Kingston General Hospital

Transient Ischemic Attack (TIA)

Stroke Prevention Clinic (SPC) Follow Up

Collaborative Care Plan

This Collaborative Care Plan is intended as a guide only. Each patient is an individual and treatment will be modified according to the individual patient's needs and the particular circumstances.

Inclusion Criteria:

- Definite or suspected TIA
- Stroke

Exclusion Criteria:

- TIA diagnosis has been ruled out and appropriate follow-up arranged.
- Diagnosis, management, and /or follow-up for cerebral aneurysm, subarachnoid hemorrhage, arteriovenous (AV) malformation, subdural hemorrhage, traumatic intracranial hemorrhage
- (Patients will be followed in Neurosurgery and /or Cerebrovascular Disease (CVD) clinics)

Classification and Definition

High Likelihood of Stroke/TIA

HIGHEST risk for stroke recurrence (Priority 1)

Patients who present **within 48 h** of a suspected TIA or ischemic stroke with symptoms of hemibody motor weakness or sensory loss (numbness), speech difficulty (slurred or expressive/ word finding difficulty), clear monocular or hemifield vision loss (either temporary or persistent) ***are considered at highest risk*** of recurrent stroke.

INCREASED risk for recurrent stroke (Priority 2)

Patients who present greater than **48 h** from onset with symptoms of transient, fluctuating or persistent unilateral weakness (face, arm and/or leg), or speech disturbance symptoms ***are considered at increased risk*** for recurrent stroke.

Patients who **present greater than 48 h** of a suspected TIA or ischemic stroke with symptoms of hemibody motor weakness or sensory loss (numbness), speech difficulty (slurred or expressive/ word finding difficulty), clear monocular or hemifield vision loss (either temporary or persistent are ***at increased risk*** of recurrent stroke.

Lower Likelihood of Stroke/TIA

LOWER risk for recurrent stroke (Priority 3 and 4)

Patients **presenting with intermediate risk symptoms** of bilateral vision loss or double vision, sudden unilateral incoordination or sudden imbalance or other focal neurological symptoms suspicious for stroke / TIA should be seen by a neurologist or stroke specialist for evaluation, generally **within one-month** of symptom onset.

Patients experiencing atypical sensory symptoms (such as patchy numbness and/or tingling) may also be considered as ***less urgent*** and should be seen by a neurologist or stroke specialist for evaluation.

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Reference: Coutts, S. B., Wein, T. H., Lindsay, M. P., Buck, B., Cote, R., Ellis, P., Foley, N., Hill, M. D., Jaspers, S., Jin, A. Y., Kwiatkowski, B., MacPhail, C., McNamara-Morse, D., McMurtry, M. S., Mysak, T., Pipe, A., Silver, K., Smith, E. E., Gubitz, G. and the Heart, and Stroke Foundation Canada Canadian Stroke Best Practices Advisory Committee (2014), *Canadian Stroke Best Practice Recommendations*: secondary prevention of stroke guidelines, update 2014. International Journal of Stroke. doi: 10.1111/ijs.12439

FOLLOW - UP from Kingston General Hospital (KGH) Emergency Department / Hotel Dieu (HDH) Urgent Care Centre discharge is Priority 3 in most cases.

FOLLOW - UP from Inpatient discharge is Priority 4 in most cases.

Triage Priority Ratings (circle appropriate triage category)		
1.	**Highest Risk**	Immediate-assessment in the Emergency Department Assessment by Emergency, + plus /- minus Neurology, +/-Vascular Services
2.	**Increased Risk**	Assessment in next available SPC clinic within 72 hours of referral
3.	**Intermediate Risk**	Assessment in SPC clinic within 1 month of referral
4.	**Low Risk**	Assessment in SPC within 3 months
5.	**Redirected**	Internal Medicine (clinic physicians) Neurology Primary Care Other

Physician completing triage: Signature:	Date: yyyy/mm/dd	Time: hhmm
Printed name:		

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<table>
<tr><th>Critical Pathway</th><th colspan="2">Stroke Prevention Clinic Visit(s)</th></tr>
<tr><td></td><td>Date
yyyy/mm/dd</td><td>Time
hhmm</td></tr>
<tr><td>1. Assessments</td><td colspan="2">• Interprofessional Team Assessment:
• Vital Signs – BpTRU , pulse rate & regularity
• Past history and identification of risk factors
• Neurologic assessment
• Height and weight
• Waist circumference
• Adverse reactions identified
• Medication review (reconciliation)</td></tr>
<tr><td>2. Consults</td><td colspan="2">As needed:
• Registered Dietitian
• Diabetes Education
• Cardiology
• Vascular Surgery
• Speech Language Pathology (SLP), Occupational Therapy (OT), Physiotherapy (PT), & Social Work referrals thru Community Care Access Centre (CCAC) or Saint Marys of the Lake (SMOL) Outpatient Services dependent on eligibility criteria
• Physiatry consult (SMOL)
• Ophthalmology
• Psychiatry
• Internal Medicine
• Anticoagulation Management Clinic
• Hypertension Clinic</td></tr>
<tr><td>3. Tests</td><td colspan="2">• Carotid doppler, if not already done
• CT Scan, if not already done
• ECG, if not already done
• +/- CT angiogram (+ plus / - minus)
• +/- MRI
• +/- MRA
• +/- Transthoracic echocardiogram
• +/- Holter monitor / Event recorder
• +/- TEE
• +/- Other: EEG, Stress Testing, Screening for Obstructive Sleep Apnea, Cognitive Impairment, and Post Stroke Depression

