



## Secondary Prevention of Stroke Order and Documentation Template

The following actions are based on the 2014 Update of Canadian Stroke Best Practice Recommendations for Secondary Prevention of Stroke (www.strokebestpractices.ca). This document is intended to be used as a template to ensure alignment of organization specific care with the Stroke Best Practices for secondary stroke prevention. Institutional specific standards for routine precautions, assessment and care should be followed.

Patients with stroke and TIA who present to an ambulatory setting or a hospital should undergo clinical evaluation by a healthcare professional with expertise in stroke care to determine risk for recurrent stroke and initiate appropriate investigations and management strategies (CSBPR Secondary Prevention of Stroke, Recommendation 1).

Date \_\_\_\_\_ Time \_\_\_\_\_

Setting for Assessment:

- Emergency Department       Stroke Prevention Clinic
- Primary Care Office       Other Ambulatory Setting \_\_\_\_\_

### I. Initial Risk Stratification and Management

#### Stroke Symptom History and Presentation

Record Onset of Stroke Symptoms (or last time seen as normal) \_\_\_\_\_

- Triage patient based on time since onset of stroke symptoms and clinical presentation ([Refer to Recommendation 1: Initial Risk Stratification and Management](#))
- Conduct history and physical examination to establish diagnosis of TIA/non-disabling stroke

#### Stroke Severity and Focal Deficits

- Complete baseline assessment with standardized stroke scale
  - National Institute of Health Stroke Scale (NIHSS)      Record baseline Score: \_\_\_\_\_
  - or  Canadian Neurologic Scale (CNS)      Record baseline Score: \_\_\_\_\_
  - or  Neurovital signs

**Investigations** (refer to Recommendation 1.2, CSBPR Secondary Prevention of Stroke)

**Vital Signs and Assessment**

Record baseline vital signs

Temperature \_\_\_\_\_°C Heart Rate \_\_\_\_\_/min.

Blood Pressure \_\_\_\_/\_\_\_\_ mmHg Respiratory Rate\_\_\_\_\_

SpO<sub>2</sub> via pulse oximetry \_\_\_\_\_ %  Maintain SpO<sub>2</sub> at \_\_\_\_\_ %

Actual Weight \_\_\_\_\_ kg or  Estimated Weight \_\_\_\_\_ kg

Height \_\_\_\_\_ cm Body Mass Index (BMI) calculated \_\_\_\_\_ kg/m<sup>2</sup>

**Neuroimaging**

CT Angiography or  MR Angiography

Urgency:  STAT  Same-day  Within 24 hours  Within 2 weeks  Within 1 month

Scan scheduled Date: \_\_\_\_\_ Time: \_\_\_\_\_

Scan completed Date: \_\_\_\_\_ Time: \_\_\_\_\_

Other Non-invasive Vascular Imaging (intra- and extracranial vasculature)

Carotid Ultrasound  Scheduled (date) \_\_\_\_\_  Completed (date) \_\_\_\_\_

**Neurovascular Intervention**

Referral to neurovascular expert Name: \_\_\_\_\_ Date: \_\_\_\_\_

Carotid endarterectomy scheduled Date: \_\_\_\_\_

**Cardiac**

Complete 12 lead ECG

Presence of Atrial Fibrillation:

No

Order prolonged ECG monitoring

Holter Monitor  Loop Recorder  Event Monitoring

Duration of monitoring \_\_\_\_\_

Yes

Refer to Antithrombotic administration recommendations below (page 5)

**Recommended Laboratory Investigations for Patients with Acute Stroke or TIA**

(Refer to Box One, CSBPR Secondary Prevention of Stroke)

