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This tool was used for: ☐education ☐follow-up/continuing education ☐other: Click or tap here to enter text.

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Provincial Health Services Authority

Stroke Services BC Stroke Unit Care Core Competency Tool

Background

The Canadian Stroke Best Practice Recommendations (2022) provide up to current, evidenced based guidelines for stroke care across the continuum. A stroke unit is a geographically defined area where persons with stroke are cared for (Canadian Stroke Best Practice Recommendations, 2022). It includes a multidisciplinary team with expertise in stroke care who engage in regular education and training (Canadian Stroke Best Practice Recommendations, 2022; Langhorne et al., 2020). These qualities contribute to the high quality care received on stroke units, which leads to better care, fewer complications, better outcomes, and decreased mortality (Canadian Stroke Best Practice Recommendations, 2022; Stroke Unit Trialists' Collaboration, 2020). While the Canadian Stroke Best Practice Recommendations (2022) are well defined, and the available research is clear, there are gaps in the translation of this evidence into practice provincially. There is currently variability across the province in the provision of standardized competencies for clinicians on acute stroke units. In an effort to support high-quality, holistic, and evidence-based care to persons with stroke across BC, the Stroke Services Stroke Unit Core Competencies were developed in 2023. This was a collaborative effort between all five Regional Health Authorities, and reflects the current Canadian Stroke Best Practice Recommendations (2022) and expert opinions from its working group.

For the purposes of this framework, in alignment with the Stroke Services BC Stroke Unit Care Definition position statement, a Stroke Unit is defined as the physical space or hospital unit where stroke patients are cared for, and Stroke Unit Care is the care that is provided to stroke patients in that physical space. The best practice elements of a stroke unit and stroke unit care are further defined in the Canadian Stroke Best Practice Recommendations (2022) and should be considered when planning and evaluating stroke unit care at the regional and site level.

Purpose & Scope

The Stroke Services BC Stroke Unit Core Competencies are intended to support clinicians in providing consistent, evidence-based, best practice care to persons with stroke. This tool can be used to promote collaboration and provide a framework for education, training, evaluation, and/or professional development in the context of acute stroke unit care.

This tool is intended to be accessed by clinicians providing care, educators, managers or designates, and/or professional practice administrators. These competencies are specific to the scope of Registered Nurses in British Columbia, however this tool can be used as a reference/informational resource by any healthcare providers who provide or oversee care for persons with stroke. These competencies should not be considered as encompassing all the skills required for practice, and should be used in combination with entry level competencies required by each Health Authority, the British Columbia College of Nursing Professionals standards of practice, and any other requirements of practice determined at the regional and/or site level. In addition, this is considered a living document and will be updated accordingly to remain consistent with the Canadian Stroke Best Practice Guidelines and other applicable regulatory standards. It is the responsibility of the clinician using the competencies to ensure they are using the most current version of this document, and operate within their scope of practice as outlined by their Health Authority and licensing body, and consult with educators and/or leadership at their site for any clarification on the contents of this document.

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Other Education and Recommendations

In addition to the competencies in this framework, it is important for each health authority and/or site to evaluate which supplementary courses, certifications, and education resources they will incorporate into their education and requirements for practice. The use of validated, standardized assessment tools is imperative to support evidenced-based stroke care. These include, but are not limited to:

- National Institute of Health Stroke Scale (NIHSS)
- Modified Rankin Scale (mRS)
- AlphaFIM ®

Refer to the Canadian Stroke Best Practice Recommendations for a comprehensive list of screening tools recommended by stage on the stroke continuum. In addition, clinicians should be able to describe where to find region-specific stroke resources and education.

Knowledge of the Canadian Stroke Best Practice Recommendations (CSBPRs) is essential to the delivery of high-quality, evidenced-based stroke care. Clinicians should be able to describe where to find, and practice in alignment with the CSBPR's. In addition, it is also recommended clinicians have a basic understanding of the importance and impact of data collection and performance indicators in monitoring the quality of stroke care, including the BC Stroke Quality Standards. It is also recommended that clinicians have a sound understanding of the provincial stroke system in which they operate. This includes the abilities to describe their regional stroke network, including the location of stroke and rehabilitation units, TIA prevention clinics, and EVT centers. In is also suggested that general knowledge of the Tiers of Service, and regional repatriation processes, including key partners (i.e. PTN), is beneficial.

