Summary of Recommendations

	RECOMMENDATION	*LEVEL OF EVIDENCE
Practice Recommendations		
Secondary Prevention	**1.0** Nurses in all practice settings should screen clients for risk factors related to stroke in order to facilitate appropriate secondary prevention. Clients with identified risk factors should be referred to trained healthcare professionals for further management.	IV
Stroke Recognition	**2.0** Nurses in all practice settings should recognize the new onset of the signs and symptoms of stroke as a medical emergency to expedite access to time dependent stroke therapy, as *"time is brain"*.	IV
Neurological Assessment	**3.0** Nurses in all practice settings should conduct a neurological assessment on admission, and when there is a change in client status. This neurological assessment, facilitated with a validated tool (such as the Canadian Neurological Scale, National Institutes of Health Stroke Scale or Glasgow Coma Scale), should include at minimum: ■ Level of consciousness; ■ Orientation; ■ Motor (strength, pronator drift, balance and coordination); ■ Pupils; ■ Speech/Language; ■ Vital signs (TPR, BP, SpO_2); and ■ Blood glucose.	IV
	3.1 Nurses in all practice settings should recognize that signs of decline in neurological status may be related to neurological or secondary medical complications. Clients with identified signs and symptoms of these complications should be referred to a trained healthcare professional for further assessment and management.	IV
Complications	**4.0** Nurses in all practice settings should assess the client's risk for pressure ulcer development, which is determined by the combination of clinical judgment and the use of a reliable risk assessment tool. The use of a tool that has been tested for validity and reliability (such as the Braden Scale for Predicting Pressure Sore Risk) is recommended.	IV
	4.1 Nurses in all practice settings should assess the stroke client's fall risk on admission and after a fall using a validated tool (such as the STRATIFY or timed *"Up and Go"*).	IV
	4.2 Nurses in all practice settings should assess stroke clients for the following stroke complications: painful hemiparetic shoulder, spasticity/contractures, and deep vein thrombosis in order to facilitate appropriate prevention and management strategies.	IV
Pain	**5.0** Nurses in all practice settings should assess clients for pain using a validated tool (such as the Numeric Rating Scale, the Verbal Analogue Scale or the Verbal Rating Scale).	IV

*Please refer to Page 16 for an Interpretation of Evidence.

	RECOMMENDATION	LEVEL OF EVIDENCE
Dysphagia	**6.0** Nurses should maintain all clients with stroke NPO (including oral medications) until a swallowing screen is administered and interpreted, within 24 hours of the client being awake and alert.	IIa
	6.1 Nurses in all practice settings, who have appropriate training, should administer and interpret a dysphagia screen within 24 hours of the stroke client becoming awake and alert. This screen should also be completed with any changes in neurological or medical condition, or in swallowing status. This screening should include: ■ Assessment of the client's alertness and ability to participate; ■ Direct observation of signs of oropharyngeal swallowing difficulties (choking, coughing, wet voice); ■ Assessment of tongue protrusion; ■ Assessment of pharyngeal sensation; ■ Administration of a 50 ml water test; and ■ Assessment of voice quality. In situations where impairments are identified, clients should be referred to a trained healthcare professional for further assessment and management.	IV
Nutrition	**7.0** Nurses in all practice settings should complete a nutrition and hydration screen within 48 hours of admission, after a positive dysphagia screen and with changes in neurological or medical status, in order to prevent the complications of dehydration and malnutrition. In situations where impairments are identified, clients should be referred to a trained healthcare professional for further assessment and management.	IV
Cognition/ Perception/ Language	**8.0** Nurses in all practice settings should screen clients for alterations in cognitive, perceptual and language function that may impair safety, using validated tools (such as the Modified Mini-Mental Status Examination and the Line Bisection Test). This screening should be completed as follows: Within 48 hours of regaining consciousness: ■ Arousal, alertness and orientation; ■ Language (comprehensive and expressive deficits); and ■ Visual neglect. In addition, when planning for discharge: ■ Attention; ■ Memory (immediate and delayed recall); ■ Abstraction; ■ Spatial orientation; and ■ Apraxia. In situations where impairments are identified, clients should be referred to a trained healthcare professional for further assessment and management.	IV
Activities of Daily Living	**9.0** Nurses in all practice settings should assess stroke clients' ability to perform the activities of daily living (ADL). This assessment, using a validated tool (such as the Barthel Index or the Functional Independence Measure™), may be conducted collaboratively with other therapists, or independently when therapists are not available. In situations where impairments are identified, clients should be referred to a trained healthcare professional for further assessment and management.	IV

