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An Introduction to Post-Acute Stroke QBP Recommendations on Transient Ischemic Attack/Minor (Non-Disabling) Stroke

June 24 2015

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Pre-presentation Instructions

- Please keep microphone on mute unless you are asking a question
- The presentation and Executive Summary is available at www.ontariostrokenetwork.ca
- There will be a question and answer period at the end of the presentation
- Please email additional questions to info@ontariostrokenetwork.ca with *your position title and*

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Speaker:

- Dr. Leanne Casaubon, OSN Best Practice Champion and Chair of Best Practice Secondary Prevention and Acute Care Subcommittee and member of HQO Phase Two Expert Panel

Objectives:

1. To provide a brief overview of Quality Based Procedures
2. To provide an overview of recommended practices for QBPs for Transient Ischemic Attack (TIA) or Minor (Non-Disabling) Stroke
3. To provide an overview of the OSN Ambulatory Care Triage Algorithm for Patients with Suspected or Confirmed TIA or Stroke
4. To provide an opportunity for discussion & questions

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Acknowledgement

- Health Quality Ontario's Clinical Handbook for Stroke: Acute and Post-Acute was developed by Health Quality Ontario on behalf of the Ministry of Health and Long Term Care with the Stroke Episode of Care Provincial Phase 2 Expert Advisory Panel
- The content of this presentation follows content of the Quality Based Procedures for Stroke: Acute and Post Acute Clinical Handbook
- South West Ontario Stroke Network for their contribution to this presentation

Phase 2 Expert Panel for Health Quality Ontario: Episode of Care for Stroke

Name	Role	Organization
Dr Mark Bayley	Physiatrist	University Health Network
Christina O'Callaghan	ED	Ontario Stroke Network
Dr Leanne Casaubon	Stroke Neurologist	University Health Network-Toronto Western
Dr Adam Steacie	Family Physician	Ontario Medical Association
Dr Robert Teasell	Physiatrist	St Joseph's Health Care
Connie McCallum	Nurse Practitioner	Stroke Prevention Clinic, Niagara Health System
Trixie Williams	Lead, Vascular Health	Central East LHIN
Armi Armesto	Clinical Nurse Specialist	Stroke Prevention Clinic, Sunnybrook Health Sciences
Dr Dan Brouillard	Stroke Survivor	Kingston
Nadia Hladin	Manager Professional Practice Rehabilitation	VHA Home Healthcare
Karen Sutherland	Service Lead	Specialized Community Stroke Rehab Team, St Joseph's Health Care, Parkwood
David Ure	Coordinator	Community Stroke Rehab Team
Sarah McEwen	Research Scientist	St John's Rehab
Stefan Pagliuso	Regional Stroke Rehabilitation, Community & LTC Coordinator	Central South Stroke Network
Jim Lumsden	Regional Program Director	Champlain Regional Stroke Program
Paula Gilmore	Regional Program Director	South West Ontario Stroke Network
Joan Southam	Home Health Senior Manager/Project Specialist	CBI-LHIN
Matthew Meyer	Project Coordinator	Ontario Stroke Network
Nicole Martyn-Cobianco	Program Head Human Services	University of Guelph-Humber
Holly Sloan	Speech Language Pathologist	Trillium Health Partners
Rebecca Fleck	Regional Education Coordinator	Central South Stroke Network

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About the OSN

- The OSN provides provincial leadership and planning for the Ontario's 11 Regional Stroke Networks (Ontario Stroke System) by:
  - *establishing province-wide goals, strategies & programs to implement BP's across the care continuum*
  - *leading or facilitating provincial initiatives & aligning regional/LHIN plans*
  - *evaluating performance, benchmarking & reporting on provincial, LHIN & Regional Stroke Network progress*
  - *managing the KT program*

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Regional Stroke Networks

- Ontario's 11 RSNs support the 14 LHINs
- Each stroke network is a collaborative partnership of health care organizations and providers that:
  - *span the care continuum from prevention to community re-engagement*
  - *develop and implement strategies to achieve equitable access and improved outcomes for stroke survivors and their families through the integration of stroke best practices across the care continuum*
  - *will support the LHIN implementation of QBPs*

