Re-Organizing Stroke Care in Nova Scotia

Report of the Nova Scotia Integrated Stroke Strategy Committee

HEART AND STROKE FOUNDATION OF NOVA SCOTIA

Presentation Team

Jane Farquharson, MSC

Executive Director, HSFNS

Clare O'Connor, MURP

Health Policy Co-ordinator, HSFNS

Ed Harrison MD, FRCPC

Director Stroke Rehabilitation Service, QEII Health Sciences Centre

Greg Archibald, MD, CCFP, FCFP

Chief Department of Family Medicine, QEII Health Sciences Centre

Steve Phillips, BSC, MBBS, FRCPC

Director, Acute Stroke Program, QE II Health Sciences Centre

Alison McDonald, BScPT

Physiotherapist, Stroke Rehabilitation, QEII HSC

Gordon Gubitz, MD, FRCPC

Director, Outpatient Neurovascular Clinic, QEII Health Sciences Centre

Overview of Nova Scotia Integrated Stroke Strategy (NSISS)

Ed Harrison MD, FRCPC
Director Stroke Rehabilitation Service
QEII Health Sciences Centre

Re-Organizing Stroke Care in Nova Scotia

Why bother?

Why now?

Stroke and Nova Scotia

- **3rd leading cause of death**
- **Leading cause of adult onset disability**
- **Cost**
  - $3-$5 billion per year

Stroke and Nova Scotia

- **Stroke: An Epidemic In Waiting**
  - Increasing Prevalence of Stroke Survivors
  - Major Non-Modifiable Risk Factor- Age
  - Nova Scotia Demographics
    - Aging Population
    - Poor Stroke Outcomes
    - Prevalence of Vascular Risk Factors
    - The Extent of the Problem?

Integrated Organized Stroke Care Works

- Outcomes / Benefits
  - Reduces Mortality
  - Improves Functional Outcomes
  - Improves Quality of Life
  - Reduces Inpatient Length of Stays
  - Reduces Long-term Institutional Care
  - Durable Results- results last for years

Integrated, Organized Stroke Care Works

- Example of Success

  – Ontario's Co-ordinated Stroke Initiative
    - Improved access to services
    - Improved quality of care
    - Integration between specialized services and primary care providers
    - Helped decrease reoccurrence of stroke
    - Cost effective

Health Care in Nova Scotia

Traditional Approach to Organization

A New Direction for Stroke Care

NSISS

Nova Scotians

- A template for delivery of comprehensive, effective and efficient stroke care services
- A truly provincial, evidence- based model of care
- Addresses the realities (challenges) of disease management in Nova Scotia
- Shaped by Nova Scotians

Nova Scotia Integrated Stroke Strategy Committee

Core Committee

- Ed Harrison- Chair
- Corinne Corning- Secretary
- Greg Archibald
- Gail Eskes
- Mary Anne Finlayson
- Gord Gubitz
- Anne Mason-Browne
- Alison McDonald
- Steve Phillips
- David Rippey

Nova Scotia Integrated Stroke Strategy Committee

Task Groups

- Health Promotion
  - Greg Archibald
- Acute/Emergency Care
  - Steve Phillips
- Rehab and Re-integration
  - Alison McDonald
- Evaluation/Monitoring
  - Gord Gubitz

Report Summary

- Make stroke prevention and care a top priority in Nova Scotia
- Support a comprehensive and integrated Provincial Stroke Care System
- Establish a provincial stroke working group

Report Summary

- Support the development of a comprehensive stroke registry
- Develop a coordinated province-wide public education program
- Develop and enhance information and diagnostic/evaluative technologies, including telemedicine technologies

A Comprehensive and Integrated Provincial Stroke Care System

Comprehensive Continuum of Care (Effective)

- Health promotion and Prevention
- Acute and Emergency Care
- Rehabilitation and Community Re-integration

