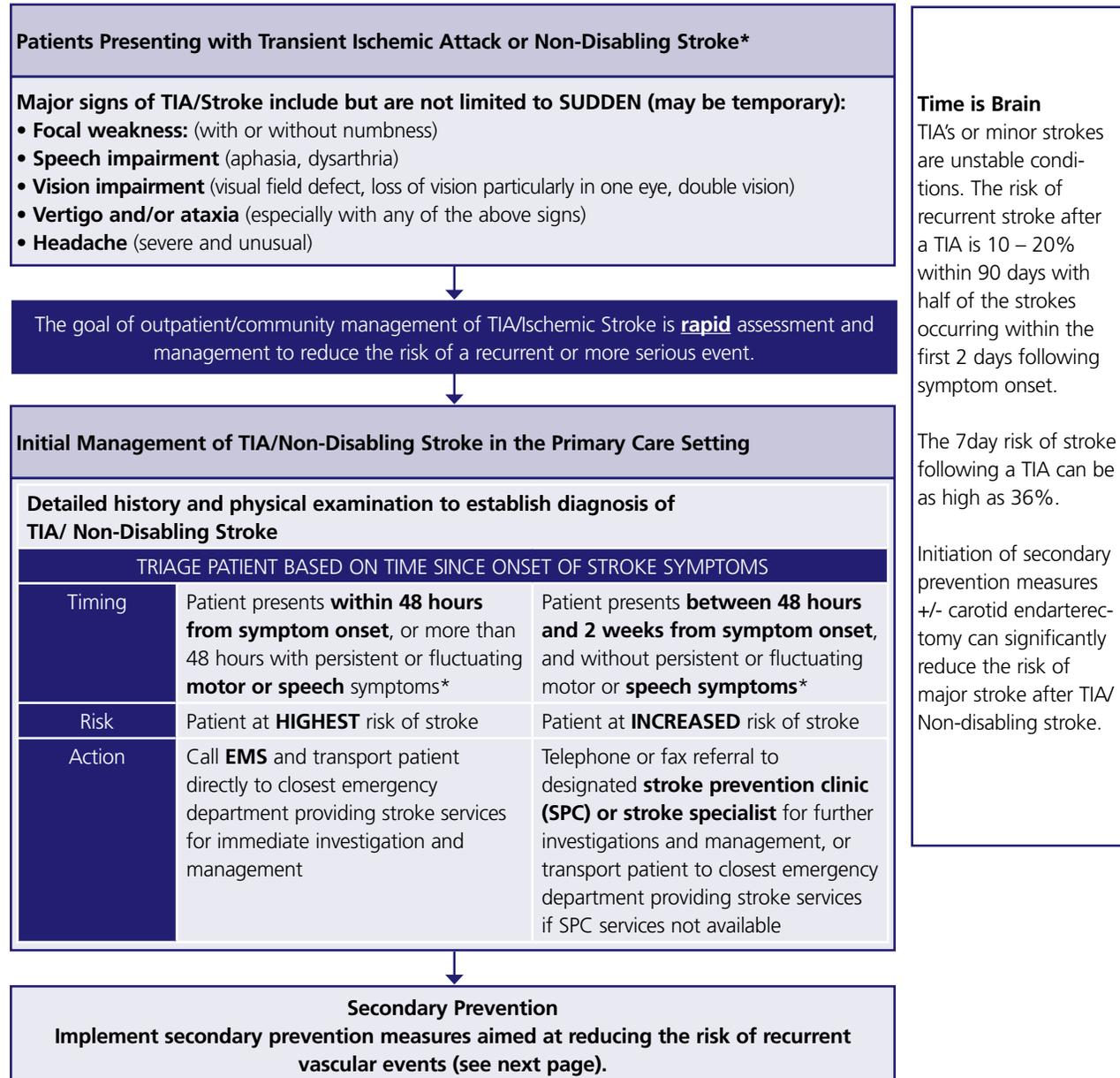




TIA & ISCHEMIC STROKE

Adapted from the Canadian Stroke Network, Canadian Best Practice Recommendations for Stroke Care 2012. Please visit www.strokebestpractices.ca for further information and/or most current recommendations.

