northern health
the northern way of caring

Regional Order Set

Acute Stroke: Non Thrombolysis and Transient Ischemic Attack (TIA) Admission Order Set

PATIENT LABEL

Allergies: ☐ None known ☐ Unable to obtain
List with reactions: _____

Weight: _____ **kg**

This order set is appropriate for admissions from the emergency department, direct inpatient admissions, strokes that occur after admission to hospital for another initial reason ("in-hospital strokes").

☐ **Patient has been excluded as a candidate for thrombolysis**
☐ Yes → Continue with this order set ☐ No → Follow order set **10-111-5164 Thrombolytic Therapy for Stroke**

☐ **Patient has been excluded as a candidate for endovascular therapy**
☐ Yes → Continue with this order set ☐ No → Follow order set **10-111-5164 Thrombolytic Therapy for Stroke**

Admission

Admit to Dr.: _____ Diagnosis: _____

Code status: Refer to **10-111-5171 Medical Order for Scope of Treatment (MOST)**
(Note - This is not an order. Prescriber must obtain, complete and sign this order separately)

Stroke symptom onset time

• Obtain and record stroke symptom onset time (or time patient was last seen normal/last known well)
Onset/last seen normal → Date: _____ Time: _____

Consults: ☐ Dietitian ☐ Occupational therapist (OT) ☐ Palliative care team ☐ Pharmacist ☐ Physiotherapist (PT)
☐ Social worker (SW) ☐ Speech language pathologist (SLP) ☐ Other: _____

Swallowing precautions/diet:

• NPO until **10-000-5189 Adult Swallowing Screen (SST)** passed
• Once Adult Swallowing Screen (SST) passed, progress to: ☐ DAT ☐ Other: _____
• MRP to reassess in 24 hours
• If Adult Swallowing Screen (SST) failed or immediate allied health/nursing concerns, consult/referral to SLP/swallowing specialist for detailed assessment, diet recommendations and therapy plan and consideration for NG in the first three days of admission (Canadian Best Practices for Stroke Care 2018).

Vitals/monitoring

☐ Neurovitals routine ☐ Neurovitals q ____ h
☐ Neurovital signs q12h/shift. Repeat until stable.
☐ **10-000-5049-001 Adult NIH Stroke Scale** q12h shift. Repeat until stable.
☐ Pain score q _____ h
☐ If SBP greater than 140/90 for 2 or more readings taken 10 minutes apart, refer to blood pressure management section
☐ Monitor intakes and outputs
• Maintain SpO_2 between 90% to 94% unless contraindicated by COPD
☐ COPD patients maintain SpO_2 at 88% to 92% unless otherwise specified
• Cardiac monitoring or telemetry for minimum 24 hours
• Arrange follow up Holter monitor unless atrial fibrillation previously diagnosed

Investigations (if not done prior)

• CBC, aPTT, INR
• E7 (glucose, creatinine GFR, urea, Na, K, Cl and bicarbonate)
• AST, ALT, ALP and CK
• HbA1c
• Fasting HDL, LDL, total cholesterol, triglycerides, total cholesterol/HDL ratio

Physician signature: _____ **College ID:** _____ **Date:** _____ **Time:** _____

Blood glucose monitoring/glycemic management

- For known diabetics hold oral hypoglycemic medications and consider basal bolus **insulin** therapy or local **insulin** order set
- Blood glucose target 6 to 10 mmol/L
- Check blood glucose qid for 24 hours and then repeat as needed
- If capillary blood glucose greater than 8 mmol/L, call MRP to consider basal bolus **insulin** therapy or local **insulin** order set

Diagnostics

☐ Chest x-ray PA and lateral: Baseline

- 12 lead ECG daily for _____ days

☐ Echocardiogram: ☐ Urgent ☐ Semi-urgent ☐ Non-urgent

NeuroImaging

- Confirm that non contrast CT has been completed within first 24 hours
- Confirm that CT Angio (arch to vertex) has been performed within first 24 hours
- If CT not available or contraindicated, then confirm carotid Doppler imaging completed
- If CT shows blood, hold anticoagulation and antiplatelet therapies until consult with neurology/internal medicine
- Urgent consultation to vascular surgeon for consideration of carotid endarterectomy (revascularization) if carotid imaging reveals ipsilateral stenosis of 50% to 99% in a patient with TIA or nondisabiling stroke to occur as soon as possible once the patient is stable but within 14 days (Canadian Stroke Best Practices 2018).

