Memorandum

SUBJECT: CorHealth COVID-19 Stroke Memo # 1 - **RECOMMENDATIONS FOR AN ONTARIO APPROACH FOR AMBULATORY IMAGING AND CARDIAC INVESTIGATIONS FOR TIA AND MINOR STROKE DURING COVID-19**

TO: Ambulatory TIA and Minor Stroke Care Stakeholders

FROM: Office of the CEO, CorHealth Ontario

DATE: March 31, 2020

TIME: 5:00 PM

VERSION: #1

DISCLAIMER: The information in this document represents general guidance based on current practice and available evidence. The document was developed by provincial clinical experts, reflecting best knowledge at the time of writing, and is subject to revision based on changing circumstances and conditions. This information is *intended to* be "guidance rather than directive," and is *not meant to replace clinical* judgment. Reference to Infection Prevention and Control (IPAC) or Personal Protective Equipment (PPE) in this document should not replace or supersede the IPAC and PPE protocols or directives in place at your hospital.

Recommendations for an Ontario Approach for Ambulatory Imaging and Cardiac Investigations for Patients presenting with TIA and Minor Stroke during COVID-19

PREAMBLE

COVID-19 is an unprecedented crisis and a poses significant risk to the community as the landscape is rapidly evolving. The Ministry of Health has requested that all hospitals ramp down non-essential services, elective surgeries and other non-emergent clinical activity. CorHealth Ontario has been engaging with stroke experts and stakeholders across the province to discuss how best to preserve health care capacity, in light of increasing COVID-19 cases requiring health care. The following guidance and recommendations reflect advice from this engagement.

GUIDING PRINCIPLES

1. Keeping front line health care providers healthy and patients protected is vital.
2. Minimizing the impact of COVID-19 on the mortality and morbidity of patients with stroke disease is a priority.
3. Aligning with province- and hospital-specific infection prevention and control policies and protocols is important.
4. Promoting clinical activities aimed at preserving hospital resources (i.e. health care human resources, personal protective equipment, procedure rooms, Intensive Care Units, Emergency Departments) is a priority.

RECOMMENDATIONS

Ambulatory Rapid TIA/Minor Stroke and Secondary Prevention Clinics play a critical role in supporting patients who are high risk for acute care utilization by limiting recurrent visits to the emergency department and preventing subsequent hospital admissions**.** These services should continue to operate during the current COVID-19 outbreak and should optimize the use of virtual care options when possible (a list of potential remote/virtual care tools can be found at the CorHealth Resource Centre). To ensure adequate

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support for patients, clinics should continue to provide urgent assessments, diagnostics (i.e. imaging and cardiac investigations) and stroke prevention management. All patients referred should receive a consultation with the neurologist to review results and treatment plans.

CorHealth, in consultation with stroke stakeholders and system partners, has adapted the Canadian Stroke Best Practice Recommendations[1] with respect to the required imaging and time frames for TIA and minor/nondisabling stroke diagnosis and interventions to ensure continued access to care while minimizing patient exposure to the COVID-19 environment.

RISK AND PREVENTION ASSOCIATED WITH TIA AND MINOR/NONDISABLING STROKE

There is up to a 10% risk of recurrent stroke within 90 days after a TIA or minor stroke classifying these conditions as medical emergencies. Up to 80% of this risk is preventable with urgent assessment and treatment.[2] Imaging of the brain and intracranial and extracranial blood vessels using CT, CT angiography, or Carotid Doppler ultrasound, is an important part of the diagnostic assessment. After the patients have had imaging to rule out intracranial hemorrhage, patients with suspected TIA should be started on antithrombotic medication (i.e. anticoagulants for atrial fibrillation or antiplatelet therapy for management of atherosclerosis). Additional treatment options include carotid revascularization for symptomatic carotid artery stenosis and vascular risk factor reduction strategies.

1. RISK STRATIFICATION

1.1. Patients should be triaged into very high risk, high risk and moderate risk to determine appropriate timeframes for diagnostic investigations. Please see Appendix A for clinical description of risk categories

1.1.1. Very high-risk patients should have immediate access to the appropriate diagnostic investigations

1.1.2. High Risk patients require investigations as soon as possible, ideally within 24 hours

1.1.3. Moderate Risk patients require investigations within 2 weeks

1.1.4. If you are unsure about the risk of the patient, a telephone screen should be completed with the patient and/or the referring physician to determine timeliness of assessment, diagnostics and intervention

2. CRITICAL DIAGNOSTIC INVESTIGATIONS

2.1 All patients should receive, within the recommended time frame, brain and vascular imaging and cardiac diagnostics including

- CT, CTA (per CorHealth provincial imaging protocol)
- 12 Lead ECG
- Prolonged ECG Holter Monitoring, at minimum 24-hours

Note: Vascular imaging is used to identify significant symptomatic extracranial carotid artery stenosis. Carotid ultrasound may be an acceptable altrernative to CTA

2.2 It is recommended to have dedicated appointments on hold to ensure diagnostics can be completed for incoming stroke patients

[1] Theodore Wein, M. Patrice Lindsay, Robert Cote, et al. Canadian Stroke Best Practice Recommendations: Secondary Prevention of Stroke, sixth edition practice guidelines update 2017. International Journal of Stroke 2018, Vol. 13(4) 420–443

[2] Coutts, SB. Diagnosis and Management of Transient Ischemic Attack Continuum Review Article 2017;23(1):82–92.

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3. NON-EMERGENT DIAGNOSTICS

3.1 The following diagnostics may be postponed to preserve hospital resources and minimize patient exposure to the coronavirus in the hospital environment

- Echocardiography

4. RECOMMENDED SETTING FOR DIAGNOSTIC PROCEDURES

4.1. Hospitals are encouraged to consider alternative settings in which these diagnostics could be completed provided the timelines for emergent/urgent access can be met

4.1.1. In order to limit patient interface with hospital/clinic services, it is strongly encouraged that remote/home ECG holter monitoring applications be used to support detection of atrial fibrillation. Some examples include:

- M-healthsolutions https://m-healthsolutions.com/
- Incentia https://www.icentia.com/about-us

Note: Decisions to use remote options should take into consideration patient characteristics and/ or access to caregiver support.

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APPENDIX A: STROKE RISK LEVELS AND ACTIONS[1]

RISK LEVEL	TIMING OF INITIAL ASSESSMENT	SYMPTOMS OR CIRCUMSTANCES
VERY HIGH	• Immediate	• Presenting within 48 hours of stroke onset • Transient, fluctuating or persistent unilateral weakness (face, arm and/or leg) • Transient, fluctuating or persistent speech disturbance/aphasia. • Fluctuating or persistent symptoms without motor weakness or language/speech disturbance (e.g. hemi-body sensory symptoms, monocular visual loss, hemifield visual loss, +/- other symptoms suggestive of posterior circulation stroke such as diplopia, dysarthria, dysphagia, and / or ataxia).
HIGH	• Within 24 h	• Presenting within 48 hours and 2 weeks of stroke onset • Transient, fluctuating or persistent unilateral weakness (face, arm and/or leg), or language/speech disturbance
MODERATE	• Within 2 weeks	• Presenting within 48 hours and 2 weeks • Fluctuating or persistent symptoms without motor weakness or • Language/speech disturbance (e.g., hemibody sensory symptoms, monocular • Vision loss, binocular diplopia, hemifield vision loss, dysarthria, dysphagia, and/ or ataxia).

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