Nursing Care for Stroke Survivors
Quick Reference Guide and Assessment Checklist
(COVID-19 Pandemic)

Stroke Network Southwestern Ontario
Serving Erie St. Clair and South West LHINs

This document is intended to support nurses who may have limited experience working with stroke patients. It provides a summary of the care guidelines and assessments required to support stroke survivors during the acute and rehabilitation phases of recovery.

A. For basic information on stroke, refer to the Stroke 101 document

B. Prior to seeing the patient:

- Locate order set (note that there may be different order sets for ischemic and hemorrhagic stroke as well as orders set for those who received tPA and/or EVT)
- Obtain stroke care pathway (if applicable)
- Review existing goals of care
- Identify current discharge plan

C. 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 balance
- Change in speech/language
- Pupil changes

(HSFO, Faaast FAQS, 2007)

***Contact the physician or nurse practitioner if any change in neurological status is noted.**

Neurological Assessments	Acute	Rehabilitation
❑ **Canadian Neurological Scale (CNS) or** ❑ **National Institute of Health Stroke Scale (NIHSS)** These standard assessment tools evaluate and monitor the neurological status of acute stroke patients. Time needed: 5-10 minutes Directions on how to perform the CNS can be found here, and the NIHSS here.	*If tPA/EVT:* Q 1 hr x 24 hours, then Q4 hourly *If no tPA/EVT:* Q 4 hr x 3-5 days	not required
❑ **Complete the Glasgow Coma Scale (GCS)** This neurological scale provides a reliable and objective way to evaluate and record level of consciousness. It should be completed when there is a decreased level of consciousness. Directions on how to complete the GCS can be found here.	If patient is too drowsy for CNS/NIHSS the GCS is performed instead per the frequency noted above	Not routinely done

❑ **Alpha FIM** (acute phase ONLY) ❑ **FIM** (Rehab ONLY) These disability and functional assessments gauge the ability to perform ADL's. FIM/Alpha FIM data reporting is required and collected by the Ministry of Health. You must be credentialed to perform these assessments. If **not credentialed,** connect with a credentialed co-worker (e.g. the OT) to assist in completing the AlphaFIM/FIM®. If you are unable to do this contact your leader to determine if you should be credentialed.	**Alpha FIM** must be done on or before day 3 (Day of admission is day 1)	**FIM** must be done Within 72 hours of admission to rehab setting **and** On discharge to home/community FIM is interdisciplinary. Nursing has specific sections of the FIM assessment to complete.
❑ **Complete a swallowing screen** Conduct the swallowing screen **ONLY IF TRAINED** as per your organization's protocol. If not trained, contact a Speech Language Pathologist (S-LP) The swallowing screen should take place **before** any oral medication, and nutrition or hydration are administered Patients **will remain NPO** until screen is completed and passed	Complete swallow screen during the initial assessment. It must be completed within the first 24 hours. Consider retesting following any significant neurological change	In collaboration with team monitor swallowing and reassess as appropriate. It is common to do a reassessment at transition points (e.g.: acute to rehab)

D. For a list of severe complications and other complications after stroke, click here

E. Patient & Family Information & Education

Education and Information is the responsibility of the entire health care team.
Ensure that you are keeping the patient, and their family members/caregivers apprised of all aspects of care and are providing any necessary education.
Education starts in the ER and continues through the Acute and Rehabilitation and on into the community.

During rehabilitation there is a strong education component with a focus on:

- All areas of function
- New comorbidities (newly diagnosed diabetic, AF, etc.)
- Patient/family education on secondary stroke prevention/risk factors, etc.

