehabilitation, LTC or the community. This designation also applies while in an inpatient rehabilitation unit when the patient is ready for discharge to LTC or the community.

Ambulatory Care Services: The person resides in the community but attends one or more ambulatory therapeutic services or specialized clinics (e.g., seating clinics, orthotics). These services may be provided within a hospital or in the community.

Assisted Living: Refers to group homes, retirement homes, and supervised living settings.

Clinical Expertise: The proficiency and judgment that clinicians acquire and maintain through clinical experience, clinical practice and ongoing professional development.

Client- Centred Practice: A philosophy of practice built on concepts that reflect changes in attitudes and beliefs of clients and rehabilitation practitioners and include a number of concepts; autonomy/choice, partnership and responsibility, enablement, informed participation and functionally-based goal setting. Such an approach respects the client's dignity, values and preferences.

Community: Any residence outside of an acute or rehabilitation inpatient unit including the home, senior residences, retirement homes, supportive housing, group homes or assisted living and Continuing Care facilities.

Community (Re)-Integration Services: Services to support the reorganization of physical, psychological and social characteristics so that an individual can resume well-adjusted living after stroke. Component services include health management, life roles, social network, environment, communication, mobility, wellness and caregiver support.

Community (Re)-engagement: See Community (Re)-Integration.

Community-Based Rehabilitation: See Home-Based Rehabilitation.

Complex Continuing Care: A specialized inpatient program of care providing services for medically complex patients whose condition requires a hospital stay, regular on-site physician care and assessment and active care management by specialized staff.

Continuing Care Facilities: Continuing Care facilities are designed for people who require the availability of 24-hour nursing care and supervision within a secure setting. In general, Continuing Care facilities offer higher levels of personal care and support than those typically offered by either retirement homes or supportive housing.

Continuum of Services: A service structure that addresses the changing needs of the client during the rehabilitation process, and also rehabilitation needs that change over the course of life, from birth through old age.

Day Hospital: Generally provide intensive rehabilitation in a structured setting during the day for persons with complex medical and functional issues. Intensive short-term treatment, counseling, and education are available to patients and their caregivers to facilitate community support and integration. The treatment team is often made up of a variety of the same rehabilitation professionals found in tertiary or acute rehabilitation programs and may include a Psychiatrist, Geriatrician, Occupational Therapist, Physiotherapist, Nursing, Social Work, Speech Language Pathologist, Dietitian, (Neuro) psychologist, Recreational Therapist, and Vocational Counsellor. Examples of rehabilitation day programs or “hospitals” as they are often called are present in the young adult, adult and geriatric disabled populations.

Evidence-Based Practice: Evidence-based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research.

FIM™ is a trademark of the Uniform Data System for Medical Rehabilitation, a division of UB Foundation Activities, Inc. The Functional Independence Measure (FIM™) assesses physical and cognitive disability in terms of burden of care. It includes an 18-item ordinal scale that measures independence in self-care, sphincter control, mobility, locomotion, communication and social cognition. The maximum total FIM™ score is 126. The maximum total motor FIM™ Score is 91. FIM™ data is captured as part of the National Rehabilitation Reporting System developed by the Canadian Institute for Health Information (CIHI).

Home-Based Rehabilitation: Rehabilitation therapies received wherever the individual resides (e.g., in a Continuing Care facility, private residence and work environment), provided by hospital outreach program or private provider.

Inpatient Stroke Rehabilitation: The facility provides a comprehensive, coordinated and evidence-based inpatient stroke rehabilitation service.

Interdisciplinary Care: See Interprofessional Care.

Interprofessional Care: A philosophy and process of care that integrates the specialized knowledge of multiple professionals. There is shared decision making, collaboration, flexible leadership and sharing of information as members work in a patient- and family-focused care team to achieve desired outcomes.

Interprofessional Team: Includes stroke survivors, families/caregivers, nurses, physiotherapists, occupational therapists, speech-language pathologists, social workers, psychiatrists, physicians, primary care practitioners, dietitians, recreation therapists, rehabilitation assistants, pharmacists, spiritual advisors and psychologists.

Low Tolerance Long Duration (LTLD/slow stream) Rehabilitation: A service that is generally geared towards patients with severe strokes and may be much older. Patients suitable for LTLD care may have cognitive impairments and co-morbidities. Located in acute care and rehabilitation hospitals, LTLD rehabilitation is suitable for individuals in need of an interdisciplinary program who may also have a chronic/complex condition requiring 24-hour hospital care over an extended period of time and who are expected to benefit from a slower-paced rehab program for a longer duration than is offered in dedicated or mixed rehab units.

