

Stroke Core Competency Framework

Background:

The Canadian Stroke Best Practice Recommendations (CSBPR) provide a framework of evidence-based recommendations for healthcare providers working with persons with stroke. Stroke competencies among clinicians, reflective of the best practice guidelines, are a cornerstone of effective stroke care. The Provincial Interprofessional Stroke Core Competency Framework was developed in 2016 and reviewed and rebranded as the Stroke Core Competency Framework (SCCF) in 2022 for all healthcare providers working in Ontario.

Purpose:

The SCCF is intended to provide all healthcare providers with an accessible, comprehensive self-assessment tool to help identify specific learning needs to support stroke best practice implementation.

Target Population:

The SCCF can be used by both new and experienced healthcare providers working across the continuum of stroke care.

How to use the Stroke Core Competency Framework:

1. Rate your level of expertise using [Benner's Stages of Clinical Competence](#).
2. Identify areas for improvement and develop a professional learning plan (*a learning plan template is available at the end of each competency*).
3. Seek professional development opportunities to inform and fulfill professional learning plans.
4. Leadership may use learning plans to support professional development reviews.
5. Leadership may collate results to inform organizational priorities for stroke care that can be integrated into strategic planning.

****Steps 4 and 5 require organizational support and collaboration**

Competency							Learning outcomes The numbered learning outcomes are for everyone working in stroke care. The bulleted learning outcomes are for persons who either assess, manage, or make recommendations within this specific competency.
	Novice	Advanced Beginner	Competent	Proficient	Expert	Not applicable	
1.0 Introduction to Stroke Care							1. Describe the Ontario stroke system of care and the role of your local Regional Stroke Network and its partners (e.g. regional/district stroke centre, Telestroke, paramedic services, stroke units, community partners)
							2. Apply the Canadian Stroke Best Practice Recommendations (CSBPR) and other evidence-based resources to guide and inform stroke care
							3. Demonstrate culturally safe, person and family-centred care while recognizing the value of interprofessional collaboration and the roles of each discipline on the stroke team
							4. Describe the diverse needs of the person with stroke (ie. gender, age, cultural, socioeconomic, life roles and experiences)
							5. Demonstrate self-awareness of how personal behaviours, assumptions, and past experiences shape interactions with people with stroke, with empathetic recognition of often unseen challenges such as cognitive fatigue, emotional changes, communication barriers, and sensory processing difficulties.
							6. Describe in-person, hybrid, and virtual models of care, applying virtual care best practices to improve access through settings such as Telestroke, virtual rehabilitation, and follow-up care.
<i>Identified Learning Need:</i>							
2.0 Brain Anatomy and Physiology							1. Identify the anatomical structures of the brain
							2. Explain the functions of each major area of the brain
							3. Identify the major arteries of the cerebrovascular circulation
							4. Explain how neuroplasticity affects stroke recovery (repetition ‘use it or lose it’, task specificity and intensity)
<i>Identified Learning Need:</i>							

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							The numbered learning outcomes are for everyone working in stroke care. The bulleted learning outcomes are for persons who either assess, manage, or make recommendations within this specific competency.
3.0 Stroke Pathophysiology							1. Explain the pathophysiology of ischemic and hemorrhagic stroke
							2. Explain the etiologies of ischemic and hemorrhagic stroke
							3. Describe clinical impairments associated with major stroke syndromes
Identified Learning Need:							
4.0 Hyperacute Stroke Care							1. Identify the signs of stroke and explain the process within your organization for the rapid identification of stroke and activation of appropriate stroke protocols and/or next steps
							2. Explain care processes for Transient Ischemic Attack (TIA) management in the emergency department
							3. Describe time sensitive hyperacute stroke therapies (i.e., thrombolysis, endovascular thrombectomy)
							4. Identify stroke complications during the hyperacute phase (i.e., orolingual angioedema, hemorrhage after thrombolysis, change in level of consciousness)
	For those who assess, manage, or make recommendations within hyperacute stroke care						
							Select and complete the most appropriate neurological assessment(s) [e.g., large vessel occlusion (LVO) screening, National Institutes of Health Stroke Scale (NIHSS), Canadian Neurological Scale (CNS), Glasgow Coma Scale GCS]]
							Interpret assessment results and implement the appropriate interventions for management of hyperacute stroke care
							Manage hyperacute stroke care and associated complications (i.e., orolingual angioedema, hemorrhagic transformation, and systemic hemorrhage after thrombolysis)
							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
	Identified Learning Need:						