***Order initial Laboratory Investigations on arrival to the emergency department***

- |                                       |   |
|---------------------------------------|---|
| <input type="checkbox"/> CBC          | <input type="checkbox"/> capillary glucose  |
| <input type="checkbox"/> Electrolytes | <input type="checkbox"/> blood and/or urine drug screen (if clinically indicated)   |
| <input type="checkbox"/> PTT          | <input type="checkbox"/> urine or serum $\beta$ HCG (if female of childbearing age) |
| <input type="checkbox"/> INR          | <input type="checkbox"/> cross and type may be considered                           |
| <input type="checkbox"/> creatinine   |   |
| <input type="checkbox"/> e-GFR        |   |

***Order additional Laboratory Investigations to be completed as needed after admission to hospital (should only be completed on appropriate patient when clinically indicated)***

- |  |   |
|--|---|
| <input type="checkbox"/> fasting lipid profile | <input type="checkbox"/> HIV, syphilis serology (if clinically indicated)           |
| <input type="checkbox"/> Hemoglobin A1c        | <input type="checkbox"/> blood cultures x 3 (per individual institutional protocol) |
| <input type="checkbox"/> fasting glucose       |   |
| <input type="checkbox"/> ALT                   |   |

***Consider ordering Immunological Tests (to be completed as needed after admission to hospital and only on appropriate patients when clinically indicated)***

- |   |  |
|---|--|
| <input type="checkbox"/> erythrocyte sedimentation rate (ESR) | <input type="checkbox"/> C3/C4   |
| <input type="checkbox"/> C-reactive protein (CRP)             | <input type="checkbox"/> c- and p-ANCA                                 |
| <input type="checkbox"/> antinuclear antibody (ANA)           | <input type="checkbox"/> ENA (anti SSA, SSB, anti-Smith, andti-DS DNA) |

***Consider ordering Coagulopathy Screen (to be completed as needed after admission to hospital and only on appropriate patients when clinically indicated)***

- |  |   |
|--|---|
| <input type="checkbox"/> anticardiolipin (Antiphospholipid) antibody | <input type="checkbox"/> Sickle cell screen             |
| <input type="checkbox"/> lupus anticoagulant                         | <input type="checkbox"/> Anti-beta2-glycoprotein type 1 |

**Special considerations for young adults, children, and adults with stroke or TIA in absence of identified etiology and clinical suspicion of rarer causes of stroke, including venous thrombosis:**

- consider LP for CSF analysis (cell count and differential, protein, glucose, bacterial and viral cultures; possibly cytology/flow cytometry if CNS lymphoma is a consideration)
- Further genetic tests – CADASIL, Fabry's, MELAS
- Further blood tests – Lipoprotein (a), Homocysteine
- Brain biopsy (if vasculitis of the central nervous system or angiocentric lymphoma is a consideration)
- For patients with cerebral venous sinus thrombosis (CVST), consider additional coagulopathy screening, including protein S, antithrombin III, prothrombin gene mutation, factor V Leiden mutation. These tests to be completed after the acute phase of stroke (i.e. after three months or so, or as per Hematologist's advice)

### Record Type of Stroke

- Acute Ischemic Stroke                       Transient Ischemic Attack                       Venous Sinus Thrombosis  
 Subarachnoid Hemorrhage                       Intracerebral Hemorrhage  
 Other \_\_\_\_\_

### Consults

#### *Physicians*

|   | Name | Appointment Date |
|---|------|------------------|
| <input type="checkbox"/> Stroke Prevention Clinic |      |                  |
| <input type="checkbox"/> Stroke Neurologist       |      |                  |
| <input type="checkbox"/> Neurosurgeon             |      |                  |
| <input type="checkbox"/> Vascular Surgeon         |      |                  |
| <input type="checkbox"/> Other                    |      |                  |
| <input type="checkbox"/> Other                    |      |                  |