How to Use this Tool

Rate the competencies in this document from novice – expert either independently or in collaboration with your clinical educator using the Benner Self-Assessment Tool (Benner, 1982) (Appendix B). Following completion, reflect on, and/or discuss your current level of competence with your clinical educator and identify any learning needs. Create a continuing education plan as needed, and reassess as needed or as determined by your clinical educator.

Note: The goal is not to become an expert in all areas of stroke care, but to identify learning needs based on your current environment, knowledge, skill, experience, and scope of practice.

Novice = 1	Advanced Beginner = 2	Competent = 3	Proficient = 4	Expert = 5
• Has limited to no experience, knowledge, or skills • Requires close support and guidance • Unaware of resources or rationale for practice • Unable to perform or describe outcome	• Developing understanding, experience, and skills. • Needs practice and feedback, may require occasional guidance and support • Able to make simple decisions about patient care • Limited ability to perform task or describe outcome • Limited awareness of resources or rationale for practice	• Has the knowledge, skills, judgement, and experience to provide safe and efficient care without guidance • Able to provide rationale for actions and aware of resources • Able to perform task or describe outcome within a suitable timeframe, without prompting, and with confidence	• Has knowledge, skills, judgement, and skills to provide safe, efficient, and holistic care • Processes, protocols, and resources used with an in-depth understanding and ability to provide rationale • Intuitive and analytical approach to care • Ability to understand and provide care in complex situations	• Extensive background and experience in the area • Skills are mastered • Able to provide quick, intuitive care in complex situations • Performances is fluid and flexible and highly proficient • Able to teach and mentor others

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COMPETENCY AREA	ASSESSMENT/FOLLOW-UP			LEARNING OUTCOMES
	Initial (1 – 5)	**Follow-up (1 – 5)**	**Follow-up (1 – 5)**	
	Date:	**Date:**	**Date:**	
***Competency Area 1**: Core Principles and Systems Awareness*				
Stroke Unit Care				• Define an acute stroke unit
				• Describe the various roles and scope of practice of other disciplines that are a part of the care on an acute stroke unit
				• Describe where stroke unit care fits on the continuum of stroke care
Culturally Safe Care				• Describe the importance of providing culturally safe care, and recognizes personal/implicit biases
				• Demonstrate respect for cultural differences and values when providing care to persons with stroke, caregivers, and families
				• Aware of how indigenous-specific racism and discrimination have impacted stroke care in BC ▪ Understands how stereotyping, racism, and discrimination impact stroke care (delayed diagnosis, misdiagnosis, delayed treatment/intervention, delayed or withheld treatments for symptom management, lack of communication, medical mistakes) ▪ Knows stroke prevalence rates in indigenous populations are 2x higher than for other residents in BC
				• Provide a trauma-informed practice approach to care delivery
				• Aware of multidisciplinary teams available to help organize comprehensive stroke care plans (Aboriginal Liaison, Diversity & Inclusion resources)
				• Completion of cultural safety courses as mandated by their Health Authority
***Competency Area 2**: Brain Anatomy and Physiology*				
				• Name and describe the functions of each major area of the brain
				• Identify the major arteries of the cerebrovascular system
				• Describe how neuroplasticity affects the timeline of stroke recovery and prognostication
***Competency Area 3**: Stroke Pathophysiology*				
Definitions				• Provide the definition of a stroke
				• Describe the pathophysiology and incidence of ischemic and hemorrhagic strokes
				• Demonstrate and understanding of the etiologies and risk factors for ischemic and hemorrhagic strokes
				• Demonstrate basic knowledge of types of cerebral bleeds (epidural, subdural, subarachnoid, and intracerebral)
				• Define Last Seen Normal (LSN), including in the context of a wake-up stroke, and how it relates to treatment options for hyperacute stroke
				• Describe signs and symptoms of acute stroke using stroke specific assessment tools ▪ Describe the FAST VAN (Face, Arm, Speech, Time; Vision, Aphasia, Neglect) scale and how it is used in the care of persons with stroke ▪ Able to distinguish differences between standardized stroke assessment tools used and rationale for each