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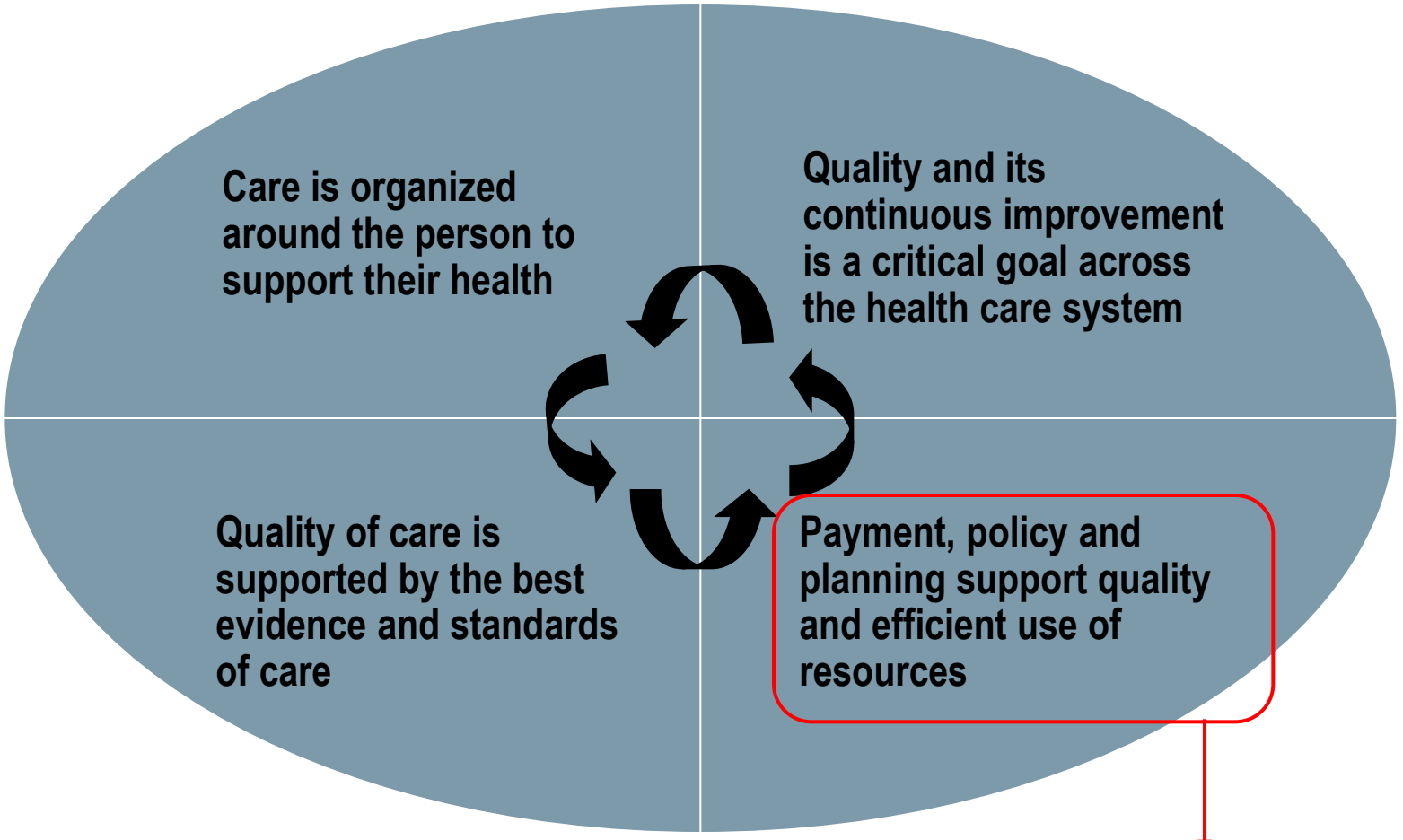
Quality Based Procedures

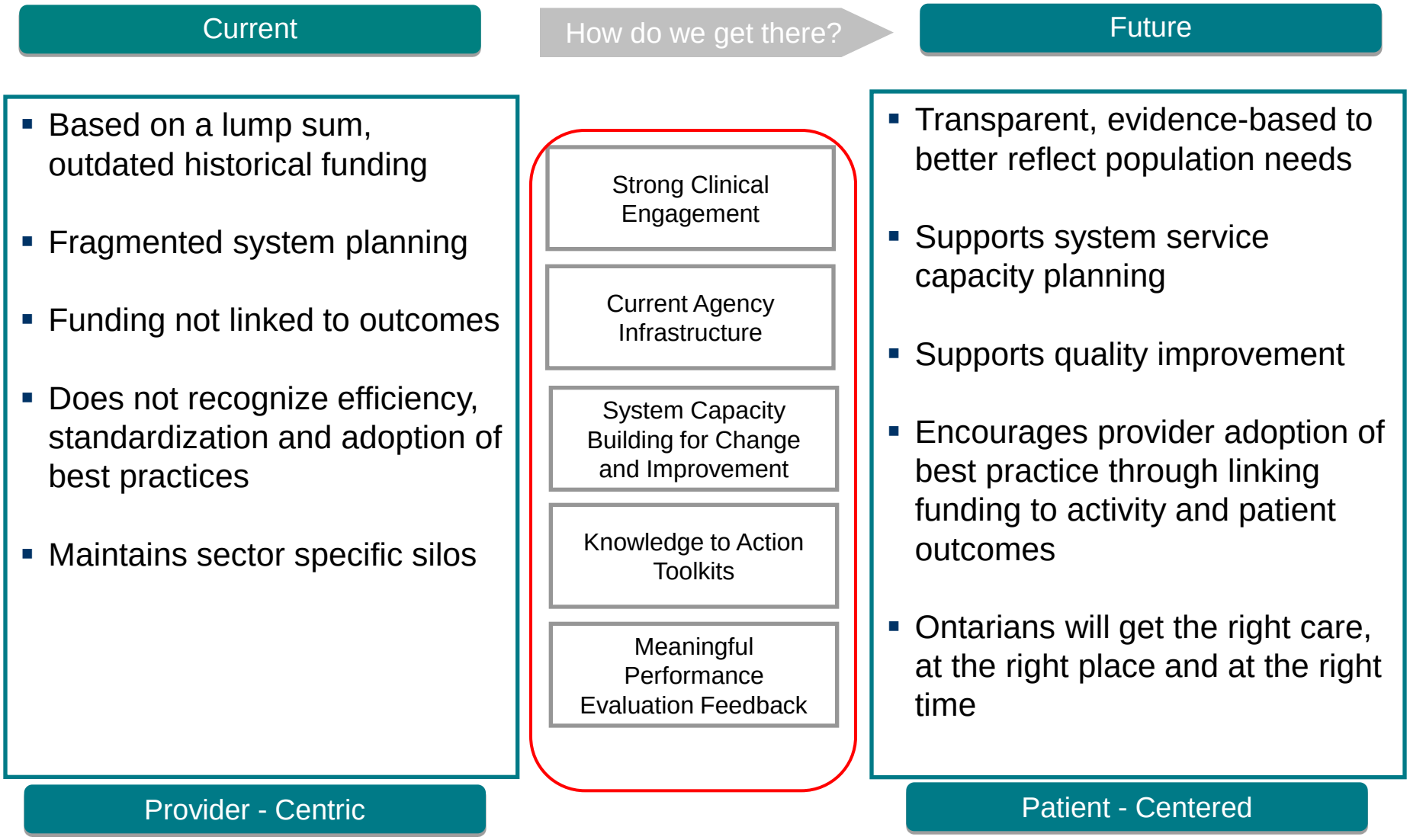
The path forward: The Excellent Care for All Strategy is anchored by principles reflecting *high quality as the primary driver to system solutions…*



