

# Ontario Stroke Network Provincial Integrated Working Group – Stroke Unit Toolkit - FINAL REPORT

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## Introduction

Stroke Units are at the centre of best practice stroke care. Patients should be admitted to a specialized, geographically defined hospital unit dedicated to the management of stroke patients. A special report: HQO Effectiveness of Stroke Unit Care concluded (61): *Moderate quality evidence showed that persons admitted to a stroke unit had a significant reduction in death and the combined outcome of death or institutionalization, and a nonsignificant reduction in institutionalization. Low quality evidence showed that patients admitted to a stroke unit had a significant reduction in the combined outcome of death or dependency and length of hospital stay and a nonsignificant reduction in the outcome of dependence.*<sup>1</sup>

In Ontario (2012), the Ministry of Health and Long-Term Care established Health System Funding Reform (HSFR) in order to develop and implement a strategic funding system based on best practices and promote the delivery of quality health care services across the continuum of care<sup>2</sup>.

MOH contacted OSN Evaluation office in December 2013 to discuss the difficulty in defining a stroke unit within Ontario hospitals and to explore the opportunity of a proxy measure as currently the recommended QBP SU indicator cannot be readily calculated for the baseline report. This information was brought back to the Stroke Regional Directors and District Stroke Coordinators to determine a stroke unit definition based upon the following:

- 1) Reflect the Canadian Best Practice Recommendations definition;
- 2) Be measurable and provide reliable hospital reporting; and,
- 3) Consider real world implementation and sustainability.

As a result, the definition of a stroke unit recommended and endorsed by the Ontario Stroke Network is:

**Acute Stroke Unit (ASU):**

*A geographical unit with identifiable co-located beds (e.g. 5A -7, 5A-8, 5A-9, 5A-10, 5A-11) that are occupied by stroke patients 75% of the time and have a dedicated inter-professional team with expertise in stroke care with the following professionals at a minimum nursing, physiotherapy, occupational therapy, speech language pathologist*

1. Quality-Based Procedures: Clinical Handbook for Stroke (Acute and Postacute). February 2015; p 46.

2. Quality-Based Procedures: Clinical Handbook for Stroke (Acute and Postacute). February 2015; p 11.

## Purpose

As stroke units were more closely aligning with the new definition, a stroke unit toolkit was timely and would assist centres with new stroke unit development; and also assist centres with existing stroke units to make improvements. The toolkit would pertain to Acute, Integrated and Rehab Stroke Units.

## Work Plan

The work plan included 1 priority initiative: Develop a Stroke Unit Toolkit that will facilitate implementation of stroke units at stroke centers as described in the Canadian Best Practice Guidelines and the new Ontario QBP Stroke Unit definition. Toolkit would be used by:

- OSN members e.g. Regional Program Managers, District Stroke Coordinators; OREG, Rehab Coordinators, Community and LTC Coordinators etc.
- OSS stakeholders e.g., Directors, Managers, frontline staff of organizations implementing a stroke unit in a stroke centre.
- Other stakeholders such as the LHIN(s).

## Deliverables

The priority initiative had 7 deliverables:

1. Develop a framework for Stroke Unit Toolkit. The framework helped to guide the development of the toolkit. For final Framework, see Appendix C.
2. Distribute tasks to the Stroke Unit Workgroup based on the framework. Subgroups were developed based on the framework.

A survey was developed and disseminated using Survey Monkey to stroke units in Ontario that more closely met the new stroke unit definition (see Appendix D). Survey was distributed in the summer and fall of 2015. Twenty-eight sites responded. Survey consisted of 33 questions and evaluated the following areas:

- development/planning
- operations
- staffing model
- interdisciplinary team

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- professional stroke education
  - performance improvement and evaluation
3. Develop content of each module in toolkit with monthly review by Stroke Unit Workgroup. The Toolkit modules include, but at this point in time are not limited to:
- Introduction(Outline)
  - Stroke Unit definition
  - Types of Stroke Unit Models (Acute, Rehab and Integrated)
  - Getting Started / Important Considerations: (# of beds calculation; staffing; admission criteria; standards and protocols; preparation of the interprofessional team)
  - Evaluation (Performance Indicators)
  - FAQs
  - Key Contacts (appendix of established stroke units that meet the new QBP definition), became a stand-alone resource and was renamed Stroke Units Contact List. This resource is an inventory of stroke units in Ontario that closely meet the new Ontario stroke unit definition. In addition, information regarding:
    - type of stroke unit(acute, rehab, integrated)
    - contact number
    - stroke volumes(ischemic, hemorrhagic, TIA)/
    - number of acute beds and/or number of rehab beds in stroke unit
    - type of physician most responsible for patients in the stroke unit
    - number of days per week therapy provided, is housed in the Contact list.

