

Is it Possible to Develop a System for Timely Repatriation to Local Stroke Centres After Stroke Endovascular Therapy?

Rhonda McNicoll Whiteman¹, Michelle Bott², Venessa Bailey³, Jennifer Dennis³, Amy deHueck⁴, Leanne Hammond⁵, Stefan Pagliuso¹, Tammy Tebbutt⁶

Background

The Central South Regional Stroke Centre is also the regional stroke endovascular (EVT) provider. The Regional Stroke Centre provides tertiary level stroke care to 2.3 million residents within the region. Five stroke thrombolysis centres identify and transfer potential EVT patients to the EVT centre for treatment. The regional EVT transferred patients are approximately 50% to 60% of the regional stroke EVT volumes. In order to manage the increasing EVT volumes at the regional EVT centre, it is imperative that there is timely repatriation back to the local acute stroke unit for ongoing stroke management post endovascular treatment.

Regional Stroke Centre/ Stroke Endovascular Centre

- Hamilton General Hospital

Regional Stroke Thrombolysis Referral Centres

- Brant Community Healthcare System
- Grand River Hospital
- Guelph General Hospital
- Joseph Brant Hospital
- Niagara Health System: Greater Niagara Site

Methods

As the Regional Stroke EVT Algorithm was developed in 2015 with the referring centres, the structures to support repatriation were explored to determine if an additional regional EVT Memorandum of Understanding was required.

The Region had an existing Central South Ontario Acute Stroke Protocol Memorandum of Understanding (MOU) that had been in place since 2004. The MOU guided the bypass to stroke centres and the repatriation of stroke patients to stroke units. The MOU did not address repatriation of EVT patients.

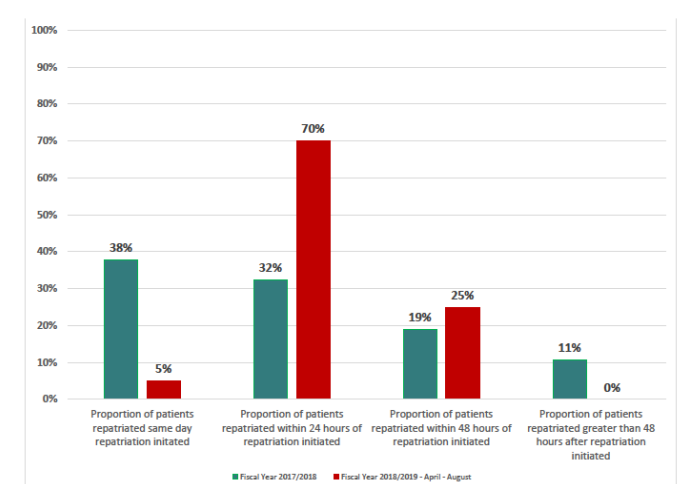
In 2013, the Ministry of Health implemented a Provincial Life and Limb Policy (LOLA) to facilitate the transfer of patients with life or limb threatening conditions to the tertiary care hospitals within 4 hours and supported the repatriation back to the sending centre within 24 to 48 hours when stable for transfer. It was determined that the Provincial LOLA policy would provide the structure to support the timely repatriation of EVT patients.

Results

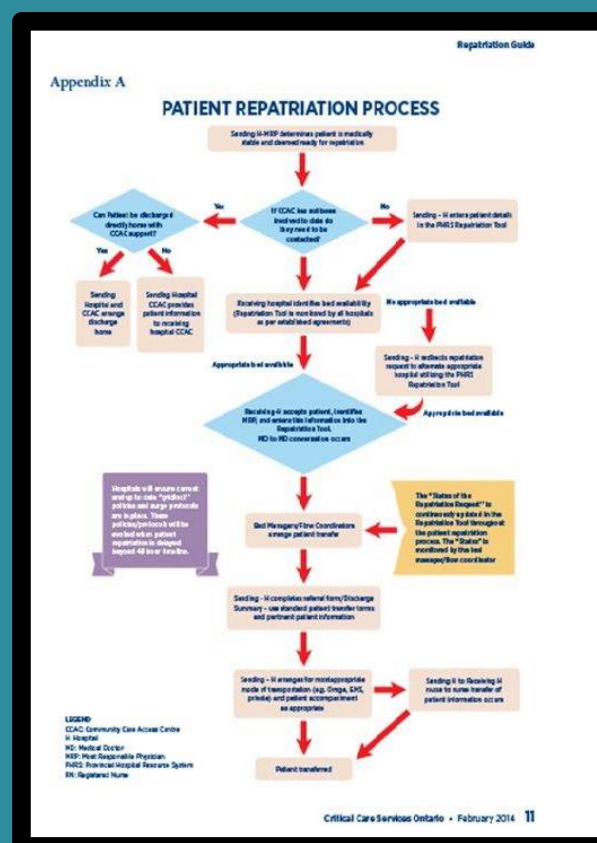
After EVT, the patient is admitted to Level 2 Neurosurgical Stepdown Unit for up to 24 hours. Repatriation is initiated when the patient is discharged from the Stepdown Unit to the Stroke Unit. The expectation is that the patient will be repatriated back to the local stroke centre within the next 24 - 48 hours. The Regional Stroke Centre Stroke Navigator reaches out to the local stroke centre to support timely repatriation of patients. The region has been able to achieve timely repatriation (see Table 1):