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COMPETENCY AREA	ASSESSMENT/FOLLOW-UP			LEARNING OUTCOMES
Stroke Syndromes				• Describe the clinical presentations and large vessels/vascular territory involved with right and left hemisphere and brainstem strokes.
				• Demonstrate basic understanding of stroke penumbra vs. core, factors that influence them, and their significance to treatment for stroke and functional recovery.
Transient Ischemic Attack				• Define transient ischemic attack (TIA)
				• Describe relationship of TIA/minor stroke to stroke
				• Demonstrate basic understanding of TIA/minor stroke risk stratification and implications for management of TIA and risk of future stroke
Competency Area 4: *Hyperacute Stroke Care (In-patient Stroke ONLY)*				
Incidence and Risk				• Demonstrate an understanding the prevalence of in-patient stroke, including outcomes in comparison to out-patient stroke
Process				• Demonstrate understanding of hospital specific in-patient acute stroke protocols, if applicable.
				• Describe pertinent information to include in SBAR (situation, background, assessment, recommendations) report when communicating during activation of in-patient acute stroke protocols
				• Identify and differentiate between various roles involved in in-patient acute stroke, including transfer of care (i.e. higher level of care) ▪ Distinguish MRN (most responsible nurse) (acute stroke unit) responsibilities from other clinicians. ▪ Describe specific roles in supporting access to thrombolytics and/or EVT (endovascular thrombectomy) if indicated (region specific, can describe process for transition to higher level of care within same facility and/or transfer to another site for higher level of care)
Assessment & Care				• Describe the important of timely assessment and tools to promote rapid identification of acute stroke ▪ Describe best practice benchmarks for Hyperacute stroke treatment: door to CT, door to needle, door to puncture, door in door out
				• Able to determine likely timing of stroke onset (witnessed/wake-up/LSN)
				• Able to perform a standardized stroke assessment using a tool endorsed in the CSBPR's (i.e. NIHSS)
				• Demonstrate ability to effectively assess and provide timely management of: ▪ Blood glucose levels in suspected or actual stroke patients ▪ Blood pressure in acute ischemic and hemorrhagic stroke (role and scope specific
				• Demonstrate awareness of required patient care when acute stroke is suspected ▪ Describe the rationale for use of different imaging modalities in acute stroke (CT, CTA, mCTA, CTP, MRI)
				• Treatment for Hyperacute stroke ▪ Describe utility of thrombolytics, including treatment window and/or tissue based decision making, inclusion and exclusion criteria, and complications ▪ Describe utility of EVT, including treatment window, inclusion and exclusion criteria, and complications ▪ Demonstrate understanding of late window presentation definition and treatment options
Competency Area 5: *Ischemic and Intracerebral Hemorrhage Acute Stroke Care*				
Complications				• Ability to describe, assess, and support management of post-stroke complications including: ▪ Intracerebral hemorrhage/hemorrhagic transformation ▪ Reperfusion injury ▪ Increased intracranial pressure

COMPETENCY AREA	ASSESSMENT/FOLLOW-UP			LEARNING OUTCOMES
				▪ Cerebral edema ▪ Seizure ▪ Recurrent stroke ▪ Angioedema ▪ Pneumonia ▪ DVT/PE ▪ UTI ▪ Bowel/bladder complications including incontinence and post-void residual ▪ GI bleed ▪ Shoulder subluxation ▪ Skin breakdown/pressure sores ▪ Physical deconditioning ▪ Anxiety/depression ▪ Delirium ▪ Falls ▪ Aggressive behavior
				• Describe role specific clinical interventions to prevent and manage complications
Management & Care				• Describe the diagnostic tests used to support stroke diagnosis, treatment, in the acute and sub-acute phase of stroke (i.e. on the stroke unit). ▪ CT, CTA, MRI ▪ Holter (24/48h vs. 5/10/14d event monitoring) ▪ Echocardiogram (TTE, TEE, Bubble study) ▪ EEG ▪ Ultrasound (carotid, transcranial Doppler) ▪ Lab investigations (A1C, lipid panel, etc.)
				• Explain the importance of clear and timely communication within the multidisciplinary team on the stroke unit (i.e. team huddles, report, handover, charting, etc.)
				• Describe pharmacologic rationale for drugs used in stroke management ▪ Thrombolytics ▪ Antithrombotics (antiplatelets, anticoagulants) ▪ Blood pressure medications (calcium channel blockers, ace inhibitors, beta blockers, angiotensin receptor antagonists, diuretics) ▪ Cholesterol lowering medications (absorption inhibitors, fibrates, niacin, resins, statins) ▪ Medications used to reduce intracranial hypertension (osmotic diuretic, hypertonic saline)
Competency Area 6: *Dysphagia*				
Assessment & Management				• Explain purpose and importance of swallow screening
				• Identify a validated screening tool (region specific tool) including when to use, and understands referral process for SLP
				• Describe signs and symptoms of swallowing difficulties and associated complications
				• Describe proper positioning and set-up for safe feeding