#### *Interdisciplinary Stroke Team Members/External Services*

|  | Name | Appointment Date |
|--|------|------------------|
| <input type="checkbox"/> Pharmacist                          |      |                  |
| <input type="checkbox"/> Physiotherapist                     |      |                  |
| <input type="checkbox"/> Occupational Therapist              |      |                  |
| <input type="checkbox"/> Speech Language Pathologist         |      |                  |
| <input type="checkbox"/> Social Worker                       |      |                  |
| <input type="checkbox"/> Registered Dietician                |      |                  |
| <input type="checkbox"/> Psychiatrist                        |      |                  |
| <input type="checkbox"/> Psychologist/<br>Neuropsychologist  |      |                  |
| <input type="checkbox"/> Physiatrist                         |      |                  |
| <input type="checkbox"/> Home Care Services                  |      |                  |
| <input type="checkbox"/> Palliative Care Specialist/<br>Team |      |                  |
| <input type="checkbox"/> Other                               |      |                  |

## II. Immediate Secondary Prevention Strategies

### Antiplatelet Therapy in Ischemic Stroke and TIA

Start antiplatelet therapy immediately after ruling out intracranial hemorrhage ([Refer to recommendation 6, CSBPR Secondary Prevention of Stroke](#)):

Administer **one** of:

- ECASA 160 – 325 mg load, followed by 81 mg daily, **or**
- Clopidogrel 300 mg load, followed by 75 mg daily, **or**
- ECASA 160 – 325 mg load, followed by ASA 25 mg/dipyridamole 200 mg twice daily
- Drug administered:

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(drug) (dose) (route) (date) (time)

**Note:** Short-term concurrent use of acetylsalicylic acid and clopidogrel (up to 90 days) has not shown an increased risk of bleeding; however, longer-term use is not recommended for secondary stroke prevention, unless there is an alternate indication ([Recommendation 6.0 iii, Secondary Prevention of Stroke](#)).

### Antithrombotic for Atrial Fibrillation for Individuals with Stroke

Patients with TIA or ischemic stroke and atrial fibrillation should receive oral anticoagulation using one of the following ([Refer to CSBPR Secondary Prevention of Stroke, 7.2, i, and Table 6: Oral Anticoagulants for the Prevention of Stroke in AF Patients](#)):

Order **one** of:

- Apixaban \_\_\_\_\_ mg PO BID, **or**
- Dabigatran \_\_\_\_\_ mg PO BID, **or**
- Rivaroxiban \_\_\_\_\_ mg PO once daily, **or**
- Edoxaban (when available for use in Canada) \_\_\_\_\_ mg daily, **or**

- Warfarin loading dose of \_\_\_\_\_ mg PO daily for \_\_\_\_\_ days

- Measure INR on \_\_\_\_\_ (target INR 2.5; range 2-3)
- Maintenance dose: Warfarin \_\_\_\_\_ mg daily

- for DOACs, monitor patient's renal status at least annually, or following a change in health status

- Antithrombotic administered:

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(drug) (dose) (route) (date) (time)

**Note:** Concomitant antiplatelet therapy with anticoagulation is not recommended in patients with AF unless there is a specific medical indication ([Recommendation 7.3, iii](#)).

### III. Strategies for Risk Factor and Symptom Management

- Refer to CSBPR Post-Stroke Checklist (appended to this document) for additional information
- Review CSBPR Post-Stroke Checklist with the patient at initial and all follow-up Stroke Prevention Clinic visits
- Assess and TREAT all vascular risk factors, additional patient-specific risk factors and sub-optimal lifestyle practices, including:
  - Diet, sodium intake, exercise, weight, alcohol intake, use of oral contraceptives and hormone replacement therapy, and recreational drug use
- Provide referrals and links to appropriate community-based lifestyle modification programs and supportive services

Program/service: \_\_\_\_\_

Program/service: \_\_\_\_\_

Program/service: \_\_\_\_\_

Program/service: \_\_\_\_\_

#### Blood Pressure Management

- Baseline blood pressure \_\_\_\_\_ mm Hg
- [Refer to Recommendation 3.0, Blood Pressure and Stroke Prevention, CSBPR Secondary Prevention of Stroke, and prescribe treatment according to current CHEP guidelines.](#)
- Target systolic \_\_\_\_\_ mmHg Target diastolic: \_\_\_\_\_ mmHg
- Medication: \_\_\_\_\_ Dose, Route, Frequency: \_\_\_\_\_
- Medication: \_\_\_\_\_ Dose, Route, Frequency: \_\_\_\_\_
- Medication: \_\_\_\_\_ Dose, Route, Frequency: \_\_\_\_\_