Value = Quality/Cost

Health System Funding Reform

The successful transition from the current, 'provider-centered' funding model towards a 'patient-centered model' will be catalyzed by a number of key enablers and field supports



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Key Principles for the Clinical Handbook

- The scope of the handbook includes both hospital care and post-acute, community care
- Recommended practices reflect **best** patient care possible, regardless of cost or barriers to access
- Recommended practices, supporting evidence, and policy applications will be reviewed and updated at regular intervals
- The integrated handbook **does not involve** detailed unit costing or pricing

Key Steps of the Process for Clinical Handbook Development

1. Define patient cohorts and grouping approach

- Disaggregate broad patient population (e.g. stroke) into hospital-based patient groupings with similar clinical and utilization characteristics
- Recommend factors to consider for acuity / severity adjustment (e.g. age, comorbidities, social factors)

2. Develop a pathway model for the episode of care

- What is the index event commencing the episode?
- What are the key phases, branches and decision points within the patient episode of care?
- What proportion of patients proceed down each branch of the pathway?

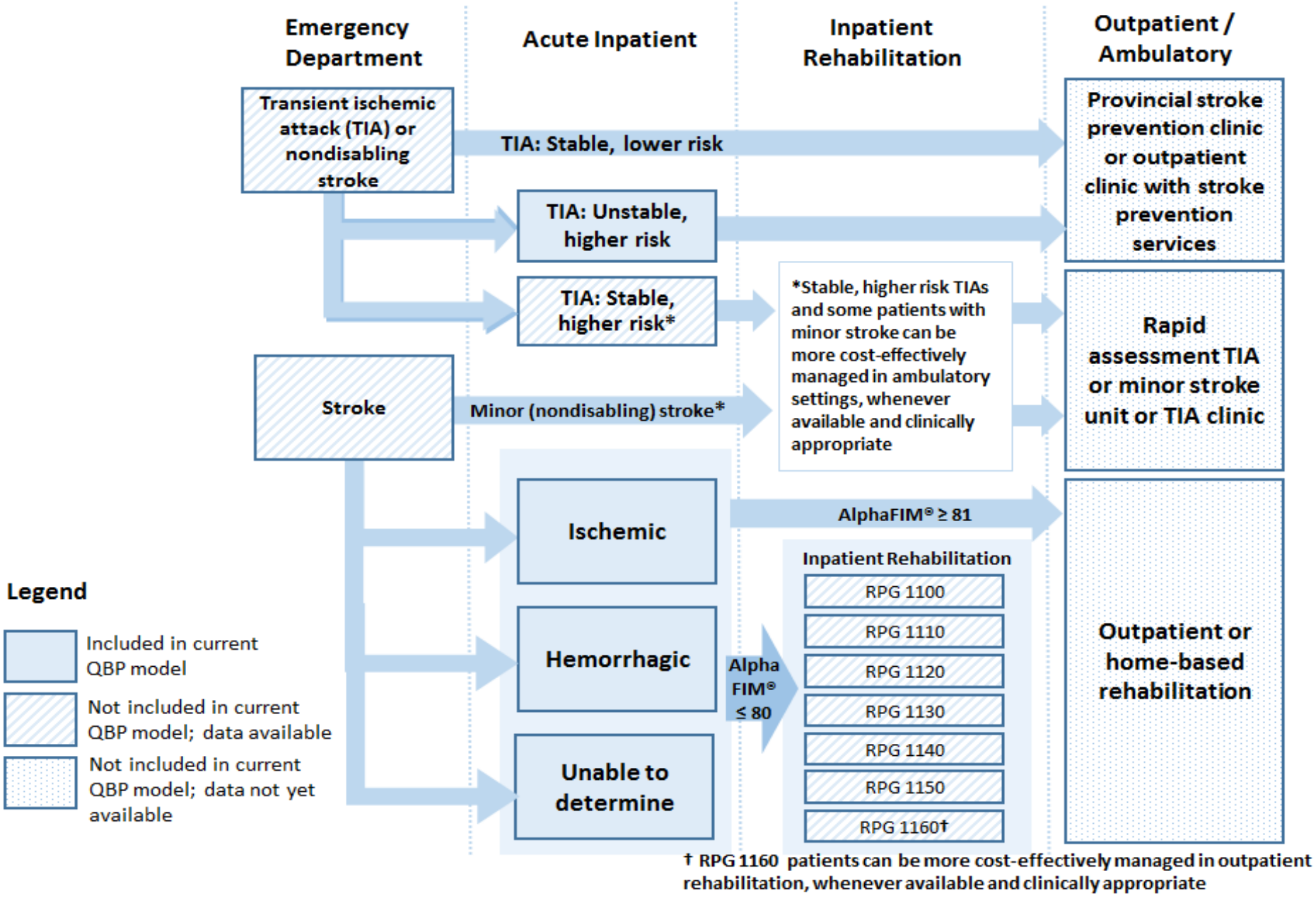
3. Recommend evidence-based practice throughout the episode