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							The numbered learning outcomes are for everyone working in stroke care. The bulleted learning outcomes are for persons who either assess, manage, or make recommendations within this specific competency.
5.0 Ischemic and Intracerebral Hemorrhage Stroke Care							1. Explain acute stroke care assessment and management for ischemic and intracerebral hemorrhagic strokes
							2. Describe the diagnostic tests used to support stroke diagnosis and treatment
							3. Identify possible post-stroke complications during the acute phase (i.e., Venous thromboembolism, hyper/hypoglycemia, infection such as a urinary tract infection or pneumonia, seizures, increased intracranial pressure)
							4. Explain interventions to prevent and manage complications
<i>Identified Learning Need:</i>							
6.0 Dysphagia							1. Explain dysphagia and the purpose of dysphagia screening using a validated screening tool prior to initiating oral intake, and know when to refer to the appropriate professional [e.g., Speech-Language Pathologist (SLP), Registered Dietitian (RD)]
							2. Describe signs and symptoms of swallowing difficulties and associated complications
							3. Demonstrate proper positioning and setup for safe feeding (e.g., visual/perceptual deficits, motor weakness, pocketing)
	For those who assess and recommend interventions and/or strategies to manage dysphagia						
							• Explain the connection between dysphagia deficits and location of the stroke
							• Select and complete the most appropriate assessment(s) to evaluate dysphagia (i.e., bedside assessment, Videofluoroscopic Swallow Study, Fiberoptic Endoscopic Evaluation of Swallowing)
							• Interpret assessment results and provide appropriate recommendations (e.g., diet modification, postural adjustments, safe swallow/therapeutic swallow strategies, oral motor exercises and swallow rehabilitation exercises)
							• Manage dysphagia and their associated complications (i.e., aspiration pneumonia, nutrition, hydration)

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							The numbered learning outcomes are for everyone working in stroke care. The bulleted learning outcomes are for persons who either assess, manage, or make recommendations within this specific competency.
							Explain the factors to consider when making decisions regarding tube feeding, transitioning from nasogastric (NG) tube to percutaneous endoscopic gastrostomy (PEG) tube, transition from tube to oral intake
							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
<i>Identified Learning Need:</i>							
7.0 Nutrition and Hydration							1. Explain the importance of nutrition and hydration after stroke
							2. Describe the signs and symptoms and the sequelae of malnutrition
							3. Identify persons with stroke at risk for malnutrition (e.g., poor intake, dysphagia using a validated screening tool, and the process to refer to a Registered Dietitian
							4. Explain strategies to improve nutrition and hydration (e.g., reduce distractions, encourage intake when alert)
							5. Describe the various diets, textures, and alternative feeding methods (e.g., tube feeding, Total Parenteral Nutrition)
							6. Demonstrate proper positioning and setup for safe feeding (e.g., visual/perceptual deficits, motor weakness, pocketing)
	For those who assess and recommend interventions and/or strategies to manage nutrition and hydration						
							Select and complete the most appropriate assessment(s) to evaluate nutrition and hydration
							Interpret assessment results and identify and/or implement appropriate recommendations (i.e. International Dysphagia Diet Standardisation Initiative)
							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
<i>Identified Learning Need:</i>							