#### Lipid Management

- [Refer to Recommendation 4.0, Lipid Management, CSBPR Secondary Prevention of Stroke](#)
- Medication: \_\_\_\_\_ Dose, Route, Frequency: \_\_\_\_\_
- Medication: \_\_\_\_\_ Dose, Route, Frequency: \_\_\_\_\_

#### Diabetes Management

- [Refer to Recommendation 5.0, Diabetes and Stroke, CSBPR Secondary Prevention of Stroke](#)
- Medication: \_\_\_\_\_ Dose, Route, Frequency: \_\_\_\_\_
- Medication: \_\_\_\_\_ Dose, Route, Frequency: \_\_\_\_\_

### Pain Management

- Acetaminophen \_\_\_\_\_ mg PO/NG/PR q4h PRN/Scheduled (maximum daily dose \_\_\_\_\_ mg)
- Medication: \_\_\_\_\_ Dose, Route, Frequency: \_\_\_\_\_
- Medication: \_\_\_\_\_ Dose, Route, Frequency: \_\_\_\_\_
- Non-pharmacological management: \_\_\_\_\_  
\_\_\_\_\_

### Nausea Management

- Dimenhydrinate 25 – 50 mg PO/NG/IV/PR q4h PRN (use lowest possible for effect for elderly/frail)
- Dimenhydrinate 12.5 – 25 mg PO/NG/IV/PR/IM q4h PRN (use lowest possible for effect for elderly/frail)
- Medication: \_\_\_\_\_ Dose, Route, Frequency: \_\_\_\_\_

### Smoking Cessation

- Identify, assess and document smoking status: \_\_\_\_\_
- Refer to Recommendation 9.0, *Smoking Cessation for Individuals with Stroke*, and Table 9: *Pharmacotherapy for Smoking Cessation in Patients with Stroke and TIA*, CSBPR Secondary Prevention of Stroke.
- Referral to Smoking Cessation Program/Specialist: (Name) \_\_\_\_\_
  - Appointment scheduled: (date/time) \_\_\_\_\_
- Order smoking cessation medication\*: \_\_\_\_\_  
Dose, Route, Frequency: \_\_\_\_\_

### Assessment and Management of Depression, Anxiety, Cognitive Changes and Fatigue

Patients and family members (especially primary caregivers) should be screened

- Cognitive evaluation (executive function, IADLs, memory)
- Depression screening       Caregiver depression screening
- Referral for comprehensive assessments (specify): \_\_\_\_\_
  - Appointment scheduled: (name) \_\_\_\_\_  
Date/time: \_\_\_\_\_
  - Appointment scheduled: (name) \_\_\_\_\_  
Date/time: \_\_\_\_\_
- Assess for post-stroke fatigue
  - Provide information and education regarding post-stroke fatigue
  - Intervention(s) recommended: \_\_\_\_\_

**Sleep Apnea Assessment and Management** (Refer to Recommendation 10.0, Sleep Apnea and Stroke, CSBPR Secondary Prevention of Stroke)

- Screen for sleep apnea symptoms
- Referral to sleep specialist if initial screening is suggestive of sleep apnea symptoms
  - Appointment scheduled: (name) \_\_\_\_\_  
Date/time: \_\_\_\_\_
- Additional recommendations \_\_\_\_\_

**Functional Assessment and Management**

- Fitness to drive assessed
- Mobility assessment
  - Precautions: \_\_\_\_\_
  - Need for assistive device: \_\_\_\_\_
- Assessment for incontinence
- Assessment for spasticity
- Assessment of speech and communication
- Referrals:
  - Appointment scheduled: (name) \_\_\_\_\_ Purpose: \_\_\_\_\_  
Date/time: \_\_\_\_\_
  - Appointment scheduled: (name) \_\_\_\_\_ Purpose: \_\_\_\_\_  
Date/time: \_\_\_\_\_