- What are the effective practices that should take place within each component of the episode?
- What is the strength of the evidence supporting each of these practices?
- How often should these practices should be delivered?

Organization of the Handbook

TIA /Minor (Non disabling) Stroke	Stroke
ACUTE EPISODE OF CARE (p.41-52)	ACUTE EPISODE OF CARE (p.86-99)
Module 1: Early Assessment Module 2: Early Treatment Module 3: Admission to Acute Care Module 4: Admission to Inpatient (IP) Rehabilitation N/A Module 5: Secondary Prevention	Module 1: Early Assessment Module 2: Early Treatment of AIS & ICH Module 3: Admission to Acute Care 3a: Acute IP Treatment 3b: Prevention of secondary complications Module 4: Admission to IP Rehab Module 5: Secondary Prevention
POST ACUTE EPISODE OF CARE (p.54-82)	POST ACUTE EPISODE OF CARE (p.101-131)
Module 5: Secondary Prevention Module 6: Pre discharge/DC Planning Module 7: Early Supported Discharge N/A Module 8: Community Assessment Module 9: Community Treatment Module 10: Cross-Continuum Processes	Module 5: Secondary Prevention Module 6: Pre discharge/Discharge Planning Module 7: Early Supported Discharge Module 8: Community Assessment Module 9: Community Treatment Module 10: Cross-Continuum Processes

Flow Chart for the Stroke Patient Cohort Across Care Settings



† RPG 1160 patients can be more cost-effectively managed in outpatient rehabilitation, whenever available and clinically appropriate

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QBP & Stroke Clinical Handbook - ED, Acute Key Messages - TIA and Stroke

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Key Messages - ED and Acute - TIA and Stroke

- Early assessment and treatment
- Neuro imaging **including** vascular imaging
- Referral for secondary prevention (rapid-assessment unit/clinic or SPC)
- Access to thrombolysis for acute ischemic stroke (AIS)
- Use of Telestroke
- Admission to stroke unit:
  - *Specialized, geographically defined*
  - *Interprofessional stroke team*
- Completion of AlphaFIM® Day 3
- LOS 5 days (AIS); 7 days (ICH)

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Acute Care Patient Group Modules 1,2 & 5

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The Impact of Prevention …

It has been estimated that full implementation of currently available preventive strategies could reduce stroke incidence by as much as 50–80%.

Murray et al. 2003; Wald and Law 2003

Risk of Recurrent Stroke

- People with symptoms of a transient ischemic attack (TIA) are at higher risk for subsequent stroke
  - 11.5 % will have a stroke within 90 days
  - Of these patients 50% will have a stroke within 48 hours

  (Johnston et al. 2000 & Gladstone et al. 2004)

- 20% - 40% of strokes are preceded by a TIA or non-disabling stroke

(Rothwell et al. Lancet Neurol 2006; 5: 323-33)

Cumulative Risk of Stroke

	Post-TIA (%)	Post-Stroke (%)
30 days	4 – 8	3 – 10
1 year	12 – 13	5 – 14
5 years	24 – 29	25 – 40

Sacco. *Neurology*. 1997;49(suppl 4):S39.
Feinberg et al. *Stroke*. 1994;25:1320.