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							The numbered learning outcomes are for everyone working in stroke care. The bulleted learning outcomes are for persons who either assess, manage, or make recommendations within this specific competency.
8.0 Oral Care							1. Explain the importance of oral hygiene after stroke
							2. Identify sequelae of poor oral care
							3. Screen oral health and perform oral care at least twice daily and according to your organizational protocol and/or SLP recommendations
Identified Learning Need:							
9.0 Activity Post-Stroke and Safe Patient Handling							1. Explain the role of each member of the interprofessional team in supporting activity and mobilization
							2. Explain the importance of early activity and progressive mobilization when medically stable in stroke recovery
							3. Explain how muscle tone, posture, balance, muscle weakness/motor loss, sensory loss and fatigue can affect function and safe patient handling
							4. Demonstrate proper techniques for handling, positioning, and transferring (e.g., hemiplegic extremities, skin integrity, injury prevention)
							5. Demonstrate proper use of appropriate equipment or devices to facilitate activity and safe handling (e.g., slings, gait aids, lifts)
							6. Identify contraindications to activity and mobilization including rationale to avoid very early high-dose mobilization in the first 24 hours
							7. Identify fall prevention strategies
	For those who assess and recommend interventions and/or strategies to improve activity post-stroke and safe patient handling						
							• Describe best practice recommendations for the upper and lower extremity, gait training, balance, mobility, and aerobic re-conditioning
							• Select and complete the most appropriate assessment(s) to evaluate function and safety (e.g., tone, posture, balance, muscle weakness/motor loss, sensory loss, and fatigue)
							• Interpret assessment results, identify/implement appropriate treatment/management recommendations (e.g., task specific goals, equipment, devices, techniques to promote activity, function, and safety)

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							The numbered learning outcomes are for everyone working in stroke care. The bulleted learning outcomes are for persons who either assess, manage, or make recommendations within this specific competency.
							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
<i>Identified Learning Need:</i>							
10.0 Changes in Communication							1. Identify types of communication impairments and explain the implications on conversations, and participation and engagement in therapy and activities
							2. Implement strategies to improve or assist with communication when interacting with those who have communication deficits [e.g., utilize Supported Conversations for Adults with Aphasia (SCA™) to assist with conversation, following instructions, and informed decision making]
							3. Explain the impact of the environment on communication and provide strategies to maximize successful communicative interactions
	For those who assess and recommend interventions and/or strategies to improve communication:						
							Describe the clinical consideration for screening and assessing communication impairment
							Select and complete the most appropriate assessment(s) to evaluate changes in communication
							Interpret assessment results and implement appropriate recommendations
							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
<i>Identified Learning Need:</i>							
11.0 Changes in Cognition							1. Identify common cognitive changes post-stroke and their impact on function
							2. Explain the impact of the environment on cognitive function post-stroke
							3. Implement strategies to optimize participation in functional activities when cognitive deficits exist

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	For those who assess and recommend interventions and/or strategies to improve and/or support changes in cognition						
							Describe the clinical consideration for screening and assessing cognitive impairment
							Select and complete the most appropriate assessment(s) to evaluate changes in cognition
							Interpret assessment results, identify/implement appropriate treatment/management recommendations
							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
<i>Identified Learning Need:</i>							
12.0 Changes in Vision and Perception							1. Identify common visual and perceptual changes post-stroke and their impact on function
							2. Explain the impact of the environment on visual-perceptual function
							3. Implement strategies and interventions to optimize participation in functional activities when visual and perceptual deficits exist
	For those who assess and recommend interventions and/or strategies to support changes in vision and perception:						
							Select and complete the most appropriate assessment(s) to evaluate visual-perceptual function
							Interpret assessment results, identify/implement appropriate treatment/management recommendations
							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team (i.e., optometry, neuro-ophthalmology)
<i>Identified Learning Need:</i>							

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							The numbered learning outcomes are for everyone working in stroke care. The bulleted learning outcomes are for persons who either assess, manage, or make recommendations within this specific competency.
13.0 Sensorimotor Recovery							1. Describe the key principles to drive neuroplasticity in sensorimotor recovery (repetition ‘use it or lose it’, task specificity and intensity)
							2. Implement strategies and interventions to optimize sensory and motor function
	For those who assess sensorimotor function and recommend interventions and/or strategies to support sensorimotor recovery:						
							Select and complete the most appropriate assessment(s) to evaluate sensorimotor function
							Interpret assessment results, identify/implement appropriate treatment/management recommendations
							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
<i>Identified Learning Need:</i>							
14.0. Mood and Depression							1. Explain the ongoing risk of post-stroke depression and be able to support discussions about the impact on their lives and mental health
							2. Describe common mood changes post-stroke and identify the warning signs of post-stroke depression, anxiety, and apathy
							3. Describe changes in mood and make appropriate referrals for screening with a validated tool
							4. Explain how stroke impacts behavior, emotions, actions and/or reactions
							5. Describe the relationship between mood and physical function, cognition, emotions, psychosocial health, the environment and spirituality post-stroke
							6. Explain the role hope plays in recovery and the value of fostering hope
							7. Implement strategies to support the person’s mood and behaviors
	For those who assess and recommend interventions and/or strategies to manage mood and depression:						
							Select and complete the most appropriate screening and assessment tools to evaluate mood and depression