	RECOMMENDATION	LEVEL OF EVIDENCE
Bowel and Bladder Function	10.0 Nurses in all practice settings should assess clients for fecal incontinence and constipation.	IV
	10.1 Nurses in all practice settings should assess clients for urinary incontinence and retention (with or without overflow).	IV
Depression	11.0 Nurses in all practice settings should screen clients for evidence of depression, using a validated tool (such as the Stroke Aphasia Depression Questionnaire, Geriatric Depression Scale, Hospital Anxiety and Depression Scale or the Cornell Scale for Depression in Dementia) prior to discharge throughout the continuum of care. In situations where evidence of depression is identified, clients should be referred to a trained healthcare professional for further assessment and management.	IV
	11.1 Nurses in all practice settings should screen stroke clients for suicidal ideation and intent when a high index of suspicion for depression is present, and seek urgent medical referral.	IV
Caregiver Strain	12.0 Nurses in all practice settings should assess/screen caregiver burden, using a validated tool (such as the Caregiver Strain Index or the Self Related Burden Index). In situations where concerns are identified, clients should be referred to a trained healthcare professional for further assessment and management.	III
Sexuality	13.0 Nurses in all practice settings should screen stroke clients/their partners for sexual concerns to determine if further assessment and intervention is necessary. In situations where concerns are identified, clients should be referred to a trained healthcare professional for further assessment and management.	IV
Client and Caregiver – Readiness to Learn	14.0 Nurses in all practice settings should assess the stroke client and their caregivers' learning needs, abilities, learning preferences and readiness to learn. This assessment should be ongoing as the client moves through the continuum of care and as education is provided.	IV
Documentation	15.0 Nurses in all practice settings should document comprehensive information regarding assessment and/or screening of stroke clients. All data should be documented at the time of assessment and reassessment.	IV

RECOMMENDATION	LEVEL OF EVIDENCE
Education Recommendations	
16.0 Basic education for entry to practice should include: ■ Basic anatomy and physiology of the cerebrovascular system; ■ Pathophysiology of a stroke; ■ Risk factors of a stroke; ■ Signs and symptoms of a stroke; ■ Components of a client history and assessment specific to stroke; ■ Common investigations (tests); and ■ Validated screening/assessment tools.	IV
16.1 Nurses working in areas with a focus on stroke should have enhanced stroke assessment skills.	IV
Organization & Policy Recommendations	
17.0 Organizations should develop a plan for implementation that includes: ■ An assessment of organizational readiness and barriers to education. ■ Involvement of all members (whether in a direct or indirect supportive function) who will contribute to the implementation process. ■ Ongoing opportunities for discussion and education to reinforce the importance of best practices. ■ Dedication of a qualified individual to provide the support needed for the education and implementation process. ■ Opportunities for reflection on personal and organizational experience in implementing guidelines. Nursing best practice guidelines can be successfully implemented only where there are adequate planning, resources, organizational and administrative support, as well as appropriate facilitation. In this regard, RNAO (through a panel of nurses, researchers and administrators) has developed the *Toolkit: Implementation of Clinical Practice Guidelines* based on available evidence, theoretical perspectives and consensus. The *Toolkit* is recommended for guiding the implementation of the HSFO-RNAO best practice guideline *Stroke Assessment Across the Continuum of Care*.	IV
18.0 Organizational policy should clearly support and promote the nurses' role in stroke assessment, either independently or in collaboration with other members of the interdisciplinary team.	IV

Interpretation of Evidence

Levels of Evidence

Level	Description
Ia	Evidence obtained from meta-analysis or systematic review of randomized controlled trials.
Ib	Evidence obtained from at least one randomized controlled trial.
IIa	Evidence obtained from at least one well-designed controlled study without randomization.
IIb	Evidence obtained from at least one other type of well-designed quasi-experimental study without randomization.
III	Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies.
IV	Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities.

Please Note:

The Heart and Stroke Foundation of Ontario has used an alternative framework to describe the levels of evidence in the *Best Practice Guidelines for Stroke Care: A Resource for Implementing Optimal Stroke Care* (2003a). The taxonomy used in this document is summarized below:

Level	Description
1	At least one prospective, randomized controlled study has found the intervention to be effective.
2	At least one non-randomized cohort comparison, multicentre case-study series, or chronological series has found the intervention to be effective. Evidence may also be part of extraordinary results from randomized clinical trials.
3	Canadian professional association guidelines, standard practice in other jurisdictions, descriptive studies, reports of an expert committee, collective experience of a consensus panel, or expert opinion have judged the interventions to be effective.