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Key Messages

- TIA is a threatened stroke and prompt intervention is key
- TIA is an emergency and those experiencing symptoms should dial 9-1-1
- The majority of TIA patients and some with minor stroke do not require admission to hospital and should be referred to an urgent TIA/minor stroke unit/TIA clinic/stroke prevention clinic or comparable ambulatory care setting

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Overview of Modules 1, 2 & 5

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What's New: Modules 1-3: Acute

- Brain Imaging interpreted immediately **by a health care professional with expertise** in reading CT and/or MRI

- Patients should have access to a specialized interprofessional team **7 days a week**

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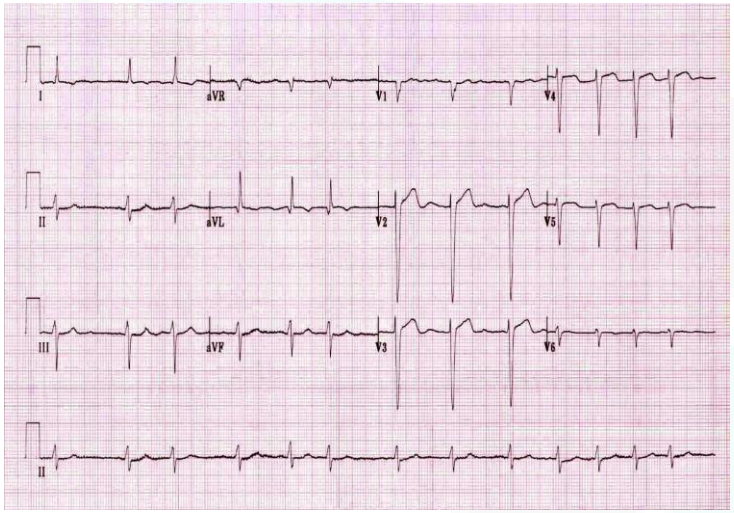
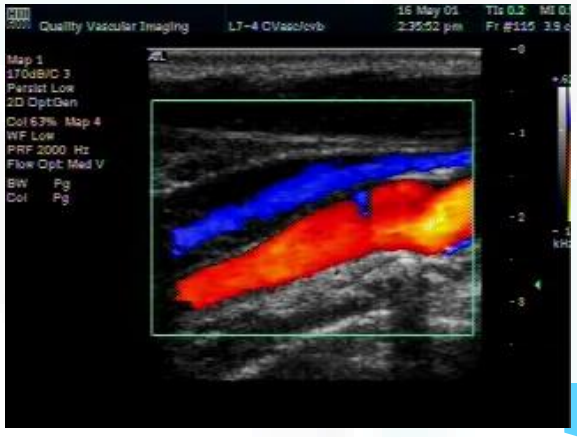
Module 1-Early Assessment

- Rapid assessment
- Neurological examination
- CT and/or MRI
- ECG
- Blood work
- NPO and dysphagia screening
  - *Referral to SLP or appropriately trained specialist*



Module 1

- Vascular Imaging
- *For patients presenting within 48 hours of symptom onset or with fluctuating motor or speech symptoms*
- *Immediate vascular imaging of neck arteries unless the patient is clearly not a candidate for carotid artery revascularization*
- *For patients presenting beyond 48 hours should undergo vascular imaging of the brain and arteries as soon as possible*



Module 2-Early Treatment

- Glucose management
- Body temperature
- Triage to appropriate setting
- Antiplatelet agent following brain imaging to rule out intracranial hemorrhage
  - *ASA 160 mg loading dose followed by enteric coated ASA (81-325 mg) daily (most pts should be on a maintenance dose of 81mg/day)*
  - *Clopidogrel 300mg loading dose followed by 75 mg/day*
  - *Extended –release dipyridamole 200 mg/ASA 25 mg BID (load with ASA 160 mg first)*
- Prevention assessment and therapies (Module 5)

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TIA and Minor Stroke Recommendations

OHTAC TIA/Minor Stroke Recommendations

- Patients presenting with a transient ischaemic attack (TIA) with high-risk features[1] or a minor stroke[2], undergo a brain CT scan and initiation of antiplatelet therapy (provided this is not contraindicated) as soon as possible and no later than 24 hours after symptom onset, followed by other stroke prevention treatments tailored to each patient
- With respect to location of care:
  - Such immediate care be provided at a ***specialized TIA/minor stroke clinic***[3]
  - Where delays to accessing a specialized TIA/minor stroke clinic pose risks to patient health, evaluation (as outlined above) occur at an appropriately resourced ED, and further consideration be given to inpatient evaluation and management for stroke prevention. ***OHTAC further recommends establishment of accreditation standards for TIA/minor stroke care*** to ensure equitable access to appropriate, high-quality care irrespective of the location of initial presentation.
  - Where **medical attention has been sought after 48 hours from symptom onset**, patients be ***referred for evaluation at a specialized TIA/minor stroke clinic or alternatively an outpatient clinic with stroke prevention services***[4] within 24 hours of initial presentation

OHTAC Stroke Recommendations

- Patients presenting with a TIA without high-risk features[1], undergo a brain CT scan and initiation of antiplatelet therapy (provided this is not contraindicated) as soon as possible and no later than 24 hours after initial presentation, followed by referral to an outpatient clinic with stroke prevention services[4] for comprehensive evaluation and management within 1 month of symptom onset

Based on HQO EBA on Is Transient Ischemic Attack a Medical Emergency? (very low to moderate quality of evidence) and consistent with Australia (levels C and GPP evidence)