A Comprehensive and Integrated Provincial Stroke Care System

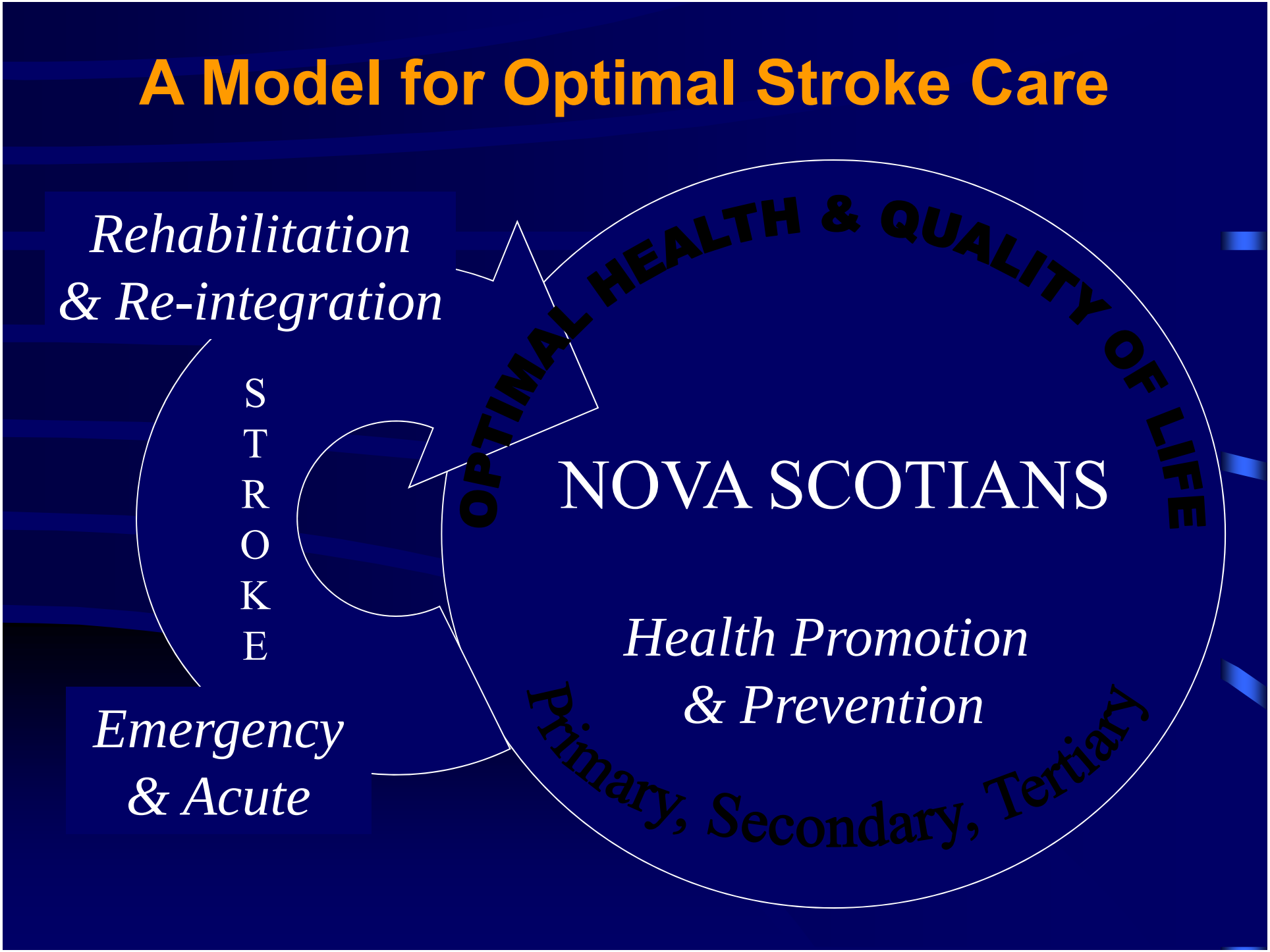
Responsive & Accountable (Efficient)

