

ONTARIO STROKE ENDOVASCULAR TREATMENT CENTRE CRITERIA

BACKGROUND

An Ontario hospital must meet the following criteria to be designated as a Stroke Endovascular Treating Centre. There are two components of criteria; required and additional considerations. Required criteria outline elements that must be in place in order to be designated a Stroke Endovascular Treating Centre. Additional considerations criteria outline elements that are strongly recommended to be considered for stroke endovascular treatment planning and implementation.

REQUIRED

- A designated Stroke Endovascular Team available 24 hours a day, seven days a week The team must include a stroke neurologist and neurointerventionalist (see below for training requirements)
- Stroke imaging on-site with 24 hour access, seven days a week, including computed tomography (CT) scanner (i.e. 3rd generation or higher helical scanner) with programming for CT angiography (CTA) (multiphase or dynamic CTA); CT perfusion imaging can also be used if available on-site¹
- Capability and experience in administration of intravenous tissue Plasminogen Activator (tPA)²
- Neurosurgery support and neurocritical care services (NeuroICU/Stepdown Unit) available
- Neurointerventionalist training and experience must include the following³:
 - Baseline training and qualifications:
 - Residency training (in radiology, neurology or neurosurgery) including documented training under the supervision of a board certified neuroradiologist, neurologist or neurosurgeon in the diagnosis and management of acute stroke, the interpretation of cerebral arteriography and neuroimaging with subsequent board eligibility or certification **or**
 - Those physicians who did not receive the training during residency noted in the bullet above require an additional period (at least one year) of training in clinical neurosciences and neuroimaging, focusing on the diagnosis and management of acute stroke, the interpretation of cerebral arteriography and neuroimaging prior to their fellowship in neuroendovascular interventions
 - Post residency training minimum one year dedicated training⁴ in Interventional Neuroradiology (also termed Endovascular Neurosurgery or Interventional Neurology) under the supervision of a full-time Neurointerventionalist (with neuroradiology, neurology or neurosurgical training background)
 - Ability for physician(s) to maintain qualifications as follows:
 - A minimum of 16 hours of stroke specific education every 2 years
 - Participation in ongoing quality assurance and improvement program

¹Casaubon LK, Boulanger JM, on behalf of the Hyperacute and Acute Stroke Writing Group. *Hyperacute Stroke Care Module 2015*. In Lindsay MP, Gubitz G, Bayley M, and Smith EE (Editors) on behalf of the Canadian Stroke Best Practices and Advisory Committee. *Canadian Stroke Best Practice Recommendations*, 2015; Ottawa, Ontario Canada: Heart and Stroke Foundation.

² Casaubon LK, Boulanger JM, on behalf of the Hyperacute and Acute Stroke Writing Group. *Hyperacute Stroke Care Module 2015*. In Lindsay MP, Gubitz G, Bayley M, and Smith EE (Editors) on behalf of the Canadian Stroke Best Practices and Advisory Committee. *Canadian Stroke Best Practice Recommendations*, 2015; Ottawa, Ontario Canada: Heart and Stroke Foundation

³[Consensus Statement. \(2016\). Training Guidelines for Endovascular Ischemic Stroke Intervention: An International Multi-Society Consensus Document. American Journal of Neuroradiology February 18 2016](#)

⁴ Specific training for intra-arterial therapy for acute ischemic stroke should be performed including obtaining appropriate access even in challenging anatomy, microcatheter navigation in the cerebral circulation, knowledge and training of the use of stroke specific devices and complication avoidance and management

- A minimum of > twenty cases/year/centre⁵
 - A minimum of > twenty supraortic catheterizations/year/physician
- For post procedure care: Able to admit to a designated critical care/Step down and/or Stroke Unit with monitoring capabilities and protocols in place that follow current evidence based-stroke best practice recommendations⁶
- For ongoing acute care admission: Able to admit to a stroke unit that meets the Ontario definition:
 - A geographical unit with identifiable co-located beds
 - Occupied by stroke patients 75% of the time
 - Dedicated interprofessional team⁷
- Protocols in place that follow current evidence based-stroke best practice recommendations for hyperacute treatment, acute stroke management and access to early rehabilitation⁸
- Established process for collection and analysis of process and outcome data

Additional Considerations

- Access to a biplane angiography suite⁹
- Use of retrievable stents are recommended as first choice endovascular device
 - Other devices such as thrombus aspiration devices may be used based on local protocols and expertise
- CT to recanalization time of less than 90 minutes and door to recanalization time of less than 120 minutes.

⁵ Recommendation from the EVT Working Group in alignment with Training Guidelines

⁶ Casaubon LK, Boulanger JM, on behalf of the Hyperacute and Acute Stroke Writing Group. *Hyperacute Stroke Care Module 2015*. In Lindsay MP, Gubitz G, Bayley M, and Smith EE (Editors) on behalf of the Canadian Stroke Best Practices and Advisory Committee. *Canadian Stroke Best Practice Recommendations*, 2015; Ottawa, Ontario Canada: Heart and Stroke Foundation.

⁷ Interprofessional team with expertise in stroke care including, at a minimum, nursing, physiotherapy, occupational therapy and speech-language pathology.”

⁸ Casaubon LK, Boulanger JM, on behalf of the Hyperacute and Acute Stroke Writing Group. *Hyperacute Stroke Care Module 2015*. In Lindsay MP, Gubitz G, Bayley M, and Smith EE (Editors) on behalf of the Canadian Stroke Best Practices and Advisory Committee. *Canadian Stroke Best Practice Recommendations*, 2015; Ottawa, Ontario Canada: Heart and Stroke Foundation.

⁹ Recommendation from the EVT Working Group