Key education resources include

- ✓ Heart and Stroke Post Stroke Checklist (Appendix A)
- ✓ Hospital specific Stroke Education resources (e.g.: Stroke Binder, Your Stroke Journey etc.)
- ✓ Key Stroke care providers (educators, staff on stroke unit, CNS, Stroke Prevention Clinic nurse) can direct you to education resources that are typically used

F. Routine Acute Phase Assessments and Care (Adapted from: http://www.swostroke.ca/acute-stroke-unit-orientation/)

ACUTE PHASE: Stroke Routine Nursing Assessment and Care	
Care	Monitoring and Treatment
Safety checklist	• Complete safety checklist at each encounter
Body temperature	Fever can worsen patient outcome after stroke. • Monitor body temperature regularly • If elevated > 37.5 Celsius, use treatments to reduce fever, consider underlying infection
Heart & Resp rate	• Follow parameters as set by physician/NP
Oxygen saturation	• Oxygen saturation should be monitored with the use of pulse oximetry • Follow parameters as set by physician/NP
Blood pressure	• Monitor blood pressure and be aware of the acceptable blood pressure parameters for individual patients
Blood glucose	Hypo/hyperglycemia can worsen patient outcome after stroke. • Monitor blood glucose levels (aim to maintain normal BG)
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 the pupil scale prior to the application of the light stimulus. Indicate the reaction of pupils as either: **+** = Brisk Reaction **S** = Sluggish **–** = No Reaction If the eyes are closed due to swelling, record "**C**" ***It is critical to report a change in either pupil size, shape or reactivity.**
Hemiplegic shoulder	• Subluxation of hemiplegic shoulder may result in a pain syndrome and/or soft tissue damage • Ensure proper positioning of hemiplegic arm to maintain neutral position (e.g., use pillows in bed, a lap tray in chair, and a sling with standing)
Positioning and transfers	• Mobilize early if safe to do so (consider medical stability, ability to follow instructions, strength, etc.) • Positioning: Support the hemiplegic side (e.g. pillow under affected arm when sitting upright) • DO NOT pull on the hemiplegic arm • Consult Occupational Therapist (OT) and/or Physiotherapist (PT) for further tips on transfers, positioning, and mobility

ACUTE PHASE: Stroke Routine Nursing Assessment and Care	
Care	Monitoring and Treatment
Skin breakdown and wound care	• Complete Braden Skin Assessment • Mobilize early, frequent position changes • If immobile consider pressure relief mattress, promote early and appropriate nutrition
Pain	• Pain assessments should be performed regularly using an aphasia friendly pain scale (see "Communication" below for aphasia definition) • Patient repositioning is important for pain
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 required for close fluid balance monitoring) • Implement toileting routine
Nutrition/Hydration	• Patients with dysphagia, eating a modified diet, or receiving enteral feeding are at risk of aspiration pneumonia • If symptoms of aspiration present (e.g., coughing after eating/drinking, etc.), keep patient NPO, use IV hydration, and find alternate routes for medications • Some patients may be silent aspirators and have no overt signs • Consult with S-LP for tips on diet texture and feeding strategies • Consult with Registered Dietitian (RD) for nutritional intake
Oral care	• Poor oral care results in bacterial colonization in the mouth and higher risk of aspiration pneumonia • Ensure an oral care routine, even if patient is NPO • Complete Oral Health Assessment Tool (OHAT)
Cognition	• Screen for delirium using a validated tool (e.g. Confusion Assessment Method) • Assess orientation (person, place, time) • Consult an OT for a more detailed cognitive assessment
Falls	• Ensure appropriate falls prevention strategies in place (e.g. use of bed rails, bed in lowest position, call bell in reach) – Refer to safety checklist
Communications	Are any of the following conditions present? ▪ Aphasia (disorder that affects your ability to speak, read, write and listen) - Receptive (saying words that don't make sense) - Expressive (difficulty forming and understanding complete sentences) - Global (difficulty forming and understanding words and sentences)

ACUTE PHASE: Stroke Routine Nursing Assessment and Care	
Care	Monitoring and Treatment
	▪ 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) Consult S-LP for strategies on how to communicate with a patient with communication difficulties.
Perception	• Patient may present with inattention to one side of their body or space • Ensure call bell and room set-up is on the unaffected side • Ensure you approach and speak to the patient on the unaffected side

Routine <u>Rehabilitation Phase</u> Assessments and Care:

During the rehabilitation phase there is a strong interdisciplinary collaboration for assessment and management. e.g.: Nursing and OT's often assess ADLs together; at transition points communication regarding screening for falls, pressure injury, dysphagia, behaviours etc. takes place.