- Evaluation and Monitoring

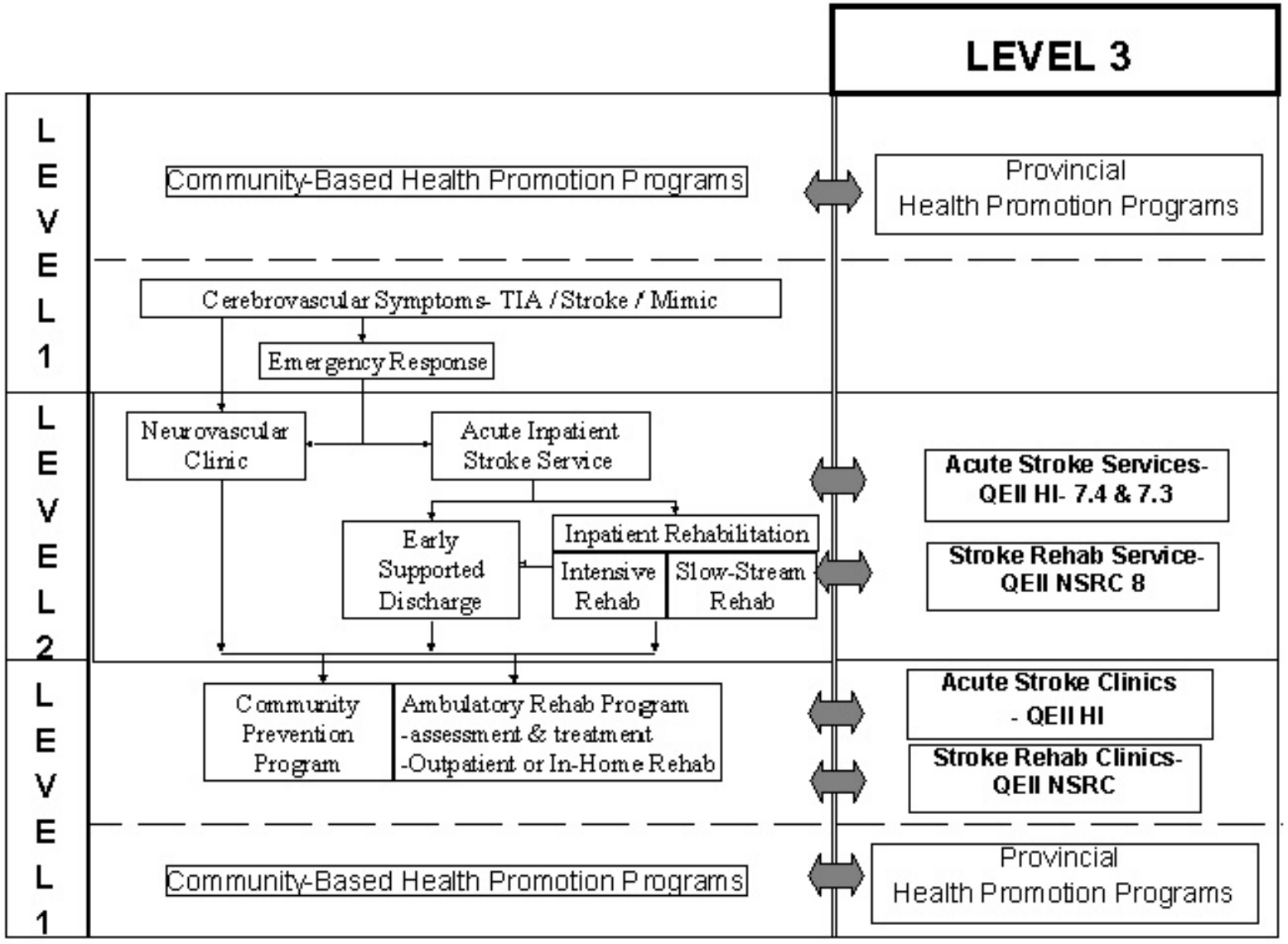
Accessible and Acceptable

- Community- Level I
- District / Regional- Level II
- Provincial- Level III

A Model for Optimal Stroke Care



An Integrated Stroke Strategy for Nova Scotia



Level 1= Community-Based; Level 2= District/Regional; Level 3= Provincial

Re-Organizing Stroke Care

~~Why bother?~~

~~Why now?~~

When can we start?!

Future Directions

- Partnership
  - DOH
  - Public
  - Community Health Boards
  - District Health Authorities
  - Community Groups & Resources
  - Other Provincial Health Initiatives
  - National Bodies

Future Directions

- Establishment of Provincial Stroke Services Working Group

Health Promotion and Stroke Prevention

Greg Archibald, MD, CCFP, FCFP
Chief Department of Family Medicine
QEII Health Sciences Centre

Behavioral Risk Factors

- Physical inactivity
- Smoking
- Excessive alcohol consumption
- Obesity

Biological Risk Factors

(modifiable)

- High blood pressure
- High cholesterol
- Atrial fibrillation
- Coronary heart disease
- Diabetes
- Transient ischemic attacks
- Asymptomatic carotid stenosis

Stroke Prevention: What works?

- Chronic disease is preventable
- Preventing the occurrence of risk factors is the key
- Small population-wide changes have a larger impact

Stroke Prevention: What works?

- Sufficient intensity and duration
- Multiple approaches
- Intersectoral collaboration and shared responsibility

Issues in Stroke Prevention

- Integration
- Societal and Systemic Changes
- Long-term Commitment and Adequate Funding
- Human Resources for Action on Healthy Eating

Issues in Stroke Prevention

- A System that Supports Clinical Prevention
- Timely Diagnosis and Treatment
- Appropriate Settings for Clinical Prevention

Emergency and Acute Care

Steve Phillips, BSC, MBBS, FRCPC
Director, Acute Stroke Program
QE II Health Sciences Centre

Recommendations

- Designate one CT-equipped hospital in each DHA as the district acute stroke hospital, and make CT scanning continuously available at each.
- Change EHSNS policy so that ambulances transporting suspected acute stroke patients are directed to the nearest district acute stroke hospital.