- 70% of patients are transferred back to local stroke centres within 24 hours of initiating the repatriation process;
- 89 to 100% of cases are repatriated within 48 hours.

Table 1 – Repatriation Data



Provincial LOLA Repatriation Process



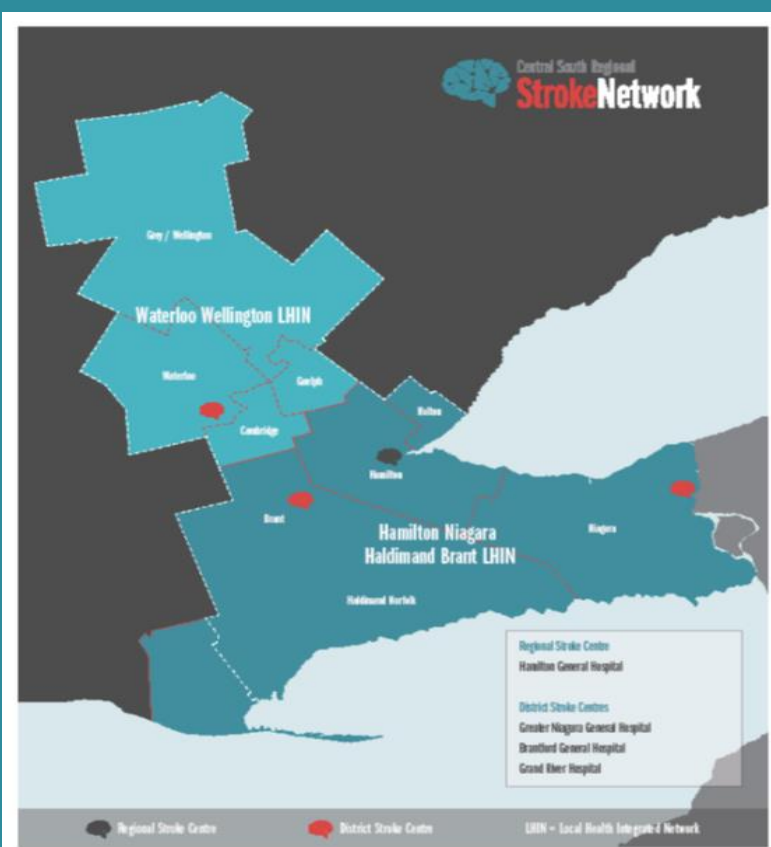
Key Enablers to Success

The enablers for success of the timely regional repatriation of EVT patients are the:

- Relationships between the regional stroke centre and its regional stroke referral centres.
- Regional EVT committee monitors and evaluates the regional EVT Referral Algorithm.
- Ability to leverage existing repatriation policies to create a system to pull EVT patients back to local stroke system.

Purpose

To describe the process that was undertaken to develop a regional repatriation for stroke endovascular patients.



Conclusion

Working with referring stroke thrombolysis centres and supported by a provincial Life and Limb Repatriation Policy has allowed for timely repatriation back to home stroke centres post EVT for ongoing stroke care. The Central South Regional Stroke Acute Stroke Bypass Memorandum of Understanding is in the process of being updated to include repatriation of Stroke EVT patients to further support the existing repatriation process.

References:

1. Ministry of Health and Long Term Care (December 2013) Life and Limb Policy. Catalogue # 018347 ISBN 978-1-4606-2905-5. Queen's Printer for Ontario.
2. Critical Care Services Ontario (February 2014) Repatriation Guide. Critical Care Services Ontario.

Affiliations:

- 1Hamilton Health Sciences, Regional Stroke Administration, Hamilton, , Ontario, Canada.
- 2Guelph General Hospital, Emergency and Medicine, Guelph, Ontario, Canada.
- 3Brant Community Healthcare System, District Stroke Program, Brantford, Ontario, Canada.
- 4Joseph Brant Hospital, Allied Health, Burlington, Ontario, Canada.
- 5Niagara Health System, Stroke Program, Niagara Falls, Ontario, Canada.
- 6Grand River Hospital, District Stroke Program, Kitchener, Ontario, Canada.