Routine assessment and interventions are roughly the same as in acute phase (noted in table above and in section C: Neurological Assessments and Interventions).

There is

- Less emphasis on Vital Signs and neuro assessment
- More on functional assessment re: mobility, self-care, continence (if an issue), swallowing, nutrition / hydration, communication, etc. And any other relevant domains, like pain, skin, emotional well-being.

Main focus is on

- Encouraging independence, adaptation, adjustment
- Establishing goals with patients, families/caregiver and working towards these goals
- Including family caregiver as partner in care – need to know what to expect in terms of learning and practice as needed
- Normalizing environment e.g.: dressing in own clothes
- Encouraging patients to perform functional daily activities (versus nursing performing ADL's for them)
- Facilitating practice of skills patients learn in therapy (mobility, self-care, communication, etc.)

Similar to the items noted in the *Acute Phase Stroke Routine Nursing Assessment and Care* table above, a shift in focus during the rehabilitation phase includes the following considerations:

Communication: Work with SLP on established goals and facilitate strategies (e.g.: supported conversation)

Cognition: Use strategies for patients with cognitive deficits such as; consistent routine, one thing at a time, cues and reminders, etc. Work towards established goals

Elimination: Working towards established goals.

Falls: Fall screen on admission. Follow Fall assessment and management process established in the organization.

Hemiplegic shoulder: Work with PT/OT to use strategies for handling the shoulder during transfers, ambulation and while in bed

Mobility: Nurses practice the strategies patients learn in therapy for positioning, transfers, mobility in the wheelchair or ambulation

Nutrition/Hydration: Working towards established goal of returning to a regular diet. If not possible, education on how to manage tube feed at home.

Oral Care: Support patients in learning how to do their oral care regularly

Pain: Ongoing pain assessment and monitoring. Use pharmacological and non-pharmacological strategies for pain management

Perception: Work with team towards established goals. Actually incorporating the affected side becomes important as the patient makes progress. Promote normal movement and recognition of the affected side into functional activities (self-care, eating, moving, etc)

Skin: On admission and weekly, monitor for pressure injury

G. Discharge Planning

Discharge planning should include the interprofessional team, the patient and caregiver/family

- If the discharge plan is for inpatient rehabilitation, complete the Rehab Referral application as soon as patient is deemed rehab ready.
- Rehab Nurses work closely with the interdisciplinary team to support patient's readiness towards the goal of discharge to home / community.

H. Helpful Resources

CorHealth has a central collection of COVID and stroke resources here: https://www.corhealthontario.ca/covid19

Heart and Stroke has created TACLS Acute Quick Reference Guides for people who may have limited experience working with stroke patients but find themselves doing so due to the current pandemic. The information in these guides was taken directly from the "Taking Action for Optimal Community and Long-term Stroke Care" (TACLS) resource.

SWOSN extends thanks to the stoke networks across Ontario for sharing in the creation of these COVID resources

Appendix A: Post Stroke Checklist

Canadian Stroke Best Practices

Post-Stroke Checklist

Developed by the Global Stroke Community Advisory Panel (2012), endorsed by the World Stroke Organization, adapted by the Heart and Stroke Foundation Canadian Stroke Best Practice Recommendations development team (2014)

