Memorandum

SUBJECT: CorHealth COVID-19 Stroke Memo # 6 **RECOMMENDATIONS FOR DESIGNATED STROKE HOSPITALS WHEN DEVELOPING REGIONAL CONTINGENCY PLANS FOR ACUTE STROKE CARE**

TO: Hyperacute and Acute Stroke Care Stakeholders

FROM: Office of the CEO, CorHealth Ontario

DATE: **October 14th 2020**

TIME: 10:00 AM

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 or hospital policies*. 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 organization.

RECOMMENDATIONS FOR DESIGNATED STROKE HOSPITALS WHEN DEVELOPING REGIONAL CONTIGENCY PLANS FOR ACUTE STROKE CARE

PREAMBLE

COVID-19 is an unprecedented pandemic situation and poses a significant risk to the community as the landscape is rapidly evolving. In response to these risks, the Ontario health system has actively engaged in strategies to keep front line providers healthy and patients protected while continuing to deliver high quality care to those in need. As we prepare for a potential second wave in the fall season, CorHealth Ontario has been engaging with stroke experts and stakeholders across the province to capture key considerations and recommendations to support local and regional contingency planning that places emphasis on maintaining services.

This document aims to support local and regional stroke teams as they develop plans to respond effectively to any expected or unexpected variations in supply or demand. The guidance provided by this document is meant to be applied by stroke system stakeholders within the context of their regional nuances (e.g. resources, capacity, geography). This document is not meant to be prescriptive or limiting. Rather, it is meant to promote consistency in planning, through a provincial framework, adapted from critical care surge capacity principles,[1] and to highlight key considerations for the development of regional contingency plans aimed at preserving acute stroke services during a

[1] John L. Hick, MD ; Sharon Einav , MD ; Dan Hanfling et. al on behalf of the Task Force for Mass Critical Care Surge Capacity Principles: Care of the Critically Ill and Injured During Pandemics and Disasters: CHEST Consensus Statement CHEST 2014; 146 (4_Suppl): e1S - e16S

pandemic or other potential crisis situations (i.e. disasters) that may place access to stroke health services at risk.

SCOPE

This document focuses on hyperacute and acute stroke services that are managed and delivered at a local/regional level (i.e. tPA administration, Endovascular Therapy (EVT) assessment and stroke unit care). Services such as EVT which involve cross regional partnerships and provincial oversight are not addressed in this document.[2]

GUIDING PRINCIPLES

The following principles should guide the development of regional contingency plans:

1. **Patient-centred:** Ensure that contingency plans incorporate the needs and experiences of patients and caregivers.
2. **Last Resort:** Ensure that contingency plans clearly articulate the circumstances under which implementation is warranted (i.e. after all other options have been explored).
3. **Equitable:** Ensure that contingency plans preserve equitable access to stroke best practices.
4. **Simple:** Ensure that contingency plans can be easily implemented in a timely manner.
5. **Future-oriented:** Ensure that contingency plans, although developed to respond to current circumstances, are applicable to other circumstances.
6. **Collaborative:** Ensure that contingency plans leverage the partnerships and systems already in place.
7. **Temporary:** Ensure that contingency plans are short-term and not intended to be used on an ongoing basis.

[2]Existing provincial alternate EVT treatment sites (i.e. Referral 1 and Referral 2 based on travel distance) have been established and should continue to be used for pandemic contingency purposes. The alternate EVT sites have been mapped out across Ontario and are already available for use by CritiCall Ontario. The need for a third alternate EVT site as further contingency was rejected by provincial stroke stakeholders (CorHealth Ontario April 3rd 2020 COVID-19 Forum) given the increased travel time implications and the unlikelihood of further benefit to patients.

LEVEL 1: RECOMMENDATIONS FOR DESIGNATED STROKE CENTRES

1. Hyperacute and stroke unit treatment remains a best practice[3], and an essential service for eligible patients and ***must be preserved*** as much as possible during surge response disaster situations (e.g. the COVID-19 outbreak) to reduce death and disability related to stroke.
2. Designated Stroke Centres[4] are best equipped to respond effectively to acute stroke and their function/role in the system ***is a priority to maintain*** as much as possible in disaster or pandemic scenarios. (Appendix A: Figure 1: Approach to Contingency Planning, **Level 1**). See below for example contingency strategies.
   - **2.1.** Designated Stroke Centres should continually assess and identify surge capacity related risks that may compromise their ability to deliver hyperacute and/or acute stroke services (e.g. decreased health human resources, decreased bed capacity). Strategies to mitigate identified risks should be developed and implemented as required (e.g. infection prevention and control protocols; surge capacity management plan).
   - **2.2.** Should mitigation strategies fail, Designated Stroke Centres should have contingency plans in place to effectively respond to any expected or unexpected variations in supply or demand (i.e. reduced access to critical care resources, diminished interprofessional stroke team members, restricted emergency department access).