MDS 2.0 is a Continuing Care Reporting System used to capture the clinical characteristics of residents in Complex Continuing Care settings. Data is captured using the Rater Assessment Instrument MDS 2.0. The RAI MDS 2.0 is © interRAI Corporation, Washington, D.C., 1997 and has been modified for use by the Canadian Institute for Health Information in 2002. The Minimum Data Set is used to collect administrative and socio-demographic information and to assess the care needs of patients in a number of functional areas. Information is collected on a quarterly basis.

Mild Stroke: Early Total Function Score > 80 and Motor Function Score > 62, using the FIM™ instrument (i.e., within 24-48 hours). Note: Mild stroke patients include those who may appear normal but have high level executive functioning difficulties. The FIM instrument may not be sensitive enough for this patient population.

Mixed Rehabilitation Unit: Also known as general inpatient rehabilitation unit, this type of unit provides intensive rehabilitation and serves a variety of patient population groups. The mixed rehab unit is suitable for individuals who require 24-hour hospital care and are in need of an interdisciplinary rehab program using a coordinated rehabilitation approach.

Moderate Stroke: Early Total Function Score of 40-80 and Motor Function Score 38-62, using the FIM™ instrument (i.e., within 24-48 hours).

Multidisciplinary: A group of people from different disciplines who develop treatment plans independently. Generally, each discipline conducts an independent assessment of the patient. The group may meet but, usually, each discipline implements its independent plan as a complementary service. Patients' and families' goals may not always be considered together as a unit of care, and specific discipline goals are not always shared with other professional care givers.

Outreach Services: Client-specific consultation and/or training/education to service providers in hospitals, Continuing Care facilities and other similar agencies that care for stroke survivors. Outreach may be provided to service providers and/or to client/family. Services can be delivered by multiple methods (e.g., in person at the referral source site, over the phone, or via telemedicine).

Primary Rehabilitation: Primary denotes a level of rehabilitation provided by a single discipline or multidisciplinary team in a general medical hospital unit (non-rehabilitation). It can also refer to community private practitioners in allied health care disciplines.

Prevention Clinic/ Services: An ambulatory clinic or service that provides individualized interdisciplinary, evidence-based prevention programs and approaches to stroke prevention for those patients at high risk of initial or recurrent stroke. These clinics need to have rapid access to diagnostic testing.

Post Acute Rehabilitation Unit: Also termed “sub-acute” or “convalescent” rehabilitation units, these units provide services to people who are slower in achieving their rehabilitation goals and may need a longer time to improve their functional status to a level that allows them to return to living independently in the community or an appropriate level of supported living. The rehabilitation services provided in post-acute rehabilitation units are usually multidisciplinary but less intense. Post-acute rehabilitation units may be part of an acute care hospital or a long-term care facility and serve both adult and geriatric populations.

Rehabilitation; A goal-oriented and often time-limited process that enables an individual with impairments and disabilities to identify and reach his/her optimal mental, physical and/or social functional level. Rehabilitation provides opportunities to the individual, through a client-focused partnership with family, providers and the community, to accommodate a limitation or lack of function. Rehabilitation focuses on abilities and aims to facilitate social integration and independence. Rehabilitation, in addition to being goal oriented, is outcome driven. Rehabilitation can be provided in a variety of settings and stages of recovery.

Rehabilitation Nurse: A nurse who has obtained certification in Rehabilitation Nursing by the Canadian Nursing Association and uses the designation of CRN(C).

Rehabilitation Professionals: Includes nurses, rehabilitation nurses, physiotherapists, occupational therapists, speech-language pathologists, psychiatrists and social workers.

Rehabilitation Ready: The following criteria are evaluated:

- Readiness for discharge from acute care
- Medical stability
- Ability to learn
- Ability to participate and consent

Restorative Care: Restorative Care helps people who live in Continuing Care facilities to achieve the best quality of life possible by maximizing their existing abilities, through individualized programs (e.g., feeding/eating programs), functional activities or optimal communication and social interaction between staff and residents.

Severe Stroke: Early Total Function Score < 40 and Motor Function Score < 37, using the FIM™ instrument (i.e., within 24-48 hours).