TIA/MINOR STROKE MANAGEMENT ALGORITHM



* Patients presenting after 2 weeks and/or those with isolated sensory symptoms / tingling may be considered less urgent if not accompanied by other high risk symptoms



MANAGEMENT OF TIA & ISCHEMIC STROKE

Risk Factor	Target	Intervention
Education	<i>Recognize warning signs of Stroke</i>	<p>Educate patients to recognize the warning signs of Stroke:</p> <ul style="list-style-type: none"> • Weakness: Sudden weakness, numbness or tingling in the face, arm or leg • Trouble speaking: Sudden temporary loss of speech or trouble understanding speech • Vision problems: Sudden loss of vision, particularly in one eye, or double vision • Headache: Sudden severe and unusual headache • Dizziness: Sudden loss of balance, especially with any of the above signs <p>Action: Call 9-1-1 or your emergency number IMMEDIATELY</p>
Smoking	<i>Smoke-free</i>	<p>See Smoking Cessation Guideline</p> <ul style="list-style-type: none"> • Ask about tobacco use at every visit. • Advise every tobacco user to quit. Advise of risks of continued smoking to Stroke patients. • Assess the tobacco user's readiness to quit. • Assist by counselling and pharmacotherapy - see smoking cessation recommendations. • Arrange follow-up, referral to specialized programs or community programs. • Urge avoidance of exposure to environmental tobacco smoke at work and home.
Physical Activity	<i>30-60 minutes, 4-7 days/ week</i>	<p>See Physical Activity Recommendations</p> <ul style="list-style-type: none"> • Encourage 30 to 60 minutes of moderate-intensity aerobic activity such as brisk walking on most days of the week, supplemented by an increase in daily lifestyle activities. • Identify problems/ barriers to starting and maintaining exercise program and discuss possible solutions. • Refer to suitable community program as indicated.
Weight Management	<p><i>Target Weight:</i> BMI 18.5 to 24.9 kg/m²</p> <p><i>Waist circumference:</i> < 80 cm (35") for women and < 94 cm (40") for men</p> <p><i>Start with targeting weight loss of 5 – 10% of body weight.</i></p>	<p>See Obesity and Weight Management Recommendations</p> <ul style="list-style-type: none"> • Assess BMI and/ or waist circumference (see Appendix B for instructions on proper waist line measurement). • Discuss weight issues with patients who are outside of the BMI and waist circumference limits. • Encourage weight maintenance or reduction through appropriate balance of physical activity, caloric intake. • Refer to behavioural programs as necessary.
Alcohol Consumption	<i><2 drinks/ day</i>	<ul style="list-style-type: none"> • No alcohol to moderate <2 drinks/ day (<9/ week for women; <14/ week for men).
Sleep Apnea	<i>Identify and manage sleep apnea</i>	<ul style="list-style-type: none"> • Assess patients for presence of sleep apnea as a risk factor prior to first stroke and a following stroke or TIA. Provide appropriate referrals to supportive and management services.



