

CANADIAN STROKE STRATEGY**STROKE STRATEGY IMPACT PERFORMANCE INDICATORS****CORE INDICATORS**

Recommended Core Indicators	
1.0	Overall Stroke Incidence
1.1	The incidence of stroke in each province by stroke type.
1.2	The stroke mortality rates across provinces and territories, including in-hospital, 30 – day and one-year.
1.3	The proportion of patients in the population who have identified risk factors for stroke including: hypertension, obesity, smoking history, low physical activity, hyperlipidemia, diabetes, atrial fibrillation
2.0	Public Awareness and Primary Stroke Prevention
2.1	Percentage of the population aware of 2 or more signs of stroke
3.0	Pre-Hospital and Emergency Stroke Care
3.1	Proportion of acute stroke patients who arrive at hospital within 2.5 hours of stroke symptom onset for all stroke types
3.2	Proportion of all ischemic stroke patients who receive acute thrombolytic therapy (tPA).
3.3	Proportion of all thrombolysed ischemic stroke patients who receive acute thrombolytic therapy (tPA) within one hour of hospital arrival.
4.0	In-Hospital Stroke Care
4.1	The proportion of all acute stroke patients who are managed on a designated acute stroke unit at any point during hospitalization.
4.2	Proportion of acute ischemic stroke patients discharged on antithrombotic therapy unless contraindicated.
4.3	Proportion of acute stroke patients with atrial fibrillation who are treated with anti-coagulant therapy unless contraindicated.
4.4	Proportion of stroke patients who receive a brain CT/MRI prior to hospital discharge.
4.5	Percentage of patients discharged to their home or place of residence following an inpatient admission for stroke.
5.0	Stroke Rehabilitation
5.1	Proportion of acute stroke patients discharged from acute care to inpatient rehabilitation.
5.2	Wait times for inpatient and outpatient stroke rehab services.
5.3	Percentage of patients discharged home or to place of residence following an inpatient rehabilitation admission for stroke.
6.0	Secondary Stroke Prevention
6.1	Proportion of patients with TIA who are discharged from the emergency department who are seen within 24 or 72 hours in a designated hospital-based or community secondary prevention clinic.
6.2	Median wait time from stroke symptom onset to carotid endarterectomy surgery

7.0 Community Stroke Care and Re-Engagement	
7.1	Proportion of acute stroke patients discharged from acute care to a long-term care home (who were not previously a resident of a LTC home).
7.2	Proportion of patients who are discharged from acute care who receive a referral for home care/community supportive services.

ADDITIONAL INDICATORS

Recommended Additional Indicators		Comments
1.0 Public Health And Primary Stroke Prevention		
1.1	Use/penetration of public awareness and educational materials and activities.	◆ To work with Health Promotion organizations for further development.
2.0 Pre-Hospital and Emergency Stroke Care		
2a	Proportion of patients who arrive at a designated stroke centre who have bypassed another hospital.	◆ Appropriate for regions where formal bypass protocols are established.
2b	Proportion of EMS and Ed personnel who attend regular professional development sessions on acute stroke management.	◆ Ideally, education should be coordinated so that all sectors and disciplines receive similar information
2c	Proportion of patients where the NINDS inclusion/exclusion criteria are applied for patient selection for thrombolysis.	◆
2d.	Proportion of patients potentially eligible for tPA who have a CT/MRI brain scan completed within 25 mins of ED arrival	◆
2e.	Percentage of patients arriving within 2.5 hours of stroke symptom onset who have a CT scan within 25 minutes of arrival.	◆
2f.	Proportion of patients who arrive at a designated referring hospital with stroke symptoms who receive access to stroke expertise through Telestroke.	◆ Denominator should be proportion of total stroke cases treated per site ◆ Also consider number of patients in a hospital/region receiving tPA before and after Telestroke program initiated.
2g.	Proportion of Telestroke cases where an urgent follow-up is required with the Stroke specialist due to complication or unexpected event.	◆ Denominator should be total number of telestroke consults.
3.0 In-Hospital Stroke Care		
3a.	The proportion of all acute stroke patients CT/MRI should be completed within 24 hrs for patients ineligible for tPA.	
3b.	Proportion of patients where blood glucose levels are checked on arrival and regularly for first 24 hours.	◆
3c.	Proportion of patients with elevated pre-prandial blood glucose who are treated with glucose lowering agents.	
3d.	Proportion of patients presenting with acute stroke symptoms who have an electrocardiogram in the ED.	◆
3e.	Proportion of patients with an acute ischemic stroke who are mobilized and out of bed within <i>24 hours of stroke symptom onset unless</i> contraindicated.	◆ Need to define both mobilization and a way to identify contra-indications
3f.	Proportion of patients with a documented assessment/screen for dysphagia before being given food or drink.	◆ Should particular screening tools be identified? Will defer to the Rehab panel in Feb. 2006
3g.	Proportion of patients who receive carotid imaging during hospitalization or have documentation to have tests completed as outpatient following hospital discharge.	◆ Applied for ischemic stroke patients
3h.	Proportion of acute ischemic stroke patients with acute Aspirin therapy initiated within 48 hours (and as soon as possible) after stroke onset unless contraindicated.	◆
3i.	Proportion of patients with acute ischemic stroke and their caregivers who receive stroke education prior to discharge	◆ Good chart documentation is essential.

	from hospital	
3j.	Patients with acute ischemic stroke should have their smoking status assessed while in hospital and documented on patient chart.	◆ Good chart documentation is essential.
4.0 Stroke Rehabilitation		
4a.	Availability of multidisciplinary coordinated rehab programs for inpatients and outpatients in appropriate settings per 100,000 population	◆ Link with HSFs and Health Canada for survey results
4b.	Rates of complications such as skin breakdown and deep vein thrombosis for stroke patients in rehabilitation programs	◆ Require clear definitions of each potential complication
4c.	Proportion of patients and families who receive educational sessions about stroke while in stroke rehabilitation.	◆ Good documentation required
4d.	Proportion of stroke rehabilitation patients who are assessed for swallowing difficulties, malnutrition, pain management, cognitive impairment, depression & other psychological effects.	◆ Requires documentation on patient chart
4e.	Changes in functional status (FIM, mRS) of patients pre and post rehabilitation.	◆ Refer to the Stroke Rehab panel in Feb. 06 for identification of functional assessment tools
4f.	Proportion of patients who were working prior to their stroke who return to work, and the duration of time from event to return to work.	◆
4g.	Proportion of patients who were driving prior to their stroke who return to driving, and the duration of time from event to return to driving.	◆
** Further stroke rehab indicators will be deferred until the stroke rehab consensus panel in February 2006.		
5.0 Secondary Stroke Prevention		
5a.	Proportion of stroke patients who are assessed for and prescribed a lipid-lowering agent if appropriate	◆
5b.	Proportion of stroke patients who are assessed for and prescribed a blood-pressure lowering agent if appropriate.	◆
5c.	Proportion of patients seen in secondary prevention who receive a CT/MRI, carotid imaging, and ECG.	◆ Non-admitted patients
5d.	Peri-operative complication rates for stroke patients undergoing carotid endarterectomy	◆ Complications: stroke and death at 30-days
5e.	Rates of new stroke events or death that occur while a stroke patient is under secondary prevention care	◆
6.0 Community Stroke Care and Re-Engagement		
6a.	Assessment for and access to community services as required, including: wait times, amount of service provision, types of services available	
6b.	Patient education and family support - appropriate community supports identified and information provided to patients	◆