Nursing Stroke Quick Reference Guide – COVID-19 Pandemic

BACKGROUND: To protect staff, facilitate infectious disease evaluations, and conserve PPE, many hospitals have made the decision to admit all COVID-19 positive patients to specialized COVID-19 units. Many of the staff on these units will not have stroke care training. Stroke guidance documents for stroke best practices have been developed to support staff unfamiliar with managing acute ischemic and hemorrhagic stroke patients. This information is intended to be "guidance rather than directive" and is not meant to replace clinical judgment.

When possible:

- Consult with a practioner with stroke expertise for consult and support
- Assign nurses with stroke expertise to the inpatient area where stroke patients are being admitted

To get started, locate your organization-specific order sets, clinical pathway and GAP Tool, if available.

❑ Initiate Order Sets

Note that there are different order sets for ischemic and hemorrhagic stroke as well as order sets for those who received tPA and/or EVT. The following are examples of order sets and other documentation tools taken from the Regional Stroke Centre, The Ottawa Hospital, Civic Campus.

- Admission for Acute Ischemic Stroke Post Alteplase
- Admission of Acute Ischemic Stroke Without Thrombolysis
- Admission for Intracerebral Hemorrhagic Stroke
- Post Endovascular Treatment for Ischemic Stroke

If available at your organization, initiate:

- Stroke Pathway
- GAP Tool

Neurological Assessments and Observations

A neurological (neuro) assessment provides a standardized method to rapidly identify emerging stroke complications and will provide a better patient prognosis. Symptoms of change in neurological status may include:

- Restlessness
- Combativeness
- Confusion
- Severe headache
- Lethargy
- Decline in motor strength
- Decrease in coordination
- Change in vision
- Change in balance
- Change in speech/language
- Pupil changes

(HSFO, Faaast FAQS, 2007)

- **Glasgow Coma Scale**

  The Glasgow Coma Scale (GCS) is a neurological scale which aims to give a reliable and objective way of recording the state of a person's consciousness. The GCS should be completed if you are unable to complete an acute neurological scale, such as the NIHSS or the CNS, due to a decreased level of consciousness.
  Directions on how to complete the GCS can be found here

- **NIHSS**

  The NIHSS is a 15-item impairment scale intended to evaluate neurologic outcome and degree of recovery for patients with stroke. The scale assesses level of consciousness, extraocular movements, visual fields, facial muscle function, extremity strength, sensory function, coordination (ataxia), language (aphasia), speech (dysarthria), and hemi-inattention (neglect). It is important to note that one must be both trained and certified in order to administer the NIHSS.
  Information on training program and certification can be found here

- **Complete a swallowing screen**—Barnes **or the validated tool used in your organization**
  - The swallowing screen should take place before any oral medication, nutrition or hydration is administered
  - Patients will remain NPO until screen is completed and passed

  Register here to access an e-module on how to complete the BARNES or Standardized Swallowing Screen

- **Patient and family education**

  Ensure that you are keeping patients, family members/caregivers informed of all aspects of care and are providing any necessary education. Use Your Stroke Journey: A guide for people living with stroke to support patient/family education.

  The Champlain Regional Stroke Network developed a guide to Understanding Stroke and TIA Prevention to help stroke survivors learn about TIA and stroke and learn how to prevent another one in the future:

  What Causes a Transient Ischemic Attack (TIA) or Stroke?
  What Are My Stroke Risk Factors?
  How Can I Address My Risk Factors?
  What Are My Targets?
  My SMART goals
  Exercise
  Eating Habits
  Measuring Your Own Blood Pressure
  Quit Smoking
  Stress Reduction & Wellness
  Taking Your Medication
  Common Stroke Prevention Medications
  Atrial Fibrillation
  Education Workshops
  Online and Local Resources
  Learn the Signs of Stroke

The Champlain Regional Stroke Network has developed the following infographics to help patients better understand some of the common concerns following a stroke:

Aphasia
Communication
Dysphagia
Changes to Emotions and Mood
Driving
Exercise and Mobility
Healthy Eating
Incontinence
Oral Health
Pain
Quit Smoking
Sexuality Post Stroke
Spasticity
Taking Your Medications
Visual Field Deficit