Risk Factor	Target	Intervention
Hypertension	<140/90 mmHg or <130/80 mmHg if patient has Diabetes	<p>See Hypertension Guideline</p> <ul style="list-style-type: none"> Assess BP routinely, ideally at every health care encounter but no less than once annually. For patients who have had a Stroke, BP lowering is recommended even if BP <140/90 mmHg. Ensure patient knows his/ her BP values and targets. Initiate or maintain lifestyle modification. Add BP medication as needed to achieve targets.
Dyslipidemia	LDL-C <2.0 mmol/L or a 50% decrease in LDL-C; TC/ HDL-C Ratio <4.0	<p>See Dyslipidemia Guideline</p> <ul style="list-style-type: none"> Conduct fasting lipid profile in all patients every 12 months. Ensure patient knows his/ her lipid values and targets. If required, initiate LDL-lowering drug therapy. Ensure adequate titration to achieve targets. Start recommended dietary therapy. Promote daily physical activity and weight management. After obtaining required target, recheck annually.
Glycemic Control/ Diabetes	If diabetic: HbA1c <7% (<6.5% if possible without hypoglycemia)	<ul style="list-style-type: none"> Screen for Diabetes annually or as clinically indicated. If diabetic: <ul style="list-style-type: none"> Initiate lifestyle and pharmacotherapy to achieve near normal HbA1c. <ul style="list-style-type: none"> Initiate pharmacotherapy as per recommendations from Canadian Diabetes Association.²⁹
Healthy Balanced Diet	Diet intake based on Canada's Food Guide. Sodium: 9 – 50 yrs: 1500 mg 50 – 70 yrs: 1300 mg > 70 yrs: 1200 mg	<ul style="list-style-type: none"> Encourage consumption of a diet high in fresh fruits, vegetables, low-fat dairy products, dietary and soluble fibre, whole grains, protein from plant sources, low in saturated fat, cholesterol, and sodium. A daily upper consumption of 2300 mg sodium should not be exceeded by any age group.
Antiplatelet	All patients with Ischemic Stroke or TIA to be started on antiplatelet therapy and continue indefinitely unless there is an indication for anticoagulation or a contraindication to the antiplatelet.	<ul style="list-style-type: none"> Evidence suggests that treating patients with: (1) ASA (2) clopidogrel; or (3) ASA + ER Dipyridamole combined are all options for secondary prevention stroke prevention. Long-term combinations of ASA and clopidogrel are not recommended. If ASA alone is used, the usual maintenance dosage is 80 – 325 mg/day. For secondary prevention in Ischemic Stroke or TIA, antiplatelet therapy is used life-long.
Antithrombotic	Warfarin (INR 2-3) Dabigatran Rivaroxaban	<ul style="list-style-type: none"> Stroke/TIA patients with atrial fibrillation should be treated with anti-coagulation (Warfarin, Dabigatran, or Rivaroxaban) Warfarin at a target INR range of 2.0 to 3.0.
Carotid stenosis	Carotid endarterectomy or stenting within 2 weeks in patients with ipsilateral 50-99% internal carotid artery stenosis	<ul style="list-style-type: none"> Referral to stroke expert for evaluation of carotid artery stenosis. Carotid endarterectomy should be offered to select patients with TIA/ ischemic stroke and ipsilateral 50-99% internal carotid artery stenosis. Carotid endarterectomy may be considered for selected patients with 60-99% carotid stenosis who are asymptomatic or were remotely symptomatic (> 3 months).



Risk Factor	Target	Intervention
Functional Assessment and Management	<i>Functional status routinely assessed and managed</i>	<ul style="list-style-type: none">• Assess patient for post-stroke residual functional deficits and abilities to carry out activities of daily living including driving and vocational concerns where appropriate.• Make appropriate referrals for out-patient, ambulatory, or community-based rehabilitation and recovery programs (refer to community resources page).
Management of Depression, Anxiety and Cognitive Changes	<i>Mood and cognitive changes for post stroke/ TIA patients routinely assessed and managed.</i>	<ul style="list-style-type: none">• Parents and family members (especially primary caregivers) should be screened for mood changes and changes in cognition (executive functions, IADLs, memory).• Screening for mood and cognition changes should occur periodically, as changes may manifest over a longer period of time.• Make appropriate referrals for comprehensive assessment and ongoing management of mood and cognitive changes.• Continue to provide patient and family education at all healthcare encounters.



COMMUNITY RESOURCES – TIA & ISCHEMIC STROKE

CHAMPLAIN REGIONAL STROKE NETWORK

Web: www.champlainregionalstrokenetwork.org

The Champlain Regional Stroke Network is accountable for providing leadership, development, implementation and coordination of Stroke care throughout the region and across all points in the spectrum of care (health promotion, primary and secondary prevention, pre-hospital, acute care, rehabilitation, and community reintegration including long-term care).

Stroke prevention encompasses risk factor reduction both at a population and individual level. Implementing optimal stroke prevention strategies throughout the whole continuum of care has the potential to reduce the incidence of stroke by as much as 80%. (Rothwell, P.M. et al., 2007).