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COMPETENCY AREA	ASSESSMENT/FOLLOW-UP			LEARNING OUTCOMES
Competency Area 7: *Nutrition and Hydration*				
Assessment & Management				• Describe the importance of screening for nutrition and hydration ▪ Identifies persons with stroke who are at risk for malnutrion (e.g. dysphagia, poor intake)
				• Demonstrate an ability to identify, manage, and evaluate dehydration and malnutrion after a stroke
				• Demonstrate an understanding of when and how to refer to a Registered Dietician (region specific)
				• Describe the various alternative feeding methods used with stroke survivors, including their management (e.g. tube feeding, total parenteral nutrition)
				• Identify the various therapeutic and/or modified diets used with stroke survivors
Oral Care				• Define why oral care in stroke is important and how often it is performed • Demonstrate an ability to perform an oral cavity assessment and all types of oral care required
Competency Area 8: *Activity, Mobility, and Prevention of Related Complications*				
Assessment & Management				• Explain the role of the multidisciplinary team in supporting activity and mobilization for persons with stroke ▪ Describe when and how to refer to members of the team
				• Explain the importance of early activity and mobilization in stroke recovery and complication prevention
				• Describe how muscle tone, posture, balance, muscle weakness/motor loss, sensory loss, and fatigue can affect function, activities of daily living, and safe patient handling
				• Describe resources, approaches, and techniques used for mobilizing, position, and handling patients with stroke.
				• Demonstrate knowledge and proper use of appropriate equipment or devices to facilitate activity and safe handling (e.g. slings, gait aids, lifts) (specific to work area).
				• Identify tools used for evaluating rehabilitation readiness (AlphaFIM)
				• Identify contraindications to activity and mobilization post stroke
				• Identify fall risks and prevention strategies
Competency Area 9: *Communication*				
Definitions				• Identify communication impairments that may occur from a stroke
				• Define aphasia and the variety of ways it may impact communication
Management & Care				• Identify strategies and/or tools to improve or assist with communication
				• Describe when and how to refer to SLP and the role they have in post stroke care
				• Describe education needs and priorities for caregivers and family on communication difficulties pose-stroke
Competency Area 10: *Cognition, Mood, Fatigue, and Behavior*				
Definitions				• Identify and describe common cognitive changes post-stroke including: level of arousal, attention, memory, orientation, ability to follow directions, insight, judgement, problem solving, motor planning
				• Describe the relationship between mood and cognitive changes post stroke
				• Describe the potential changes in mood of the survivor and caregivers related to stroke including depression, anxiety, apathy, frustration, preservation, impulsiveness, grief, and loss
				• Describe how the location of the stroke impacts cognition, mood, fatigue, and behavior
				• Describe post-stroke fatigue, implications, and provides strategies for management
				• Describe the impact of environment on cognitive function and changes