Inpatient Stroke Unit Care

Topic	Key Messages	Where to Find More Information
Body Temperature	• Monitor body temperature regularly • If elevated > 37.5^0 Celsius, use treatments to reduce fever, consider underlying infection	• Stroke Order Sets
Blood pressure	• Monitor blood pressure and be aware of the different parameters depending on type of stroke • Administer anti-hypertensives according to BP target	• Stroke Order Sets
Heart & Resp rate **Oxygen saturation**	• Follow parameters as set by physician • Report any new atrial fibrillation to physician	• Stroke Order Sets
Blood glucose	• Monitor blood glucose levels as ordered • HbA1c and fasting glucose on admission	• Stroke Order Sets
Pupils	• Subtle neurological changes, such as changes in pupil shape, reactivity & size may indicate rising intracranial pressure • Record the size of the pupils in mm using a pupil scale prior to the application of the light stimulus. Indicate the reaction of pupils as either: **+** = Brisk Reaction **S** = Sluggish **–** = No Reaction • It is critical to report a change in either pupil size, shape or reactivity	
Neuro assessment	• Complete GCS and neurological assessment as per physician order	• Stroke Order Sets
Swallowing screen	• All stroke patients are NPO until Swallowing Screen completed • Swallow Screen done within 24 hours of admission • Monitor for signs and symptoms of aspiration such as coughing, choking, wet/gurgly voice/ breath sounds or breathlessness during or immediately following meal – if present, place NPO and inform/consult SLP	• Stroke Order Sets • Stroke Care Plan / Pathway • Dysphagia Post Stroke Infographic

This document is meant to support staff who may not have experience working with the acute stroke population and provides a summary of the typical process and resources required to support patients admitted to hospital following stroke.

Topic	Key Messages	Where to Find More Information
	• Failed Swallow Screen: Keep NPO, Consult SLP • If NPO as per Swallow Screen or SLP assessment, discuss plan for enteral feeding	
Nutrition and hydration	• Monitor and document oral intake at each meal • Consult Dietetics if consumes less than 50% of meals over 3 days • If enteral feeding, follow recommendations from Dietetics	
Oral care	Poor oral care results in bacterial colonization in the mouth and higher risk of aspiration pneumonia • Provide oral care after meals and at HS, even if patient is NPO • Use a toothbrush and toothpaste • Brush teeth/dentures and tongue	• Oral Care Post Stroke Infographic
Transfers and positioning	• Mobilize early if safe to do so (consider medical stability, ability to follow instructions, insight, impulsivity, strength) • Positioning: Support the hemiplegic side • Do not pull on the hemiplegic arm • Consult OT / PT for further tips on transfers, positioning and mobility	• Positioning in Bed: Poster • Positioning in Chair: Poster • R hemi 1-person pivot • L hemi 1-person pivot • R hemi 2-person pivot • L hemi 2-person pivot
Bowel and bladder	• Constipation and incontinence are common after stroke, especially if the patient is not able to mobilize independently. Enteral feeding may cause constipation or diarrhea • Use of indwelling catheters should be avoided unless clinical indication • Implement a toileting routine and transfer to toilet or commode, if safe to do so	• Incontinence Infographic • Stroke Order Sets
Communication	• Aphasia (disorder that affects your ability to speak, read, write and understand) In non-fluent aphasia, patient may understand speech and know what they want to say but has difficulty expressing speech. Given the awareness of deficits, patient may become easily frustrated In fluent aphasia, patient may speak in long sentences that have no meaning, create made-up words and not understand fully what is said to them. The patient is often unaware of his/her spoken mistakes. • Apraxia (difficulty initiating and executing voluntary movement patterns necessary to produce speech) • Dysarthria (speech disorder that is characterized by poor articulation, respiration, and/or phonation. This includes slurred, slow, effortful, and rhythmically abnormal speech)	• Communication Disorders Post Stroke Infographic • Aphasia Infographic • Communication

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Topic	Key Messages	Where to Find More Information
	• Consult SLP for strategies on how to communicate with a patient with communication difficulties	
Pain	• Pain assessments should be performed regularly using an aphasia friendly pain scale • Patient repositioning is important for pain management • Consult PT / OT for pain relieving strategies	• Pain Infographic
Skin breakdown and wound care	• Complete Braden Skin Assessment • Mobilize early, frequent position changes • If immobile, consider pressure relief mattress • Promote early optimal nutrition	• Positioning in Bed: Poster • Positioning in Chair: Poster
Falls	• Ensure appropriate falls prevention strategies in place	• Corporate Falls Policy
Vision & Perception **Discharge planning**	• Patient may present with inattention to one side of their body or space • Patient may present with visual field deficits to one side • Ensure call bell and room set-up is on the unaffected side • Ensure you approach and speak to the patient on the unaffected side • Review discharge plan with interprofessional team, patient and family • Use Your Stroke Journey: A guide for people living with stroke and Understanding Stroke and TIA Prevention to support patient and family education around stroke, how it has affected them, and how to prevent one in the future	• Visual Field Deficit • Apraxia & Motor Planning Deficit: How can I help • Unilateral Spatial Neglect: How can I help • Champlain Stroke Regional Landscape

Contact Isabelle Martineau, Champlain Regional Stroke Network Nurse Specialist for questions.

imartineau@toh.ca **613-798-5555 extension 16177**

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