Primary prevention of stroke includes lifestyle modifications and measures to control blood pressure, cholesterol levels, diabetes mellitus, and atrial fibrillation. Lowering blood pressure in patients with hypertension prevents both hemorrhagic and ischemic stroke (relative risk reduction 35 to 45 percent).

CHAMPLAIN COMMUNITY CARE ACCESS CENTRE (CCAC)

The first step to accessing community-based services is through the Champlain Community Care Access Centre (CCAC). The Champlain CCAC coordinates in-home services such as nursing, physical therapy, occupational therapy, and personal support to qualifying clients. The CCAC can also help link Stroke survivors to alternate services available in the community such as adult day programs, meal delivery services, assistance with shopping or cleaning, or transportation assistance. When people are no longer able to manage at home, the CCAC helps them consider other housing options or coordinate admission to a long-term care home.

Tel: 613-745-5525, Toll free: 1-800-538-0520

Web: www.ottawa.ccac-ont.ca

Clinic/Program: The Ottawa Hospital Stroke Prevention Clinic

Civic Campus – 2nd floor; Section C2
1053 Carling Ave, Ottawa, ON K1Y 4E9
Tel: 613-798-5555 ext. 16156 Fax: 613-761-5320

Description: The Ottawa Hospital (TOH) was designated as the site of the Regional Stroke Prevention Clinic (SPC) in the fall of 2004. This ensures that individuals who are at high-risk for Stroke in our region receive evidence-based care founded on best practices. The SPC provides an integrated, comprehensive, inter-disciplinary approach to Stroke prevention. The main objectives are to reduce delays and inefficiencies in risk factor management of high-risk Stroke patients and to facilitate timely access to surgical interventions.

Appropriate for: Patients at high risk for Stroke or who have had a suspected TIA or other Stroke symptom.

Hours: Mon to Fri

Language: English, French

Cost: N/A

Referral: To access the SPC, patients will need to have a referral by an emergency room physician, their family physician, or another medical specialist. Upon receipt of the referral, the administrative assistant will contact the patient with an appointment to be seen in the SPC. In order to ensure efficiency of the clinic visit, it is possible that some tests will be completed prior to the clinic visit.

The SPC referral form can be downloaded from: www.champlainregionalstrokenetwork.org/ (found under “prevention” tab).

At the clinic, the patient will meet with the stroke neurologist and the stroke prevention nurse specialist to discuss their risk factors. The patients may receive treatment, have tests and be referred to a specialist. The care is based on the individual needs.

**Clinic/Program:** Hawkesbury and District General Hospital Stroke Prevention Clinic

1111 Ghislain Street, Hawkesbury, ON (2nd Floor)
Tel: 613-632-1111 ext. 412 Fax: 613-636-6194

Description: The primary objective of the clinic is to reduce delays in obtaining urgent access to stroke prevention care following transient ischemic attack or mild stroke. We offer quick access to diagnostic services, evaluation of health, treatment, and referral to other services (internal medicine, neurology, neurosurgery, dietician, diabetes clinic, cardiac rehabilitation, smoking cessation). In addition, we offer education to the patient/family so they can improve their own health status.

The team includes a nurse practitioner, a dietician, and a secretary working in close collaboration with internal medicine specialists and neurologists. Laboratory and investigations are completed on site. To access the stroke prevention clinic, patients require a Hawkesbury Stroke Prevention Clinic Consult Form completed by an emergency physician, family physician or other medical specialist. This form can be downloaded from: www.champlainregionalstrokenetwork.org (found under "prevention" tab).

Upon receipt of the referral, the secretary will contact the patient with an appointment. To ensure the effectiveness of the clinic, certain tests will be completed before the initial visit to the clinic. At the clinic, the patient will meet the nurse practitioner who will perform the initial assessment and discuss risk factors.

Appropriate for: Patients at high risk for Stroke or who have had a suspected TIA or other Stroke symptoms.

Hours: Tues to Fri: 8:30 a.m. to 4:30 p.m.

Language: English, French

Cost: N/A

Referral: Physician referral required.