Single Service (Community): Individual rehabilitation services that are usually provided through home and community care services or private practice offices. Single rehabilitation services are suitable for individuals who are in need of one or more rehabilitation services in single specialty area(s)/profession(s) provided in the home, school or work environment. Although clients may receive more than one service, a fully coordinated approach is not used as rehab providers typically work as individuals. However, some communication with other health providers may occur on an as-needed basis.

Single Service (Outpatient/Ambulatory Rehab): An outpatient rehabilitation service located in acute care hospitals, rehabilitation hospitals and community health centres/clinics that is suitable for individuals who are in need of an outpatient rehabilitation service in a single specialty area/profession. Clients may receive more than one rehab service; however, the services are not provided by way of a coordinated rehab approach. Services may include assessment only or assessment and treatment. Services may be provided during a one-time visit or multiple visits.

Stroke: An acute neurological dysfunction of vascular origin with sudden or at least rapid onset of symptoms and signs corresponding to the involvement of focal areas in the brain. Focal brain injury arising from vascular neck trauma is included.

Stroke Rehabilitation: Stroke rehabilitation is a progressive, dynamic, goal-oriented process aimed at enabling a person with impairment to reach his or her optimal physical, cognitive, emotional, communicative and/or social functional level (Canadian Stroke Strategy, 2008). It is multidimensional consisting of prevention and treatment of medical complications, restoration of maximal independent functioning, facilitation of psychosocial coping and adaptation by the patient and family, promotion of community reintegration and enhancement of quality of life for stroke survivors. Stroke rehabilitation relies on both remedial interventions designed to reduce neurological deficits and teaching compensatory techniques to enhance functional independence in the presence of neurologic impairment.

Depending on the severity of a person's impairment, activity limitations or participation restrictions, the length and intensity of the rehabilitation process will vary, as will the range of rehabilitation professionals engaged in working with the individual. Also, as a stroke survivor moves through their life cycle, they may require different types of rehabilitation support and services to facilitate their changing roles and interests.

Stroke Rehabilitation Unit: Key features include:

- Staff with a specialist interest in stroke or rehabilitation who receive ongoing education and training about stroke
- Written protocols for the assessment and management of common problems related to stroke
- A geographically located area where people with stroke are managed
- Routine involvement of the family/caregivers in the rehabilitation
- Coordinated care from a multidisciplinary team, including meetings at least once each week
- Information provided to patients and family/caregivers
- Regular programs of education and training

Different models of stroke unit care are appropriate if a hospital's size and number of admissions for stroke make a geographically distinct stroke unit unworkable. Each health region determines the most appropriate organization of their stroke services based on resource availability and expected volumes of stroke admissions.

Supported Housing: Involves a variety of models that provide a rent subsidy and on-site or off-site outreach support. Variations include block apartments, supported independent living units, campus of care seniors living facilities, enhanced apartments and group homes.

Telemedicine: The use of videoconferencing and advanced information communication technologies to deliver clinical, educational and administrative services.

Telerehab: Telemedicine applied to rehabilitation processes.

Tertiary Rehabilitation: Tertiary denotes a level of rehabilitation provided by a dedicated interdisciplinary stroke care team who has an enhanced level of experience based on a high volume of stroke patients.

Tolerance: Ability to participate in therapies without undue fatigue.

Transition: A multi-directional process by which a person moves from one health care system component to another along the continuum of rehabilitation services.

Transitional Living Programs: Provide housing for persons with a disability (activity limitation) with the goal of regaining the ability to live as independently as possible. Sometimes, the programs will have several different levels, depending on the level of need of the individual. In addition to physical, occupational, speech and recreational therapists, these programs will often have trained life skills personal to assist the disabled individual acquire skills and learn compensatory techniques so they can live in the most independent setting possible.

Wellness Focused Rehab Groups: These groups are provided in an outpatient/ambulatory setting and led by an individual rehabilitation provider or team of rehabilitation specialists to enhance an individual's ability to cope with a particular disability or impairment. These time-limited groups are publically –funded although a small fee may be charged for materials.

Triage: Evidence-based, specialized stroke assessment and referral process that matches the needs of the person with the appropriate, evidence-based, best practice stroke care service, across the continuum.

Sources

Many definitions were adapted from documents specific to stroke rehabilitation, including the following:

- The Consensus Panel on the Stroke Rehabilitation System (Ontario 2007)
- Canadian Stroke Strategy Network (CSS)
- CSS Best Practice Recommendations for Stroke Care (Update 2008)
- Canadian Institute for Health Information (CIHI)
- The Greater Toronto Area Network (GTA) website: (<http://www.gtarehabnetwork.ca>)