Patient Name: _____ **Date Completed:** _____

Completed by: ◯ Healthcare Provider ◯ Patient ◯ Family Member ◯ Other

Since Your Stroke or Last Assessment

1 Secondary Prevention Have you received medical advice on health-related lifestyle changes or medications to prevent another stroke?	**NO** ◯	Refer patient to primary care providers for risk factor assessment and treatment if appropriate, or secondary stroke prevention services.	
	YES ◯	**Continue to monitor progress**	
2 Activities of Daily Living (ADL)	**NO** ◯	**Continue to monitor progress**	
Are you finding it more difficult to take care of yourself?	**YES** ◯	Do you have difficulty: ◯ dressing, washing, or bathing? ◯ preparing hot drinks or meals? ◯ getting outside?	If **Yes** to any, consider referral to home care services; appropriate therapist; secondary stroke prevention services.
3 Mobility	**NO** ◯	**Continue to monitor progress**	
Are you finding it more difficult to walk or move safely (i.e., from bed to chair)?	**YES** ◯	Are you continuing to receive rehabilitation therapy?	◯ **No.** Consider referral to home care services; appropriate therapist; secondary stroke prevention services. ◯ **Yes.** Update patient record; review at next assessment.
4 Spasticity	**NO** ◯	**Continue to monitor progress**	
Do you have increasing stiffness in your arms, hands, or legs?	**YES** ◯	Is this interfering with activities of daily living?	◯ **No.** Update patient record; review at next assessment. ◯ **Yes.** Consider referral to rehabilitation service; secondary stroke prevention services; physician with experience in post-stroke spasticity (e.g., physiatrist, neurologist).
5 Pain	**NO** ◯	**Continue to monitor progress**	
Do you have any new pain?	**YES** ◯	Ensure there is adequate evaluation by a healthcare provider with expertise in pain management.	
6 Incontinence	**NO** ◯	**Continue to monitor progress**	
Are you having more problems controlling your bladder or bowels?	**YES** ◯	Consider referral to healthcare provider with experience in incontinence; secondary stroke prevention services.	

Since Your Stroke or Last Assessment

7 Communication

Are you finding it more difficult to communicate?

- **NO** ◯ — **Continue to monitor progress**
- **YES** ◯ — Consider referral to speech language pathologist; rehabilitation service; secondary stroke prevention services.

8 Mood

Do you feel more anxious or depressed?

- **NO** ◯ — **Continue to monitor progress**
- **YES** ◯ — Consider referral to healthcare provider (e.g., psychologist, neuropsychologist, psychiatrist) with experience in post-stroke mood changes; secondary stroke prevention services.

9 Cognition

Are you finding it more difficult to think, concentrate, or remember things?

- **NO** ◯ — **Continue to monitor progress**
- **YES** ◯ — Is this interfering with your ability to participate in activities?
  - ◯ **No.** Update patient record; review at next assessment.
  - ◯ **Yes.** Consider referral to healthcare provider with experience in post-stroke cognition changes; secondary stroke prevention services; rehabilitation service; memory clinic.

10 Life After Stroke

Are you finding it more difficult to carry out leisure activities, hobbies, work, or engage in sexual activity?

- **NO** ◯ — **Continue to monitor progress**
- **YES** ◯ — Consider referral to stroke support organization (local/provincial support group, Heart and Stroke Foundation of Canada Living with Stroke program); leisure, vocational, or recreational therapist.

11 Personal Relationships

Have your personal relationships (with family, friends, or others) become more difficult or strained?

- **NO** ◯ — **Continue to monitor progress**
- **YES** ◯
  - ◯ Schedule next primary care visit with patient and family member(s) to discuss difficulties.
  - ◯ Consider referral to stroke support organization (local/provincial support group, Heart and Stroke Foundation of Canada); healthcare provider (e.g., psychologist, counsellor, therapist) with experience in family relationships and stroke.

12 Fatigue

Are you experiencing fatigue that is interfering with your ability to do your exercises or other activities?

- **NO** ◯ — **Continue to monitor progress**
- **YES** ◯
  - ◯ Discuss fatigue with Primary Care provider.
  - ◯ Consider referral to home care services for education and counselling.

13 Other Challenges

Do you have other challenges or concerns related to your stroke that are interfering with your recovery or causing you distress?

- **NO** ◯ — **Continue to monitor progress**
- **YES** ◯
  - ◯ Schedule next primary care visit with patient and family member(s) to discuss challenges and concerns.
  - ◯ Consider referral to healthcare provider; stroke support organization (local or provincial support group, Heart and Stroke Foundation of Canada).

For more information refer to heartandstroke.ca or strokebestpractices.ca