**Other Medications**

- Medication: \_\_\_\_\_ Dose, Route, Frequency: \_\_\_\_\_
- Medication: \_\_\_\_\_ Dose, Route, Frequency: \_\_\_\_\_
- Medication: \_\_\_\_\_ Dose, Route, Frequency: \_\_\_\_\_
- Medication: \_\_\_\_\_ Dose, Route, Frequency: \_\_\_\_\_

**Discharge/Transition Plan**

- Provide patient and family education and skills training as required regarding (initial when completed):
  - \_\_\_ Diagnosis
  - \_\_\_ Stroke signs and symptoms and appropriate actions to take
  - \_\_\_ Contact numbers for EMS, neurologist, stroke team, other healthcare professionals
  - \_\_\_ Risk Factor modification – assist with development/update of an individualized plan
  - \_\_\_ Activity levels, activities of daily living
  - \_\_\_ Safety and avoidance of falls and injury
  - \_\_\_ Rehabilitation



- \_\_\_ Driving
- \_\_\_ Sexual Activity
- \_\_\_ Community Support Group resources
- \_\_\_ Other \_\_\_\_\_

Provide patient and family with written summary of diagnosis, investigations and results, interventions, medications, and follow-up appointments/needs at end of ambulatory care visit (ED, prevention clinic, family physician's office, other community setting)

Provide patient with access to resources (also refer to [CSBPR Secondary Prevention of Stroke Implementation Resources](#)):

- Taking Charge of Your Stroke Recovery: A survivor's guide to the Canadian Stroke Best Practice Recommendations ([http://www.strokebestpractices.ca/wp-content/uploads/2014/08/HSF\\_SBP\\_PatientsGuide\\_F14\\_EN\\_July2014-FINAL.pdf](http://www.strokebestpractices.ca/wp-content/uploads/2014/08/HSF_SBP_PatientsGuide_F14_EN_July2014-FINAL.pdf))
- Post-Stroke Checklist ([http://www.strokebestpractices.ca/wp-content/uploads/2014/06/HSF%20Post%20Stroke%20Checklist\\_WEB.pdf](http://www.strokebestpractices.ca/wp-content/uploads/2014/06/HSF%20Post%20Stroke%20Checklist_WEB.pdf)) and appended to this document

### Disposition

Admit patient to Emergency Department

Facility: \_\_\_\_\_ Reason: \_\_\_\_\_

Admit patient to Inpatient Facility

Facility: \_\_\_\_\_ Unit: \_\_\_\_\_ Date/Time of transfer: \_\_\_\_\_

Reason: \_\_\_\_\_

Refer patient to Stroke Prevention Clinic or Service

SPC: \_\_\_\_\_

Appointment Date: \_\_\_\_\_ Appointment Time: \_\_\_\_\_

Refer patient to Home Care services

Refer patient to outpatient or community-based rehabilitation for assessment and treatment

Facility: \_\_\_\_\_

Appointment Date: \_\_\_\_\_ Appointment Time: \_\_\_\_\_

Follow-up with Family Physician:

Name \_\_\_\_\_

Appointment Date: \_\_\_\_\_ Appointment Time: \_\_\_\_\_

Send discharge summary/consult letter to Family Physician within 72 hours

### Other Follow-up Appointments:

Name \_\_\_\_\_

Appointment Date: \_\_\_\_\_ Appointment Time: \_\_\_\_\_

Name \_\_\_\_\_

Appointment Date: \_\_\_\_\_ Appointment Time: \_\_\_\_\_



# 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)

Are you finding it more difficult to take care of yourself?

**NO**

Continue to monitor progress

**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

Are you finding it more difficult to walk or move safely (i.e., from bed to chair)?