<u>Blood work: non fasting or 14 hour fasting may be ordered. If fasting blood work is ordered for diabetic patients, the patient is advised to follow usual fasting time.</u>

ALT, Electrolytes, Creatinine, Fasting / Non fasting Glucose and Lipid profile, HbA1c</td></tr>
<tr><td>4. Treatments/ Interventions</td><td colspan="2">Risk factor modification and management including (but not restricted to):
• Antiplatelet or anticoagulation management
• Hypertension
• Dyslipidemia
• Smoking cessation
• Diabetes management
• Dietary and lifestyle management</td></tr>
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<tr><td>5. Medications</td><td>
<u>Antiplatelet Therapy</u> (1st dose already received in Emergency Department)
EC ASA 81mg PO daily.

OR

Clopidogrel (Plavix) 75 mg PO daily. (Limited use code number (LU #) not required)

OR

Dipyridamole XR 200 mg/ASA 25 mg (Aggrenox) 1 capsule PO bid. (Limited use code # 349)

OR

ECASA 81 mg PO daily plus Clopidogrel (Plavix) 75 mg PO daily

Current Canadian Best Practice Recommendations for stroke prevention do not support the long-term use of EC ASA plus Clopidogrel. Short term concurrent use of ASA & Clopidogrel (up to 90 days) has not shown an increased risk of bleeding. If dual antiplatelet therapy with ECASA and Clopidogrel is considered, a reasonable regimen is: EC ASA 162 mg PO x1 plus Clopidogrel 300 mg PO x1 in ED, then continue EC ASA 81 mg PO OD plus Clopidogrel 75 mg PO OD. (Dual antiplatelet therapy should not be continued for more than 3 months, after which most patients should be continued on single antiplatelet therapy alone).
For further information please refer to:
www.strokebestpractices.ca/index.php/prevention-of-stroke/antiplatelet-therapy/

OR

<u>Anticoagulation Therapy</u>
For patients with non-valvular atrial fibrillation therapeutic options include Dabigatran, Rivaroxaban, Apixaban, and Warfarin.

In patients with atrial fibrillation without a mechanical valve, Dabigatran, Rivaroxaban, and Apixaban should be considered as an appropriate first-line therapy.
eGFR should be assessed before prescribing Direct Oral Anticoagulants (DOAC).
Dabigatran (Limited use code # 431)

Rivaroxaban (Limited use code # 435)
Apixaban (Limited use code # 448)
In patients with atrial fibrillation & a mechanical valve, Warfarin is the appropriate therapy, with INR target between 2.5 & 3.5.
For further information please refer to:
www.strokebestpractices.ca/index.php/prevention-of-stroke/antithrombotic-therapy-for-atrialfibrillation/
<u>Other medications:</u>
• Consider ACE Inhibitor or ARB
• Start a statin / +/- other dyslipidemic agent (+ plus / - minus)
• +/- antihypertensive agents
• +/- oral hypoglycemic agents
• +/- smoking cessation aids
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Critical Pathway	Stroke Prevention Clinic Visit(s)
6. Diet	• **Restrict dietary sodium to less than 2000 mg daily** • Limit saturated fat and trans fats and replace with monounsaturated and polyunsaturated fats • Teach principles of DASH diet and Mediterranean- type diet • Reduction in refined carbohydrates and added sugars
7. Activity	• Encourage increased activity as tolerated • **Driving ability to be discussed**
8. Teaching	• Review *Warning Signs of TIA and Stroke* (review Heart and Stroke card) and when to call 911 to return to the Emergency Department. • Patient to avoid driving until advised to do so by physician (medical assessment and appropriate investigations completed). • Smoking cessation • Diet instruction, including individualized diet counseling by a registered dietitian. • Provide stroke prevention information folder and Heart and Stroke Foundation (HSF) You've Had a TIA handbook.
9. Follow-up and Referrals	• Complete diagnostic tests as ordered. • Ontario Drug Benefits (ODB) Limited Use Number (LU #) prescription codes: (as required) • Clopidogrel (Plavix) - not required • Dipyridamole / ASA (Aggrenox) number (#) 349 • Dabigatran # 431 **(# - number)** • Rivaroxaban # 435 • Apixaban # 448 • Advise primary care physician of patient's plan of care • Primary care physician follow-up • +/- Return to Stroke Prevention Clinic **(+ plus / - minus)** • +/- Vascular Surgery • +/- CVD clinic • +/- Neurointerventional radiology • +/- Neurology / Neurosurgery • +/- Internal Medicine • +/- Hypertension Clinic • +/- Other appropriate clinic
10. Patient Outcomes	• Patient / family actively participate in plan of care. • Patient / family demonstrate an understanding of patient's medication regime. • Patient agrees to follow medication regime and plan of care. • Patient's / family's expressed concerns and anxieties are addressed. • Patient / family are able to verbalize signs and symptoms of TIA and stroke and when to call 911 to return to the Emergency Department. • Patient is aware of smoking cessation resources in the community.