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COMPETENCY AREA	ASSESSMENT/FOLLOW-UP			LEARNING OUTCOMES
Management & Care				• Describe the impact of cognitive changes on function and patient safety
				• Describe how stroke can affect and/or cause changes in sleep
				• Identify cognition and mood screening tools, including when and how to use (region/site specific)
				• Describe how stroke impacts behavior, emotions, actions, and/or reactions
				• Describe when and how to refer to the multidisciplinary team for support (site specific, e.g. social work, spiritual care, OT, recreation therapist)
Competency Area 11: *Vision and Perception*				
Definitions				• Identify perceptual changes that can be associated with stroke including neglect, hemianopia, apraxia, and visual spatial deficits
				• Describe the impact of visual and perceptual changes on function
Management & Care				• Describe the impact of environment on visual-perceptual function, and strategies to optimize functional activates
				• Identify members of the multidisciplinary team that may be consulted for visual-perceptual changes post stroke (ophthalmology, neuro-ophthalmology, OT)
Competency Area 12: *Continence*				
Definition				• Describe loss of bladder (urinary retention and/or incontinence) and bowel control (fecal incontinence and/or constipation) in the context of stroke and the related care needs
Management & Care				• Describe strategies to support toileting and continence, including the importance of catheter management and reassessment for removal as soon as clinically indicated
				• Understands the importance of checking post void residual (PVR) to identify risk of urinary retention
				• Describe the benefits and physiology of bowel and bladder training
				• Identify members of the multidisciplinary team that may be consulted to support toileting and continence (OT, PT)
Competency Area 13: *Post-Stroke Pain and Spasticity*				
Definitions				• Describe complications seen in the hemiplegic arm
				• Describe how altered tone affects persons with stroke
Management & Care				• Identify persons with stroke at high risk for developing spasticity
				• Identify common types of post stroke pain and interventions
				• Identify and apply strategies to protect the hemiplegic arm and prevent injury
				• Describe and apply recommended positioning techniques, interventions, and tolls to minimize pain and spasticity
Competency Area 14: *Stroke Prevention*				
Definition				• Define and provides examples for modifiable and non-modifiable risk factors for stroke
Education				• Describe management strategies for modifiable risk factors for the prevention of secondary or recurrent stroke
				• Identify education and teaching resources for secondary stroke prevention, where to find them, and how to use them
				• Identify education in signs and symptoms of stroke, or deterioration of stroke and how to get help for stroke survivors and their caregivers

COMPETENCY AREA	ASSESSMENT/FOLLOW-UP			LEARNING OUTCOMES
				• Effectively communicate the recommendations, referrals, and resources to the persons with stroke, families, caregivers, and the multidisciplinary team
Competency Area 15: *Transitions, Community Reintegration, and Education*				
Care Planning				• Describe role in development of individualized care plans for persons with stroke and their families, that are person centered and culturally appropriate
				• Describe the importance of timely and comprehensive documentation and communication to support seamless transitions, continuity of care, and multidisciplinary team collaboration
				• Describe site and/or region specific processes for accessing post-acute stroke rehab and community services
				• Describe the importance of peer support in stroke recovery (i.e. share experiences, resources, knowledge, and provide support) and how and where this can be accessed
				• Summarize the impact of participating in social and life roles post stroke, and members of the multidisciplinary team that be consulted for support, including: ▪ Sexuality ▪ Relationships ▪ Driving ▪ Vocation ▪ Leisure activities
Education				• Describe ways to assess learning needs for persons with stroke and their caregivers, and how to develop individualized education plans with the multidisciplinary team
				• Identify where to find resources on stroke transitions, rehab, discharge, and follow up for persons with stroke and their caregivers
				• Identify resources for stroke survivors and caregivers for stroke education, lifestyle, medication management, and community resources
Competency Area 16: *Advanced Care Planning*				
Care Planning				• Describe site/region processes for documenting advanced care designations, and how it is used for informing plan of care for stroke management
				• Demonstrate communication skills and knowledge to address physical, spiritual, cultural, psychological, ethical, and social needs when engaging in advanced care planning
				• Identify members of the multidisciplinary team that may be involved in discussions in advanced care planning
				• Identify situations that may require a reassessment of advanced care planning
Palliative & End-of-life Care				• Describe when a palliative and end-of-life discussion may be warranted and who needs to be involved in the conversation • Describe key content to be addressed to support comfort and quality of life (e.g. life sustaining measures, nutrition and hydration, oral care, pain, delirium, anxiety, and depression) • Summarize basic principles of palliative care that supports basic symptom management and psychological care needs

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The competencies within this framework were adapted from the Stroke Core Competency Framework (2023, Ontario Regional Education Group) with permission and thanks.

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Ongoing Learning Goals

Competency Learning Goal	Plan	Timeline	Actions Taken/Evidence Goal has been met	Date/Initials
			☐ Goal Achieved ☐ Ongoing	
			☐ Goal Achieved ☐ Ongoing	
			☐ Goal Achieved ☐ Ongoing	
			☐ Goal Achieved ☐ Ongoing	
			☐ Goal Achieved ☐ Ongoing	