Stroke unit visits can be highly valuable to those building new stroke units and those looking to make improvements to their existing stroke unit. The information contained on the Stroke Unit Contact List regarding volumes, type of stroke unit, physician model etc., will ease the decision making for “visitors” regarding which stroke unit(s) to visit.

4. Identify change management strategies to support with the adoption and implementation of stroke units at stroke centers.
- Change management strategies were obtained from the survey that was distributed to stroke distinction sites. In the provincial survey, the following were ranked as the top 3 drivers for achieving buy in: (i) Stroke Quality Based Procedures (ii) Media attention (iii) Canadian Stroke Best Practice Recommendations.  
Common themes that emerged as also helping to facilitate change were:
  - Having Stroke Unit implementation as part of the Regional Stroke Steering Committee Strategic Plan,

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- Being inclusive; having a committee that consisted of the stroke champions, senior leadership, management, front line staff, and patient/caregiver representation.
  - Utilizing metrics as leverage such as mortality, complication or readmission rates was also found to be helpful
5. Develop and test a template of questions that would assist staff/health care providers visiting stroke units in preparation for the development of their own stroke unit.

A Site Visit Guide was developed and tested. The purpose of which was to make:

- The site visit experience meaningful.
- Ease preparation for the “visitors” in terms of what questions to ask.
- Assist with prompting other meaningful questions. However, “visitor” are not limited to the questions in the guide.

The resulting guide contains 12 pages pertaining to:

- Physical layout of the stroke unit
- Operations
- Interprofessional Team composition
- Rounding
- Patient and family Experience
- Hyperacute/Acute Stroke process
- In-hospital Code Stroke process
- Screens in use
- Discharge and Transition management
- Documentation
- Staff Education

The initial draft guide was piloted with 2 sites embarking on site visits. Feedback was very positive, indicating that having a compendium of questions was useful.

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6. Develop a sustainability plan that would help to support currency of key components of the Stroke Unit Toolkit. The committee agreed that annual updates would take place with the toolkit

The members of the Stroke Unit provincial committee have agreed to come together annually to update the toolkit, Stroke Unit Contact List and Site visit Guide.

The toolkit will also be updated with any new recommendations reflected in the Canadian Stroke Best Practices Recommendations that directly pertains to stroke units.

## Summary of Accomplishments

Development of a toolkit located on the OSN website. Toolkit would be a living document with annual updates.

Development of resources that would assist with stroke unit implementation: Stroke Unit Contact List; and Stroke Unit Visit Guide.

## Limitations

## Future Considerations

Plans are to house the Toolkit on the OSN website, Top toolbar select: Healthcare Providers/Partners >Stroke QBP Procedures Resource Centre >Clinical Tools/ Resources for Implementation >Acute >Stroke Unit Toolkit. OSN website will be undergoing some revision, and so that the toolkit will be easily located by end-users.


## Acknowledgements

None of this work would have been possible without the dedication and commitment of the working group members. Their enthusiasm and expertise led to the development of a high quality product. Special thanks to Laura MacIsaac who assisted with the development of the survey, analysis of the survey results, and the edits to the toolkit drafts. We would also like to thank the Ontario Stroke Network for their support with this work, and the provision of resources.

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## Appendix A: Provincial Integrated Work Plan

