Stroke Best Practices During the COVID-19 Pandemic

Key Messages & Guidance from the Heart and Stroke Foundation of Canada Canadian Stroke Best Practice Recommendations Advisory Council

Introduction

Health systems in Canada are facing immense challenges due to COVID-19, both to cope with the number of affected patients and the constraints imposed by containment measures such as physical distancing, quarantine, and personal protection equipment. Stroke care across the country and across the globe is rapidly evolving to meet the challenges, within pandemic planning across the health system.

Ensuring best practice stroke care is essential, otherwise the rate of recurrent stroke and ongoing functional, cognitive and social disabilities will rise and create a new burden on an already over-stressed system. Alternate care models complement existing stroke teams and processes, and can allow continued access to stroke care for those who need it throughout and beyond the COVID-19 pandemic.

The Heart & Stroke Canadian Stroke Best Practice Recommendations (CSBPR) Advisory Council has developed guidance on implementing evidence-based stroke care during the COVID-19 pandemic. This guidance is grounded in the CSBPR and enhanced by expert opinion and early shared experiences with reorganizing stroke systems in the context of the pandemic. This guidance follows two guiding principles: 1. stroke remains a medical emergency and 2. stroke care is highly effective.

The following is a summary of the key guidance for stroke care during COVID across the continuum. The full advisory statement has been published in the Canadian Journal of Neurological Sciences.

Citation: 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

Stroke Awareness, Recognition and Response

1. Stroke is a medical emergency. This fact is not altered by the COVID-19 pandemic.
2. Public awareness campaigns and existing processes in place for emergency medical system response to stroke should be maintained.
3. There is a need to continue to raise awareness with the public that stroke is a medical emergency and people who experience signs of stroke need to seek medical attention without delay despite COVID concerns.

Hyperacute Stroke Care

1. Existing evidence-based stroke guidelines should continue to be followed irrespective of the pandemic.
2. Hyperacute stroke response teams remain available to treat acute stroke.
3. Changes in workflow processes are required within a Protected Code Stroke model.
4. Intubation is not necessary for all suspected or confirmed COVID-19 patients undergoing EVT.

Inpatient and Stroke Unit Care

1. Stroke patients should continue to be cared for in specialized acute stroke units where possible.
2. Education and basic skills training may be required for non-stroke experts caring for stroke patients to ensure patient safety and optimize recovery.
3. Where access to critical care beds becomes limited, routine post-thrombolysis care could be provided in a ward bed with appropriate supports.

Stroke Rehabilitation

1. It is vital that persons with stroke continue to have access to specialized inpatient, outpatient, early supported discharge and community stroke rehabilitation.
2. Essential components of stroke rehabilitation care should be adapted to follow public health recommendations on physical distancing and ensure personal protection for staff and patient when direct contact is required.
3. Telerehabilitation is an effective and well-accepted method of outpatient and community rehabilitation services and is of particular importance during the COVID-19 pandemic.

Secondary Prevention of Stroke Care

1. Secondary prevention services and follow-up must continue to be implemented to reduce recurrent stroke incidence, with revised workflows.
2. Telemedicine enabled evaluation should be modeled on the topics defined in the Post Stroke Checklist and core elements of stroke prevention care (CSBPR resource pages).
3. Individuals presenting within 24 hours should continue to have urgent brain and vascular imaging (e.g. CT/CTA scans) and electrocardiogram performed.

Telestroke across the Continuum

1. Telestroke systems for hyperacute stroke care and support in decision making for thrombolysis and EVT care are well-established and implementation should be expanded to service all regions.

2. Toolkits based on current evidence and expert opinion are available within the CSBPR to help inform services that are switching to virtual care within short timelines.
3. Barriers to access and utilization should be assessed and alternate solutions implemented.

For complete Canadian Stroke Best Practice Recommendations and resources for health professionals and people living with stroke across the continuum visit www.strokebestpractices.ca.