



Today's Objectives


- Introduction to the Central South Regional Stroke Network and organized stroke care in Ontario.
- Discuss Hyper-acute stroke management in the new era
- Present and discuss Large Vessel Occlusion Screening Tools
- Action Planning the Implementation of LVO Screening Tools



Objectives for this Talk


- Speak to the global and national impact of Stroke
- Speak to provincial structure of stroke care in Ontario, specifically to the Central South Region
- Discuss the effectiveness of a provincial stroke structure
- Introduce Stroke Distinction 2019





Organized Stroke Care

Stroke Impact
Provincial and Regional Structure



Stroke Worldwide

- 15 million people suffer a stroke each year
- 2nd leading cause of death for people over 60
- 5th leading cause of death in people aged 15-59
- 1 in 6 people worldwide will have a stroke in their lifetime



<http://www.world-stroke.org/advocacy/world-stroke-campaign>



Stroke In Canada

- Someone has a stroke every 9 minutes¹
- 62,000 strokes occur in Canada every year¹
- About 741,800 Canadian adults aged 20+ live with the effects of a stroke²
- On-quarter of Canadians living with stroke are under the age of 65²

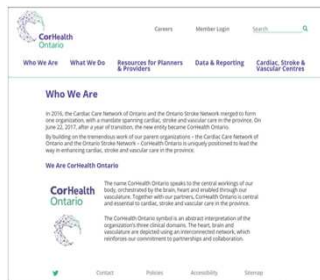


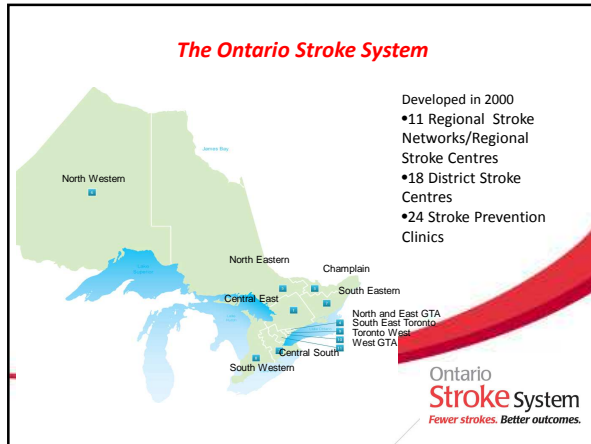
¹ <http://www.strokecanada.com/files/2014/04/Stroke-9-minutes.pdf>
² <http://www.canada.ca/en/health/science/health-topics/conditions/stroke/health-topics/stroke-in-canada.html>

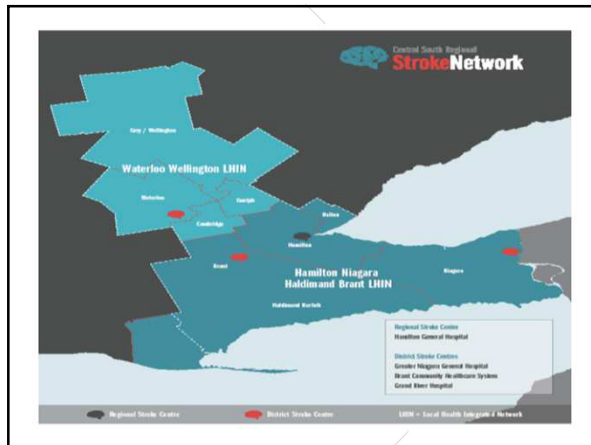


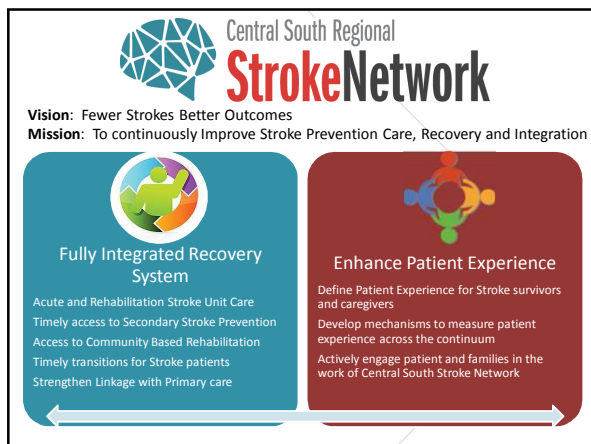
Stroke Care In Ontario

CorHealth Ontario











Time is Brain



For every minute delay in treating a stroke, the average patient loses 1.9 million brain cells

Each minute lost equates to 1 week of healthy life lost



Central South Regional StrokeNetwork

<http://www.heartandstroke.com/stroke/what-you-need-to-know/348337/348344/Statistics.htm>

LEARN THE SIGNS OF STROKE

F
A
S
T

FACE is it drooping?