IV therapy

☐ 0.9% NaCl at _____ mL/h **with**: ☐ 20 mmol KCl/L ☐ 40 mmol KCl/L

☐ _____ at _____ mL/h

- Reassess IV infusion every 24 hours

☐ Saline lock and flush as per hospital policy/procedure

Blood pressure management (choose one):

(Note: Caution is advised in patient with critical intracranial or extra cranial arterial stenosis who may require relatively higher blood pressure to maintain cerebral perfusion)

☐ **Patients with either persistent neurological deficits or critical arterial stenosis**

- **Initial management: Option A** x 48 hours
- After 48 hours start Option B

☐ **Patients without persisting neurological deficits (i.e. TIA) and without critical arterial stenosis**

- **Initial management: Option B**

Option A	Do not intervene for SBP less than 220 mm/Hg and DPB less than 120 mm/Hg
	If SBP greater than 220 mm/Hg or DBP greater than 120 mm/HG initiate the following:
	• Give **captopril** 6.25 mg sublingually x 1 dose STAT and repeat blood pressure reading in 20 minutes
	• If systolic BP 220 mm/Hg or diastolic BP greater than 120 m/Hg on two readings 20 minutes apart
	  • Notify MRP
	  • Repeat **captopril** 6.25 mg q20min PRN sublingual STAT (Maximum 25 mg in 8h period)
	  • After each dose, check blood pressure in 20 minutes, in 1h and q2h for 8 hours and until stable
	☐ If **captopril** contraindicated, give **cloNIDine** 0.1 mg PO/NG q1h PRN for SBP greater than 220 mm/Hg or DBP greater than 120 mm/Hg (Maximum 0.7 mg in 24h period)

Option B	For BP greater than 140/90 mmHg initiate treatment (goal reduction of 15% per day with no greater than 25% decrease) ☐ **ramipril** _____ mg PO/NG daily ☐ Other: _____

Physician signature: _____ **College ID:** _____ **Date:** _____ **Time:** _____

Antiplatelet therapy:

Do not start until after initial CT complete and hemorrhage ruled out

☐ **ASA** 160 mg PO x 1* then **ASA** 81 mg PO daily (only administer PO route after swallowing screen complete)
If patient has swallowing difficulty, administer **ASA** 325 mg PR daily until swallowing assessment passed and then reassess for PO administration

☐ **clopidogrel** 300 mg PO/NG x 1*, then **clopidogrel** 75 mg PO/NG daily

☐ Short-term (21 to 30 days) combination antiplatelets for very high risk TIA (e.g. ABCD^2 greater than 4 score - see Apendix) or nondisabling stroke of noncardioembolic origin (NIHSS 0 to 3)

- **clopidogrel** 300 mg PO x 1 loading dose, then **clopidogrel** 75 mg PO daily
- **ASA** 325 mg PO x 1 loading dose, then **ASA** 81 mg PO daily
- Discontinue _____ (**clopidogrel** or **ASA**) after 21 days (continuation beyond 21 to 30 days is associated with significantly increased risk of bleeding) Canadian Best Practices for Stroke Care 2018.

**Loading dose if not already receiving this medication*

Anticoagulation therapy (when indicated)

Do not start until after initial CT complete and hemorrhage ruled out. For larger strokes may consider consulting neurology for when safe to start anticoagulation.

Note: Antiplatelet therapy in addition to anticoagulation therapy is not indicated solely for stroke prevention however in patients with unstable coronary artery disease, dual therapy may be indicated, please assess on individual basis

☐ **warfarin** _____ mg PO daily x 2 days, then daily **warfarin** orders based on INR target: _____
INR target 2.0 to 3.0 (unless otherwise indicated)

☐ Other: _____

(Please refer to formulary restrictions prior to starting **apixaban, rivaroxaban, or dabigatran**)

☐ Consult pharmacist for patient anticoagulation education (new anticoagulation start)

Note: Prescriber must obtain, complete and sign any of the referenced order sets below separately

Nausea/vomiting management

☐ **dimenhyDRINATE** 25 mg to 50 mg PO/IV q4h PRN (use lowest dose possible for effect for elderly/frail)

☐ **ondansetron** 4 mg PO/IV q8h PRN

Seizure management

- **Monitor for seizures. If patient has a seizure, initiate seizure precaution and notify MRP**
- **LORazepam** 1 mg IV STAT PRN for seizure activity
  - May repeat q2min PRN up to maximum of 4 mg if seizure persists