**NO**

Continue to monitor progress

**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

Do you have increasing stiffness in your arms, hands, or legs?

**NO**

Continue to monitor progress

**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

Do you have any new pain?

**NO**

Continue to monitor progress

**YES**

Ensure there is adequate evaluation by a healthcare provider with expertise in pain management.

### 6 Incontinence

Are you having more problems controlling your bladder or bowels?

**NO**

Continue to monitor progress

**YES**

Consider referral to healthcare provider with experience in incontinence; secondary stroke prevention services.

**SINCE YOUR STROKE OR LAST ASSESSMENT**

|   |  |
|---|--|
| <p><b>7 Communication</b></p> <p>Are you finding it more difficult to communicate?</p>  | <p><b>NO</b> <input type="radio"/> Continue to monitor progress</p>  |
|   | <p><b>YES</b> <input type="radio"/> Consider referral to speech language pathologist; rehabilitation service; secondary stroke prevention services.</p>  |
| <p><b>8 Mood</b></p> <p>Do you feel more anxious or depressed?</p>  | <p><b>NO</b> <input type="radio"/> Continue to monitor progress</p>  |
|   | <p><b>YES</b> <input type="radio"/> Consider referral to healthcare provider (e.g., psychologist, neuropsychologist, psychiatrist) with experience in post-stroke mood changes; secondary stroke prevention services.</p>  |
| <p><b>9 Cognition</b></p> <p>Are you finding it more difficult to think, concentrate, or remember things?</p>   | <p><b>NO</b> <input type="radio"/> Continue to monitor progress</p>  |
|   | <p><b>YES</b> <input type="radio"/> Is this interfering with your ability to participate in activities?</p> <p> <input type="radio"/> <b>No.</b> Update patient record; review at next assessment.<br/> <input type="radio"/> <b>Yes.</b> Consider referral to healthcare provider with experience in post-stroke cognition changes; secondary stroke prevention services; rehabilitation service; memory clinic.                 </p> |
| <p><b>10 Life After Stroke</b></p> <p>Are you finding it more difficult to carry out leisure activities, hobbies, work, or engage in sexual activity?</p>                 | <p><b>NO</b> <input type="radio"/> Continue to monitor progress</p>  |
|   | <p><b>YES</b> <input type="radio"/> 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.</p>   |
| <p><b>11 Personal Relationships</b></p> <p>Have your personal relationships (with family, friends, or others) become more difficult or strained?</p>                      | <p><b>NO</b> <input type="radio"/> Continue to monitor progress</p>  |
|   | <p><b>YES</b> <input type="radio"/> Schedule next primary care visit with patient and family member(s) to discuss difficulties.</p> <p><b>YES</b> <input type="radio"/> 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.</p>              |
| <p><b>12 Fatigue</b></p> <p>Are you experiencing fatigue that is interfering with your ability to do your exercises or other activities?</p>                              | <p><b>NO</b> <input type="radio"/> Continue to monitor progress</p>  |
|   | <p><b>YES</b> <input type="radio"/> Discuss fatigue with Primary Care provider.</p> <p><b>YES</b> <input type="radio"/> Consider referral to home care services for education and counselling.</p>   |
| <p><b>13 Other Challenges</b></p> <p>Do you have other challenges or concerns related to your stroke that are interfering with your recovery or causing you distress?</p> | <p><b>NO</b> <input type="radio"/> Continue to monitor progress</p>  |
|   | <p><b>YES</b> <input type="radio"/> Schedule next primary care visit with patient and family member(s) to discuss challenges and concerns.</p> <p><b>YES</b> <input type="radio"/> Consider referral to healthcare provider; stroke support organization (local or provincial support group, Heart and Stroke Foundation of Canada).</p>   |

For more Information refer to [www.heartandstroke.ca](http://www.heartandstroke.ca) or [www.strokebestpractices.ca](http://www.strokebestpractices.ca)