ARMS can you raise both?

SPEECH is it slurred or jumbled?

TIME to call 9-1-1 right away.

ACT **FAST** BECAUSE THE QUICKER YOU ACT,
THE MORE OF THE PERSON YOU SAVE.

© Heart and Stroke Foundation of Canada, 2014

Waterloo Wellington FAST Decals




Hamilton FAST Decals

New ambulance decals will help create more stroke survivors



Oct 2018 - Hamilton Paramedic Service and Hamilton Health Sciences have partnered with the Heart and Stroke Foundation to help residents recognize the signs of stroke.

To do this, Hamilton ambulances will display "FAST" decals to remind residents of the signs of stroke, and urge them to call 9-1-1 right away if stroke is suspected.

"FAST" stands for:

Face – is it drooping?

Arms – can you raise both?

Speech – is it slurred or jumbled?

Time – to call 9-1-1 right away!



Niagara FAST Decals



EFFECT OF A PROVINCIAL STROKE SYSTEM



Effect of a Provincial System for Stroke

CMAJ

RESEARCH

Effect of a provincial system of stroke care delivery on stroke care and outcomes

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ABSTRACT

Background: Systems of stroke care delivery have been promoted as a means of improving the quality of stroke care, but little is known about their effectiveness. We assessed the effect of the Ontario Stroke System, a province-wide strategy of regionalized stroke care delivery, on stroke care and outcomes in Ontario, Canada.

Methods: We used population-based provincial administrative databases to identify all emergency department visits and hospital admissions for acute stroke and transient ischemic attack from Jan. 1, 2001, to Dec. 31, 2010. Using piecewise regression analysis, we assessed the effect of the full implementation of the Ontario Stroke System in 2005 on the proportion of patients who received care of stroke

attack. The full implementation of the Ontario Stroke System in 2005 was associated with an increase in rates of care at stroke centres (before implementation: 40.0%; after implementation: 46.5%), decreased rates of discharge to long-term care facilities (before implementation: 16.0%; after implementation: 14.8%) and decreased 30-day mortality for hemorrhagic (before implementation: 38.3%; after implementation: 34.4%) and ischemic stroke (before implementation: 16.3%; after implementation: 15.7%). The system's implementation was also associated with marked increases in the proportion of patients who received neuroimaging, thrombolytic therapy, care in a stroke unit and

Competing interests: Frank Silver has received payment for board membership, lecture or honoraria from Medtronic, Synovis, Covidien, Bristol Myers Squibb, Sanofi Canada and Bayer Canada. No other competing interests were declared.

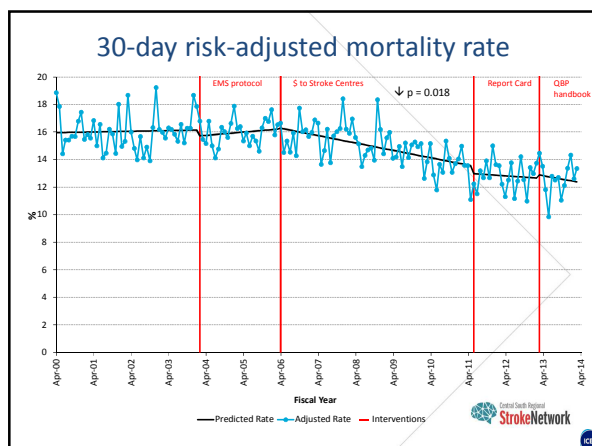
Correspondence: Frank L. Silver, MD, FRCPC, FRCPC (CMAJ) 393, DOI:10.1503/cmaj.121418