  *For recurrent or persistent seizures greater than 15 minutes, consider **phenytoin***
  *(loading dose: **phenytoin** 17.5 mg/kg IV x 1, maintenance: dose **phenytoin** 100 mg IV q8h)*

Fever management

- Treat temperature greater than 37.5°C aggressively

☐ **acetaminophen** 650 mg PO/PR q4h PRN for temperatures greater than 37.5°C
(max **acetaminophen** from all sources 4000 mg/24 hours)

Lipid lowering therapy: ☐ **atorvastatin** 80 mg PO/NG at bedtime ☐ Other: _____ (do not substitute)

VTE prophylaxis (following CT scan)

- Required for all patients unable to ambulate
- Refer to **10-111-5162 Adult Venous Thromboembolism Risk Assessment and Prophylaxis in Acute Care**

Physician signature: _____ **College ID:** _____ **Date:** _____ **Time:** _____

Smoking cessation

☐ **10-111-5117 Nicotine Withdrawal Protocol**

- Give patient smoking cessation literature if patient agrees
- Patient referred to website quitnow.ca or call BC Health Line at 811

Bowel management

☐ Refer to **10-111-5201-001 Adult Bowel Care Orders - Patient Not Taking Scheduled Opioid**

☐ Refer to **10-111-5201-002 Adult Bowel Care Orders - Patient Taking Scheduled Opioid**

☐ Other: _____

Bladder management

- Avoid indwelling catheter

☐ Monitor patient for urinary incontinence or retention

- If patient does not void spontaneously within 6h of admission, perform bladder scan
- If bladder scan volume greater than 300 mL, then catheterize in and out
- Repeat bladder scan q4 to 6h

Activity

In specific situations, activity will be limited:

☐ Head of the bed elevated 15° to 30° for patients at risk for airway obstruction or aspiration and those with suspected elevated intracranial pressure (AHA/ASA Guideline 2013)

☐ Supine position for non-hypoxic patients able to tolerate lying flat (AHA/ASA Guideline 2013)

- Reposition patient q2h aand PRN
- Maintain head and body midline alignment, use supportive positioning for affected limbs
- Mobilize as tolerated and/or per OT/PT recommendations
- Skin care assessment using Braden scale qshift
- Mouth care qshift and PRN

Functional assessments

- Assess patient for falls risk and reassess when changes in status occur
- Consult Rehab Team OT/PT for rehabilitation assessment within 48 hours of patient admission
- Recommended usage to AlphaFIM ®for prognostication at 3 days following stroke (Refer to **10-000-5178 AlphaFIM Data Collection Form**)
- Complete an ADL assessment

Cognitive assessments

- Assess patient for cognitive status using a validated tool (e.g., MoCA)
- Assess patient for signs of depression, mood changes or changes in personality, notify MRP

Patient and family education

- Assess patient and family for learning needs and readiness for information
- All team members to provide education to patient, family, and caregivers throughout admission. Suggest begin stroke education with brochure “Your Stroke Journey: A guide for people living with stroke" (available at the Heart and Stroke foundation website: http://www.heartandstroke.ca/)
- Provide discharge education and skills training to patient, family and caregivers

Physician signature: _____ **College ID:** _____ **Date:** _____ **Time:** _____

PATIENT LABEL

Discharge plan

• Family meeting within 7 days of admission; Booked: _____

☐ Initiate discharge planning process

☐ Expected discharge to: ☐ Home or place of residence ☐ Repatriate/transfer to other acute care: _____
☐ Inpatient rehabilitation ☐ Long term care ☐ Palliative care
☐ Other: _____

☐ Expected discharge referrals: ☐ Home care services ☐ Outpatient rehabilitation ☐ Community based rehabilitation
☐ Palliative care team/advanced care planning/end-of-life specialist

Appendix: ABCD² Score

A: Age greater than or equal to 60 years	1 point
B: Blood pressure: systolic greater than or equal to 140 mmHg or diastolic greater than or equal to 90 mmHg	1 point
C: Clinical features	
Unliateral weakness with or without speech impairment	2 point
Speech impairment without unilateral weakness	1 point
D: Duration:	
Greater than or equal to 60 minutes	2 point
10 to 59 minutes	1 point
E: Diabetes:	1 point
Total:	0 to 7 points

Physician signature: _____ **College ID:** _____ **Date:** _____ **Time:** _____