To refer: Complete referral form; include all lab results and CT reports; call clinic to request referral and fax form to clinic; and, inform patient that clinic will contact them directly with appointment date and time.

Clinic/Program: Pembroke Regional Hospital Stroke Prevention Clinic

705 Mackay St, Pembroke ON (Ambulatory Clinics, Tower C, off Deacon Street)
Tel: 613-732-2811 ext. 6640 Fax: 613-732-6350

Description: The Stroke Prevention Clinic will provide rapid access to diagnostic services, health assessment, diagnosis, treatment and risk factor management to those who have had a Transient Ischemic Attack (TIA) or a very mild stroke.

Appropriate for: Patients at high risk for Stroke or who have had a suspected TIA or other Stroke symptom.

Hours: Mon to Fri

Language: English, French

Referral: Download referral form from: www.champlainregionalstrokenetwork.org (found under "prevention" tab). complete form and include recent test results, medications, and copy of CT report and advise patient to bring copy of CT head on CD; call clinic to make referral – instructions are then given as to where referral form is to be faxed; and, inform patient that clinic will contact them directly. Referrals can be made by family physicians or through any of the Renfrew County Hospital Emergency Departments



Clinic/Program: **Cornwall Community Stroke Prevention Clinic**

Cornwall Community
Cornwall Community Hospital - McConnell site
840 McConnell Ave, Cornwall ON K6H 5S5
Phone: 613-938-4240 ext 3118 Fax: 613-938-5379

Description: The primary objective of the clinic is to reduce delays in obtaining urgent access to stroke prevention care following transient ischemic attack or mild stroke. We offer quick access to diagnostic services, evaluation of health, treatment, and referral to other services (internal medicine, neurology, neurosurgery, dietician, diabetes clinic, cardiac rehabilitation, smoking cessation). In addition, we offer education to the patient/family so they can improve their own health status.

The team includes a nurse practitioner and an administrative assistant working in close collaboration with a local neurologist. Laboratory and investigations are completed on site. To access the stroke prevention clinic, patients require a Cornwall Stroke Prevention Clinic Consult Form completed by an emergency physician, family physician or other medical specialist. This form can be downloaded from: <http://www.champlainregionalstrokenetwork.org> (found under "prevention" tab).

Upon receipt of the referral, the patient will be contacted with an appointment. To ensure the effectiveness of the clinic, certain tests will be completed before the initial visit to the clinic. At the clinic, the patient will meet the nurse practitioner who will perform the initial assessment and discuss risk factors.

Appropriate for: Patients at high risk for Stroke or who have had a suspected TIA or other Stroke symptom.

Hours: Mon to Fri: 9:00 a.m. to 12:00 p.m.

Language: English, French

Referral: Physician referral required. To refer: Complete referral form; include all lab results and CT reports; call clinic to request referral and fax form to clinic. Inform patient that clinic will contact them directly with appointment date and time.

PROFESSIONAL EDUCATION/RESOURCES

One of the key success factors in the Ontario Stroke Strategy is the dedication to best practice stroke care. Professional education resources and programs have been developed along the continuum of care to aid in the dissemination of the latest evidence, research and clinical implications related to best practice stroke care.

In the Champlain Region, recommendations for stroke related educational initiatives are vetted through the Regional Stroke Education Working Group. This multidisciplinary group is comprised of health care professionals from hospitals and community agencies providing health care to stroke survivors and their families. This group meets 3-4 times a year to discuss regional educational needs, review feedback from stroke educational initiatives and to develop the educational plan for each fiscal year (April 1st to March 31st). This group is also the main communication network for all stroke initiatives related to educational or professional resources.

If you have any questions about stroke education in our region, please contact your "Regional Stroke Education Working Group" member at your facility, or the Regional Stroke Education Coordinator at 613-798-5555 Ext 16152.

- The Canadian Stroke Best Practice Recommendations for Stroke care can be accessed at: www.strokebestpractices.ca
- Ontario Stroke System Secondary Prevention web initiative can be accessed at: www.heartandstroke.ca/profed
- Go to STROKE and then ACUTE CARE and then STROKE PREVENTION