Central South Regional StrokeNetwork

4 Major Policies Implemented

1. EMS Redirect protocol
2. Provincial implementation of stroke regions
3. 1st provincial and 14 LHIN report cards
4. QBP Stroke Clinical Handbook released

Central South Regional StrokeNetwork




Hamilton Health Sciences

STROKE DISTINCTION 2019



Stroke Services Distinction Program

- Developed to recognize health organizations that demonstrate outstanding commitment to excellence, innovation and leadership in stroke
- Assessment of standards of excellence, in-depth clinical performance measures and protocols



EMS-Related Standards

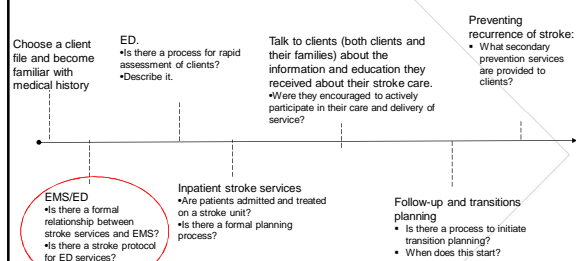
		High Priority
4.2	The team identifies partnerships and collaborates with other service providers and organizations, including surrounding acute care organizations and Emergency Medical Services, to coordinate and plan acute stroke services within the site's boundaries and to provide access to appropriate stroke services for clients.	Yes
5.1	The team contributes to ongoing education for EMS providers about assessment and management of suspected stroke clients at the pick-up site and during transport.	
5.2	The team has protocols and memorandums of understanding with EMS providers for direct transport to stroke centres, bypass of smaller centres, use of air ambulance services, and screening tools for suspected stroke clients.	Yes
5.3	The team has protocols with EMS providers to receive pre-notification of suspected acute stroke clients in transit.	Yes
5.4	EMS personnel, emergency departments, and stroke teams use agreed upon triage levels to assign clients with suspected stroke, and use these levels when communicating.	
5.5	The ED and stroke team initiate stroke protocols when stroke pre-notification is received from EMS so that suspected stroke clients are received efficiently from EMS personnel when they arrive.	Yes

Table 3: Stroke Distinction Protocols

Acute Care Protocols	Inpatient Rehabilitation Protocols
Emergency Medical Services (EMS) stroke screening	Swallowing ability assessment
EMS bypass / direct transport to stroke centres (including air ambulance)	Initial assessment of rehabilitation needs
EMS pre-notification of stroke	Assessing and managing diabetes mellitus (when present)
Emergency Department notification of hospital-based stroke team	Pressure ulcer prevention
Neurovascular imaging for potential stroke patients (rapid access to CT)	Falls prevention
Eligibility screening (Based on Canadian Stroke Strategy / Canadian Best Practice Recommendations for Stroke Care (2008) criteria)	Formal intake criteria for triaging client referrals and accepting clients for inpatient rehabilitation
IPA administration	
Administering acute ASA therapy	
Swallowing ability assessment	
Initial assessment of rehabilitation needs	
Assessing and managing diabetes mellitus (when present)	
Pressure ulcer prevention	
Falls prevention	
Formal criteria for identifying appropriate clients for referral to inpatient rehabilitation	



Clinical Tracer Methodology



Stroke Distinction 2019

- Hamilton Health Sciences achieved Stroke Distinction for Acute and Rehab Stroke Services (2015)
- On-Site Survey scheduled for November 25 and 26, 2019.



Patient Story

<http://hhsshare.ca/2017/06/first-responder-needs-help/>



Regional Stroke Website

Please visit www.csnstroke.ca to connect with our team

Meet our Team:

<http://www.csnstroke.ca/contact-professional/>



References and Acknowledgements

- <http://www.world-stroke.org/advocacy/world-stroke-campaign>
- <http://www.heartandstroke.com/site/c.ikiQLcMWtE/b.3483991/k.34A8/Statistics.htm>
- <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/stroke-in-canada.html>
- Kapral MK, Fang J, Silver FL, Hall R, Stemplecoski M, O'Callaghan C, Tu JV (2013). Effect of a provincial system of stroke care delivery on stroke care outcomes. CMAJ, 185(10), pp.483-91.
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