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							The numbered learning outcomes are for everyone working in stroke care. The bulleted learning outcomes are for persons who either assess, manage, or make recommendations within this specific competency.
							Interpret screening/assessment results, identify/implement appropriate treatment/management recommendations
							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
<i>Identified Learning Need:</i>							
15 Sleep Health and Post-Stroke Fatigue							1. Describe sleep health, post-stroke fatigue and provide strategies for self-management
							2. Explain the ongoing risk of post-stroke fatigue and the impact on participation and engagement in therapy and activities
							3. Identify the signs of fatigue and make appropriate referrals
							4. Identify contributing factors to poor sleep health and fatigue
							5. Provide education on sleep health and post-stroke fatigue to persons with stroke, families/caregivers
							6. Explain strategies to improve sleep health and reduce/manage fatigue
	For those who assess and recommend interventions and/or strategies to manage sleep health and post-stroke fatigue:						
							Select and complete the most appropriate assessment(s) to evaluate sleep health and fatigue
							Interpret assessment results, identify/implement appropriate treatment/management recommendations
							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
<i>Identified Learning Need:</i>							

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16.0 Changes in Physical Function							1. Identify physical changes that can occur post-stroke
							2. Explain the physical impacts of stroke on activities of daily living
							3. Implement strategies and interventions that optimize recovery (e.g., remediation and compensatory strategies)
							4. Explain the impact of the environment on physical function
	For those who assess and recommend strategies and/or interventions to improve functional engagement in activities of daily living following stroke:						
							• Select and complete the most appropriate assessment(s) to evaluate changes in physical function
							• Interpret assessment results, identify/implement appropriate treatment/management recommendations
							• Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
	Identified Learning Need:						
17.0 Maintaining/Promoting Continence							1. Explain the impact of a change in bladder and bowel function on the care needs of the person with stroke
							2. Identify contributing factors to changes in bladder and bowel function
							3. Apply tools and strategies to support and manage bladder and bowel function
	For those who assess and recommend strategies and/or interventions to promote bowel and bladder function:						
							• Select and complete the most appropriate assessment(s) to evaluate bladder and bowel function
							• Interpret assessment results, identify/implement appropriate treatment/management recommendations
							• Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
Identified Learning Need:							

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18.0 Prevention and Management of Post-Stroke Pain and Spasticity							1. Identify common types of post-stroke pain and explain recommended interventions
							2. Describe the changes and complications that may occur in a hemiplegic arm and/or leg
							3. Explain how altered tone affects persons with stroke
							4. Identify risk factors for developing spasticity/tone
							5. Implement strategies to protect the hemiplegic arm and leg to prevent injury
							6. Apply recommended positioning techniques, interventions, and tools to minimize pain and spasticity
	For those who assess and recommend interventions and strategies for the prevention and management of post-stroke pain and spasticity:						
							Select and complete the most appropriate assessment(s) to evaluate pain and spasticity
							Interpret assessment results, identify/implement appropriate treatment/management recommendations
							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
<i>Identified Learning Need:</i>							
19.0 Stroke Prevention							1. Identify the warning signs of stroke and transient ischemic attack
							2. Identify and provide examples of the modifiable and non-modifiable risk factors for stroke
							3. Identify modifiable risk factor management strategies for the reduction of secondary or recurrent stroke
							4. Implement available education resources to support teaching on primary and secondary prevention and self-management strategies
							5. Make referrals to services and supports as appropriate
	For those who assess and recommend interventions and strategies for primary and secondary stroke prevention						