EXAMPLE STRATEGIES FOR SUSTAINING SERVICES IN LEVEL 1

- Development of *Local Virtual Care Models* may enable stroke neurologists to provide hyperacute stroke consultation from home should they be required to be offsite. (e.g. self-isolation).
- Leveraging knowledge/skills of other physicians, nursing and allied health clinicians to support stroke care within the organization.
- Leveraging other higher skilled nursing units (e.g. PACU, Step-down units) to support required monitoring post hyperacute care, when ICU beds may not be available.

[3] Smith, E., Mountain, A., Hill, M., Wein, T., Blaquiere, D., Casaubon, L., Linkewich, E., Foley, N., Gubitz, G., Simard, A., Lindsay, P. (2020). Canadian Stroke Best Practice Guidance During the COVID-19 Pandemic. Canadian Journal of Neurological Sciences / Journal Canadien Des Sciences Neurologiques, 1-11. doi:10.1017/cjn.2020.74

[4] A Designated Stroke Centre includes a Regional Stroke Centre, District Stroke Centre or a Telestroke Hospital

LEVEL 2 AND 3: RECOMMENDATIONS FOR DESIGNATED STROKE CENTRES AND REGIONAL NETWORKS

3. Should a designated stroke centre become limited in its ability to deliver tPA and assess for EVT eligibility (Level 2) or unavailable for these services (Level 3) due a reduction or lack of health human resources or space capacity, regional contingencies, including redirection, should be developed. (Appendix A; Figure 1: **Level 2/3**). See below for example contingency strategies:

3.1. Regional contingency plans should include a process for informing all impacted parties (e.g. Emergency Medical Services, Non-Designated and Designated Stroke Centres, Ontario Telestroke Program) and CorHealth Ontario prior to enacting.

3.2. In circumstances where redirection is being considered, the appropriate LHIN and Ontario Health regions must be engaged in planning discussions and decision-making given the extenuating regional implications of loss of essential services, likely beyond stroke, at the designated stroke hospital as may be anticipated in Level 3 scenarios.

3.3. All impacted hospitals (designated and non-designated stroke centres) within a stroke region should be involved and/or aware of the development of regional contingency plans for acute stroke services.

3.3.1. Where stroke team expertise may be compromised at the designated hospital and level 1 contingencies are no longer adequate, consideration may be given to virtual support for stroke expertise of the designated hospital by other designated hospitals.

3.3.2. Where both staffing and space/equipment may not be available at the designated hospital, consideration may be given to redirection of patients to an alternate designated thrombolysis/EVT assessment centre where geographically feasible.

3.3.3. Further consideration may be given to moving staff resources from another designated or non-designated hospital to the designated stroke hospital where geographically feasible in order to leverage space and equipment capacity (e.g. stroke units) at the designated site. A mechanism to support access to virtual[5] stroke expertise should be an additional consideration in this contingency

[5] Hospitals that are not equipped as a referral site to the Ontario Telestroke Program will be required to consider alternative virtual visit solutions to facilitate implementation of this contingency strategy. See OTN Virtual Visits Solutions Requirements (2020) and OTN Virtual Visit Guidance

approach as well as directives to enable credentialing of staff between hospitals.

3.4. In regions where no alternate designated thrombolysis/EVT assessment centre exists or is feasible, hyperacute stroke care establishment at a non-designated stroke hospital may be considered. (Appendix A Figure 1: **Level 3**).

3.4.1. Hyperacute stroke care establishment at a non-designated stroke hospital (i.e. hospital that does not provide tPA/EVT) should only be considered as a last resort after all actions to preserve designated stroke centre capacity have been enacted. Hospitals with existing stroke care capacity (e.g. CT/CTA imaging, stroke unit, critical care) would be prioritized, where they exist and would require similar virtual support and credentialing directives as described in 3.3.3

EXAMPLE STRATEGIES FOR SUSTAINING SERVICES IN LEVEL 2 AND 3

- Development of a redirection protocol to a CT/CTA capable site should CT/CTA become unavailable at the designated stroke hospital.
- The provincial Telestroke program may be leveraged, to access stroke neurologist consultation for hyperacute care when stroke expertise is limited or unavailable. (e.g. Telestroke hospitals shift from prn models to 24/7)
- Implementation of 'field' hospitals at or near designated stroke hospitals to maintain flow patterns to designated hospitals consistent with usual regional practice.

ACKNOWLEGEMENTS CorHealth Ontario would like to greatly acknowledge the contributions of the Regional Stroke Medical Directors and Regional and District Stroke Advisory Committee for their leadership and valuable insight in the development of this document.

APPENDIX A

FIGURE 1: APPROACH TO CONTIGENCY PLANNING