Patient Group	Patient Characteristics/ Triage Criteria	Recommended Care Pathway
1. **Possible TIA: <u>stable</u>**	Stable/lower-risk patients presenting to hospital with possible TIA and **<u>without</u>** ***higher-risk features*** consistent with the hemispheric ischemic event **Higher-risk features** include the following: • sudden hemiparesis • speech difficulties • monocular vision loss • patients presenting within a short time of symptom onset (especially within 48 h) • patients with known high-risk conditions associated with stroke, including atrial fibrillation (especially if inadequately anticoagulated) or known carotid artery atherosclerosis with > 50% stenosis on the side consistent with the hemispheric event • patients with very mild persistent symptoms or no residual symptoms but a small asymptomatic infarct on imaging	Brain CT scan and initiation of antiplatelet therapy (provided this is not contraindicated) as soon as possible and no later than 24 hours after initial presentation, followed by ***referral to an outpatient clinic with stroke-prevention services for comprehensive evaluation and management within 1 month of symptom onset***

Patient Group	Patient Characteristics/ Triage Criteria	Recommended Care Pathway
2. Possible TIA or minor (non-disabling) stroke: stable/ higher risk	Patients presenting to hospital **with** *1 or more of the higher-risk features described in group 1*	*If urgent access is available to specialized ambulatory TIA/minor (non-disabling) stroke services, refer patient there* *If urgent access is not available, consider acute inpatient admission*
3. Possible TIA or minor (non-disabling) stroke: unstable/ higher risk	Unstable/high-risk patients presenting to hospital with the higher-risk features described in group 1 **and with** *> 1 possible TIA* in the previous 2 weeks and/or *more significant stroke symptoms* (including but not limited to weakness causing possible swallowing difficulty or symptoms causing difficulty with walking safely)	*Admit to acute inpatient care* FOLLOWED BY Discharge home with community-based supports and stroke-prevention clinic services, where appropriate

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Module 5-Secondary Prevention

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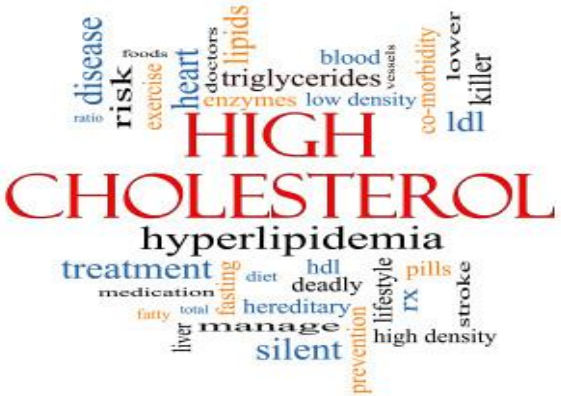
Module 5-Secondary Prevention



Stroke and SleepApnea

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Evaluation of Outcomes of QBP Implementation

Strategy for Patient Oriented Research (SPOR) Project

- Overarching goal is to **translate research results** into **improved health outcomes** for Canadians
- Excellent **alignment** between **SPOR goal** and Ontario's focus on **evidence-based person-centred health care** as per ECFAA and Ontario's Action Plan for Health Care
- **OSN SPOR Project Objectives:**
  - *Ensure patient/family perspective incorporated into QBP implementation and the iterative evaluation*
  - *Inform development and implementation of QBPs for stroke in Ontario*
  - *Perform an iterative evaluation of stroke and where feasible other QBP implementation strategies*
  - *Develop a framework for ongoing evaluation of QBPs*

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OSN Ambulatory Care Triage Algorithm for Patients with Suspected or Confirmed Transient Ischemic Attack (TIA) or Stroke

Rationale

- One in 20 patients returns to the ED within 48 hours with a stroke and one in 10 patients is readmitted in 90 days
- One in four patients has an adverse event within 90 days (including stroke, MI and death) and half of these events occurs within four days of the initial event
- OSN Stroke Evaluation Report: Spotlight on Secondary Prevention and Care 2013
  - **<20% of highest risk categories of TIA are seen in a timely manner**

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Rationale

- **Support role of SPCs:**
  - Provide coordinated services for all high risk patients to allow access to prevention programs
  - Developing and implementing referral and triage processes that incorporate best practices to facilitate transition of care management
  - Establish processes to coordinate timely access to consults, specialty diagnostics and surgery
  - Provide access to interdisciplinary team members for risk factor and lifestyle management
  - Establish process for timely access to carotid revascularization