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							The numbered learning outcomes are for everyone working in stroke care. The bulleted learning outcomes are for persons who either assess, manage, or make recommendations within this specific competency.
							Select and complete the most appropriate assessment(s) to evaluate the risk of stroke
							Interpret assessment results, identify/implement appropriate treatment/management recommendations
							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
<i>Identified Learning Need:</i>							
20.0 Transitions and Community Reintegration							1. Develop individualized care plans with persons with stroke and their families that are person-centered and culturally appropriate
							2. Provide comprehensive and relevant information in a timely manner to ensure seamless transitions and continuity of care
							3. Explain the process for accessing post-acute stroke rehabilitation services as appropriate
							4. Identify the impacts of transitions on persons living with stroke and explain how to prepare for transitions between care
							5. Identify available transitional/discharge resources and services for post-stroke care and recovery relevant to your areas of practice
							6. Explain the impact of stroke on the caregiver and family members post-stroke
							7. Identify virtual care resources to support stroke care where appropriate
	For those who support transitions and recommend or refer to community supports:						
							Identify the most relevant information to enable a warm handover
							Implement available resources and supports (e.g., community stroke rehabilitation programs, community supports and services) including their inclusion/exclusion criteria and referral processes
							Facilitate relationships with partners across the continuum to better support smooth transitions and community reintegration

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							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
Identified Learning Need:							
21.0 Participation in Social and Life Roles							1. Explain the impact of participating in social and life roles post-stroke including: a. Sexuality b. Relationships c. Vocation d. Leisure activities e. Driving
							2. Identify the impact on participation in social and life roles and make appropriate referrals
	For those who recommend interventions and strategies to resume participation in social and life roles:						
							Select and complete the most appropriate screen and/or assessment(s) to evaluate participation in social and life roles
							Interpret assessment results, identify/implement appropriate treatment/management recommendations
							Demonstrate communication skills and knowledge to address physical, emotional, and cognitive impact on social and life roles
							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
Identified Learning Need:							

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22.0 Advanced Care Planning							1. Describe advanced care planning including who should be involved
							2. Explain the difference between advanced care planning and goals of care
							3. Demonstrate the appropriate communication skills and knowledge to respectfully address the physical, spiritual, cultural, psychological, ethical, and social needs of the person with stroke and their family and informal caregivers
							4. Explain when to reassess goals of care (i.e., change in a patient's health status)
	For those who support advanced care planning:						
							Explain information on advanced care planning
							Effectively communicate the recommendations and appropriate referrals, services, and resources to the persons with stroke, families/caregivers, and the interprofessional team
Identified Learning Need:							
23.0 Palliative and End-of-Life Care							1. Describe a palliative care approach to reduce suffering and improve quality of life
							2. Implement strategies to support pain and symptom management; psychological, social, emotional, spiritual, and practical support
							3. Implement strategies to support caregivers during palliative and end-of-life care
							4. Identify when a palliative and end-of-life discussion is warranted (i.e. change in health status, poor prognosis)
	For those who support palliative and end-of-life care discussions:						
							Demonstrate communication skills and knowledge to address physical, spiritual, cultural, psychological, ethical, and social needs when participating in palliative and end of life care planning discussions
							Explain when to reassess goals of care for palliative care
Identified Learning Need:							

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24.0 Patient, Family, Caregiver Education							1. Conduct an assessment of individualized learning needs and goals through the stages of care in collaboration with the person with stroke, caregivers and the interprofessional team
							2. Develop individualized education plan based on the assessment of learning needs and goals (i.e., all relevant aspects of stroke care and recovery)
							3. Explain strategies to promote self-management (e.g., shared decision making, goal setting, self-monitoring tools, access to resources, education and skill building)
							4. Identify communication strategies to promote self-management and support retention (e.g., motivational interviewing, teach-back, aphasia-friendly and accessible resources)
<i>Identified Learning Need:</i>							
25.0 Reporting and Performance							1. Demonstrate accurate documentation of stroke-specific data elements
							2. Explain how various stroke specific Key Quality Indicators and metrics (e.g. door-to-needle time, rate of access to a designated stroke unit, proportion of patients with swallow screening completed, time to post-acute care) are used to help inform program planning and system development and improve patient outcomes
<i>Identified Learning Need:</i>							

Your feedback is important to us. Please take 1-2 minutes to complete this survey:

https://forms.cloud.microsoft/pages/responsepage.aspx?id=tkGbhQ8TE02mkx_-xOfLWsx9vUIhAs9Pqc-9eB72H_FUQUtiUTNMSUZJQVEySzg2N1VYNTFOV1pOQi4u&route=shorturl