Recommendations

- Ensure that all CT scanners are DICOM-compatible to enable the development of teleradiology links between hospitals.
- Establish an acute stroke unit and interdisciplinary stroke team at each district acute stroke hospital.

Recommendations

- Create electronic and video communication links between stroke teams.

- Develop navigation criteria for transfer of patients within the system.

Stroke Rehabilitation and Community Re-Integration

Alison McDonald, BScPT

Physiotherapist, Stroke Rehabilitation, QEII HSC

Why Do We Need Stroke Rehabilitation?

- Scientific evidence supports:
  - early intensive rehabilitation
  - early supportive discharge programs
  - interdisciplinary ambulatory rehabilitation
- Intensive coordinated rehabilitation significantly:
  - decreases disability, LOS and institutionalization
  - improves quality of life

Current Limitations

Insufficient:

- designated rehabilitation beds
- human resources for all rehabilitation disciplines
- co-ordination along the continuum of care
- in-home rehabilitation services (e.g. OT, PT)
- accessible transportation
- provincial outcome measurement systems

Stroke Rehabilitation and Community Re-integration

- Vision for Stroke Rehabilitation in NS

  "Individuals who experience a stroke will have timely access to the appropriate intensity and duration of rehabilitation services required to optimize their functional recovery, quality of life and community re-integration."

Priorities for Stroke Rehabilitation and Community Re-integration

- Establish coordinated 3-level rehabilitation system with:
  - dedicated beds for stroke rehabilitation
  - appropriate staffing (benchmarks)
  - access rehabilitation services as close to home as possible

Rehabilitation Priorities

- Develop a long-term budget specifically dedicated to rehabilitation programs and services
  - clear, accessible entry points
  - timely service
  - improved transitions
  - rehabilitation services funded around “places” along the continuum not just on hospital beds

Rehabilitation Priorities

- Provide outreach education and consultation
  - coordinated navigation system
  - telemedicine technology to remote communities
- Provincial Outcome Measurement System
  - continuous quality management
  - increase accountability

Evaluation and Monitoring

Director, Outpatient Neurovascular Clinic,
QEII Health Sciences Centre

Current Limitations

- Measuring indicators and monitoring outcomes is critical throughout the continuum of stroke care.

- Without this information, it is impossible to analyze needs and determine the efficiency or effectiveness of interventions.

Current Limitations

- Nova Scotia is lacking important information about stroke, the people affected and the outcomes of their care and treatment.
- There is no provincial case reporting system for stroke in Nova Scotia.

Current Limitations

- Routine administrative data collected by hospitals and physicians provide limited information on stroke incidence and outcomes.
- The validity and comprehensiveness of these data for surveillance, monitoring and planning of stroke care is limited.

Recommendations

- The Department of Health, in collaboration with District Health Authorities and other partners, should establish a ***comprehensive provincial data set*** for stroke.

Recommendations

- This data set should include: demographic and epidemiological data, outcome measures and mortality, complications, disability and quality of life measures.

- Process measures should also be collected to monitor cost, accessibility, efficiency and resource utilization.

Recommendations

A provincial ***stroke monitoring implementation team*** is needed to:

- Develop the appropriate data set,
- Ensure timely review and interpretation of data,
- Establish formal reporting policies to ensure accountability,
- Identify opportunities for research and quality monitoring, and
- Ensure accessibility of data to health care providers.

Benefits

- A provincial monitoring system for stroke would enable stakeholders to monitor and evaluate the provision of stroke care, as well as its impact on patients and the health care system.

- It would help assess waiting times and other barriers to care, and provide information on both quality of care and patient satisfaction.

Benefits

- A single provincial system to monitor and evaluate stroke care would provide data and information to assess:
  - whether the stroke care system is providing quality care in a ***timely manner***,
  - whether services are readily ***accessible*** to patients and their families and providers, and
  - whether service delivery and organization is ***effective and efficient***.

Benefits

- A single provincial system to monitor and evaluate stroke care would facilitate ***accountability*** at both the system and clinical levels within the health care system.

Priorities for Evaluation and Monitoring

- Establish a stroke monitoring implementation team.
- Collaborate with and build upon existing and developing data collection initiatives
- Take into account increasing demands on service providers for detailed data collection.

Conclusion

- A comprehensive provincial integrated stroke strategy is necessary to address current and future needs

  – On average, Nova Scotians are at a high risk for stroke.
  – Aging population requires improvements to current system.
  – Cost to individuals as well as the health care system can be decreased with an Integrated Stroke Strategy.