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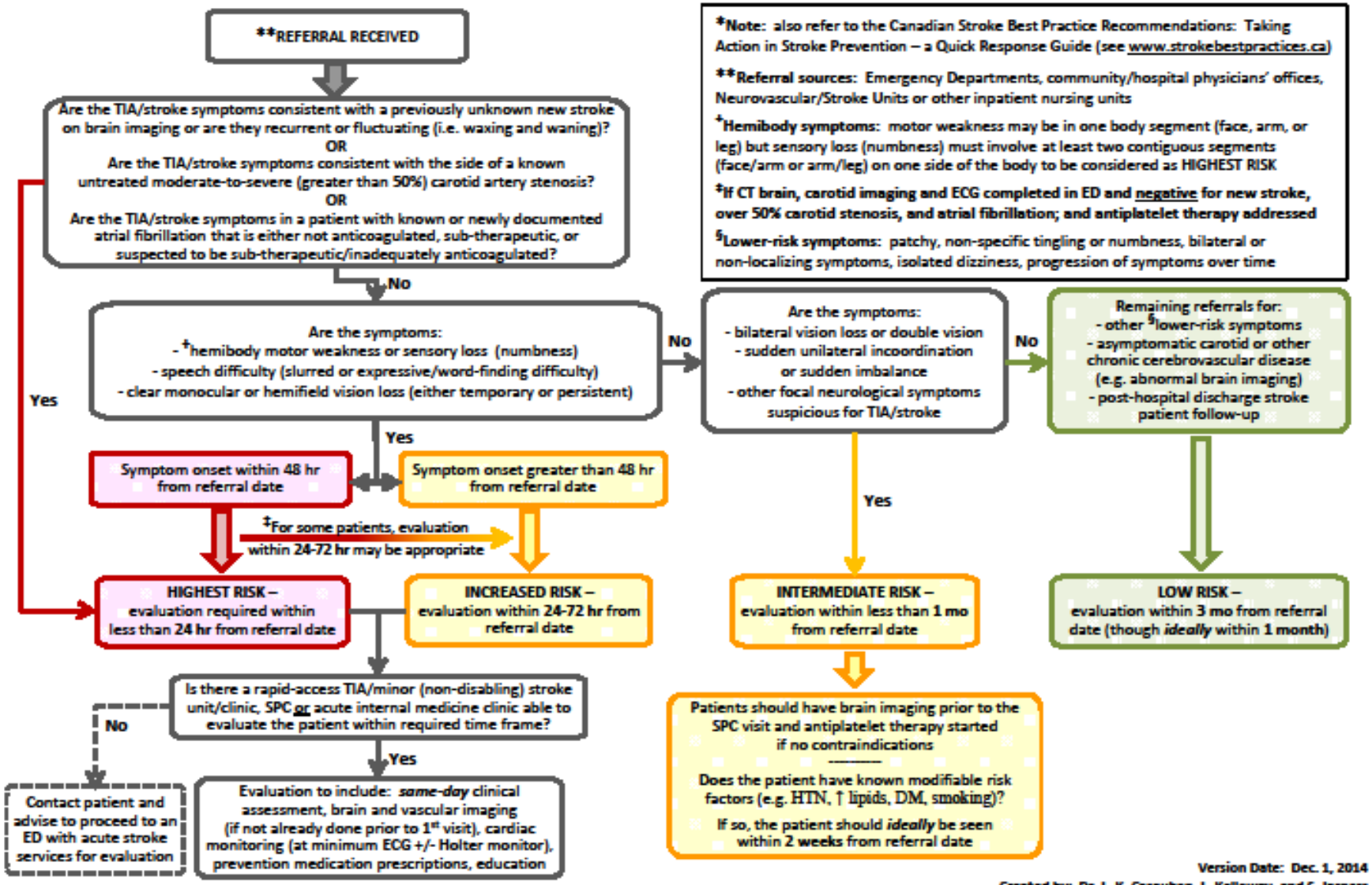
Process

- Aligned with Canadian Best Practice Recommendations
- Reviewed and endorsed by the OSN Best Practice Secondary Prevention and Acute Care Subcommittee
- Reviewed and endorsed by the Ontario Stroke Regional Medical Directors

Ontario Stroke Network (OSN) Ambulatory Care Triage Algorithm for Patients with Suspected or Confirmed Transient Ischemic Attack (TIA) or Stroke

*For use by regional Stroke Prevention Clinics (SPC) or other ambulatory units/clinics providing stroke prevention services



*Note: also refer to the Canadian Stroke Best Practice Recommendations: Taking Action in Stroke Prevention – a Quick Response Guide (see www.strokebestpractices.ca)

**Referral sources: Emergency Departments, community/hospital physicians' offices, Neurovascular/Stroke Units or other inpatient nursing units

†Hemibody symptoms: motor weakness may be in one body segment (face, arm, or leg) but sensory loss (numbness) must involve at least two contiguous segments (face/arm or arm/leg) on one side of the body to be considered as HIGHEST RISK

‡If CT brain, carotid imaging and ECG completed in ED and negative for new stroke, over 50% carotid stenosis, and atrial fibrillation; and antiplatelet therapy addressed

§Lower-risk symptoms: patchy, non-specific tingling or numbness, bilateral or non-localizing symptoms, isolated dizziness, progression of symptoms over time

Version Date: Dec. 1, 2014

Created by: Dr. L. K. Casaubon, L. Kellowny, and S. Jaspers

Next Steps

- Working with CIHI to explore opportunities to support ongoing data collection within SPCs, rapid-assessment TIA and minor stroke units/clinics, and other community clinics that provide stroke prevention services
- Confirming process for evaluation of uptake and utilization of algorithm within clinics

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Implementation Considerations

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Key Implementation Considerations

1. Recognition of TIA/stroke symptoms by EMS and inclusion in regional medical redirect protocols has been identified and need to develop ongoing education opportunities to address gap both regionally and provincially
2. Currently there is no mechanism to collect data, assess performance and compliance with QBP for patients seen at TIA/SPCs
3. Identify opportunities to further develop SPCs and new rapid-assessment TIA and minor stroke units/clinics throughout Ontario so that all Ontarians can access this care

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QBP Resources

- Two rapid reviews as part of the evidence in the acute episode of care

- Go to http://www.hqontario.ca/evidence/publications-and-ohtac-recommendations/rapid-reviews