 <span style="float: right;"> <b>STATUS:</b>            -In progress            -Completed            -On Hold            -Delayed            -Discontinued         </span>				
<div style="border: 2px solid blue; padding: 5px; display: inline-block;"> <b>Provincial Integrated Work Plan</b> </div>				
Strategic Direction 2: Catalyst to drive excellence in stroke care and vascular health				
Priority Initiative	Committee Members <small>(Lead(s) underlined)</small>	Deliverables and Target Date	Status	Update
Develop a Stroke Unit Toolkit that will facilitate implementation of stroke units at stroke centers as described in the Canadian Best Practice Guidelines and the new Ontario QBP Stroke Unit definition.  <b>Target Audience:</b> Toolkit would be used by: <ul style="list-style-type: none"> <li>OSN members e.g. Regional Program Managers, District Stroke Coordinators, OREG, Rehab Coordinators, Community and LTC Coordinators etc.</li> <li>OSS stakeholders e.g., Directors, Managers, frontline staff of organizations implementing a stroke unit in a stroke centre.</li> <li>Other stakeholders such as the LHIN(s).</li> </ul>	<u>Jessica Bresse</u> Margo <u>Coliver</u> Elaine Edwards <u>Esme French</u> Shelley <u>Hawton</u> Whitney <u>Kucey</u> Rhonda <u>McNicoll</u> Whiteman Colleen Murphy Beth Nugent Linda <u>Kelloway</u> Nicole <u>Pageau</u> Stefan <u>Pagluso</u> Gina <u>Tomaszewski</u>	1. Develop framework for Stroke Unit toolkit.  <div style="text-align: right;">Target Date: Dec 10<sup>th</sup>, 2014</div>	Completed	
		2. Distribute tasks to Stroke Unit Workgroup based on framework.  <div style="text-align: right;">Target Date: Dec 10<sup>th</sup>, 2014</div>	Completed	
		3. Develop content of each module in toolkit with monthly review by Stroke Unit Workgroup. The Toolkit modules include, but at this point in time are not limited to: <ul style="list-style-type: none"> <li>Introduction(Outline</li> <li>Stroke Unit definition</li> <li>Types of Stroke Unit Models(Acute, Rehab and Integrated)</li> <li>Getting Started/Important Considerations: (# of beds calculation; staffing; admission criteria; standards and protocols; preparation of the <u>interprofessional</u> team)</li> <li>Evaluation (Performance Indicators)</li> <li>FAQs</li> <li>Key Contacts (appendix of established stroke units that meet the new QBP definition.</li> </ul> <div style="text-align: right;">Target Date: June 2016</div>	In Progress	Workgroup has spent several meetings working on a survey. The plan is to survey those centres whose stroke unit meets the <b>new</b> stroke unit definition. Feedback from the survey will help to populate the sections of the Stroke Unit Toolkit. Plans are to disseminate the survey before the end of June 2015. Survey completion extended to Sept 11 as only 14/36 facilities completed survey.
		4. Identify change management strategies to support with the adoption and implementation of stroke units at stroke centers.  <div style="text-align: right;">Target Date: June 2016</div>	In Progress	Survey results will help with this piece.

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## Appendix B: Committee Members

Name	Title
Jessica Bresee	Stroke Nurse Practitioner Central East Stroke Network
Margo Collver	SWO Community and LTC Coordinator Southwestern Ontario Stroke Network
Elaine Edwards	Regional Stroke Education Coordinator Northwestern Ontario Regional Stroke Network
Esme French	Regional Rehabilitation Coordinator Northwestern Ontario Regional Stroke Network
Shelley Hawton	District Stroke Coordinator Northeastern Ontario Regional Stroke Network
Whitney Kucey	Acute Care Coordinator Champlain Regional Stroke Network
Laura MacIsaac	Clinical Nurse Specialist Central East Stroke Network
Rhonda McNicoll-Whiteman	Stroke Best Practice Clinical Nurse Specialist Central South Stroke Network
Colleen Murphy	Regional Stroke Best Practice Coordinator Stroke Network of Southeastern Ontario
Beth Donnelly	Regional Rehabilitation Coordinator Champlain Regional Stroke Network
Linda Kelloway	Director of Best Practices Stroke Services, Cardiac Care Network of Ontario
Nicole Pageau	Regional Program Director West GTA Stroke Network
Stefan Pagliuso	Regional Program Director Central South Regional Stroke Network
Gina Tomaszewski	Regional Stroke Acute Care Coordinator Southwestern Ontario Stroke Network

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## Appendix C: Final Framework

**Introduction**.....

**Section 1: Getting Buy-in** .....

### **Section 2: Preparation and Planning**

*Build your Implementation Team*

*Stroke Unit Type*

*Bed Calculation*

*Staffing*

*Requirements*

*Budget*

*Considerations*

### **Section 3: Key Components of the Implementation**

*Assessment of Current State*

*Stroke Care Pathway*

*Education/Training*

*Day to Day*

*Operations Patient*

*Trajectory*

### **Section 4: Key Elements of the Stroke Unit**

*Processes of*

*Care*

*Validated*

*Tools*

*Orientation*

*Stroke*

*Expertise*

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## Appendix C: Final Framework -continued

### Section 5: Evaluation

*Case Study*

*Recommendations for Stroke Unit Quality Indicators*

*Data*

*Sources:*

*Canadian Institute for Health Information (CIHI)*

*Special Projects*

*Chart Audit*

*Quality-Based Procedures for Stroke*

*Ontario Stroke Evaluation Report*

*Importance of Sharing Data with your Team*

### Appendices:

- A. Sample Budget Plan
- B. Stroke Unit Admission Criteria
- C. Flow Algorithm
- D. Rounds Template
- E. LHIN-specific, Ontario Stroke Report Card
- F. Recommended Stroke Unit Quality Indicators
- G. Sample Dashboards
- H. Supplemental Indicators and Evaluation Information

References .....

1. Quality-Based Procedures: Clinical Handbook for Stroke (Acute and Postacute). February 2015; p 46.

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## Appendix D: Stroke Unit Survey

(see attached)



Stroke unit survey Final.pdf