Welcome to the Ontario Stroke Network - Windows Internet Explorer

http://www.ontariostrokenetwork.ca/rehab.php

time is brain acute stroke management

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::: SELECT A RESOURCE TOPIC :::

Stroke Rehabilitation Standards of Care

Health System Level Tools and Guidelines

Clinical Tools and Resources for Implementation

Educational Resources

Success Stories Inventory

Performance Indicators

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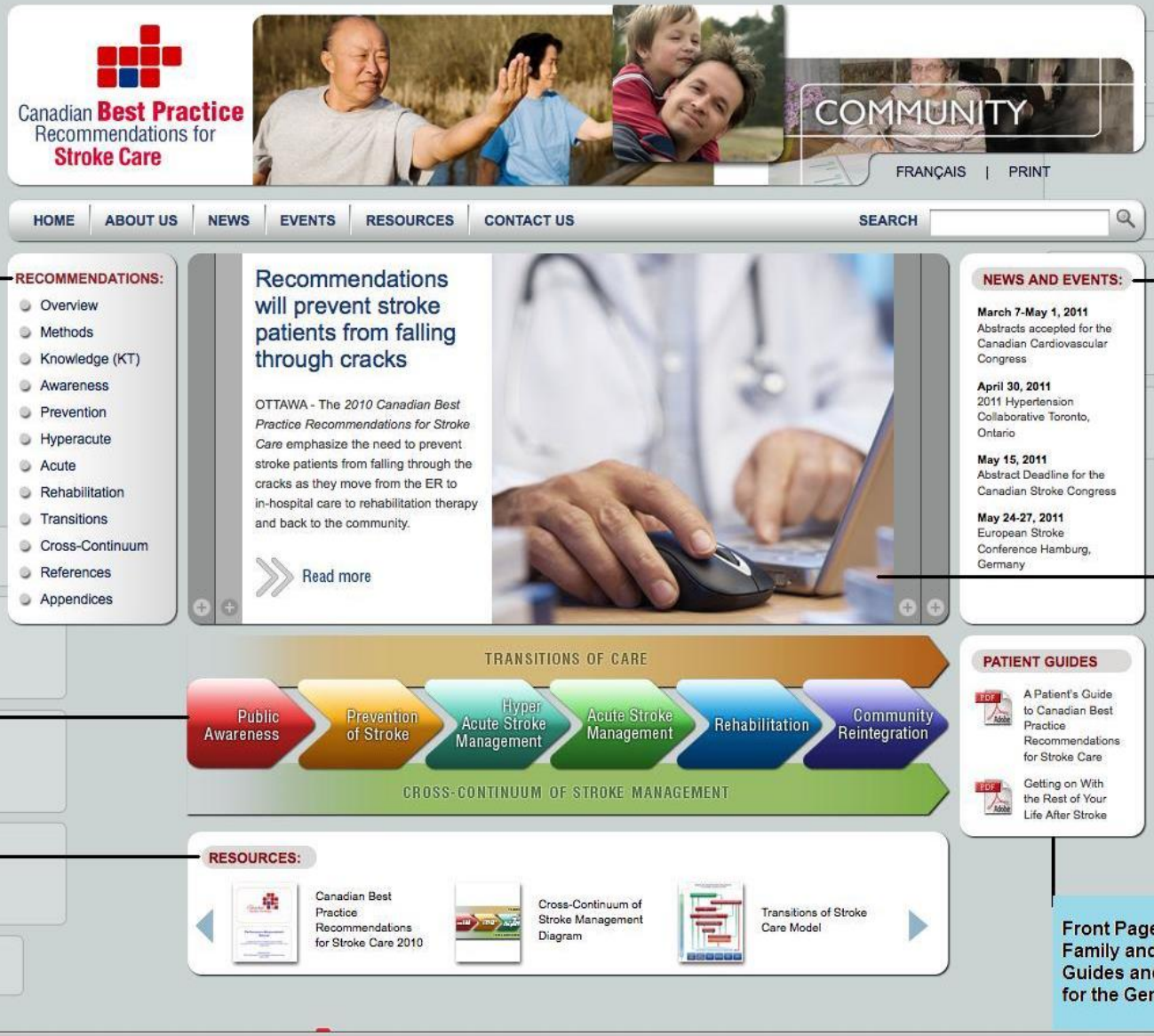

Direct Access to Specific Best Practice Recommendations

Up-to-date Conference and Research Events for Health Professionals in Stroke Care

Real-Time Updates on Key Stroke Topics and Best Practice Updates

Quick Access to Knowledge Translation Tools and Resources

Front Page Access to Family and Patient Guides and Resources for the General Public

Next steps

- OSN has created an Executive Summary of the Handbook available on the OSN website
- Support dissemination and KT; OSN providing educational webinar/videoconference (archived):
  - June 5 (OP & Community Rehab) and June 24 (TIA/Stroke)
- Collaborate with MoHLTC, HQO, CIHI and others to improve data quality and availability
- Advance stroke QBP implementation through OSN Strategy for Patient-Oriented Research (SPOR) project

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Q&A/Discussion

- What approach would you recommend for further communication and engagement?

- Any success stories you would like to share?

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- Please email info@ontariostrokenetwork.ca with your position title and LHIN/Stroke Region
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