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Réseau Canadien contre
les accidents cérébrovasculaires

Lessons Learned from the Canadian Stroke Network

Northeast Cerebrovascular Consortium

September 14, 2006

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MacLachlan Stroke Unit Sunnybrook ~ 1978



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Hachinski and Norris (Morris Freedman) ~ 1978



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Canadian Stroke Strategy

Is a joint initiative of

- the Canadian Stroke Network and
- the Heart and Stroke Foundation of Canada



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The Canadian Stroke Strategy

By 2010 an integrated stroke strategy will exist in every province in Canada



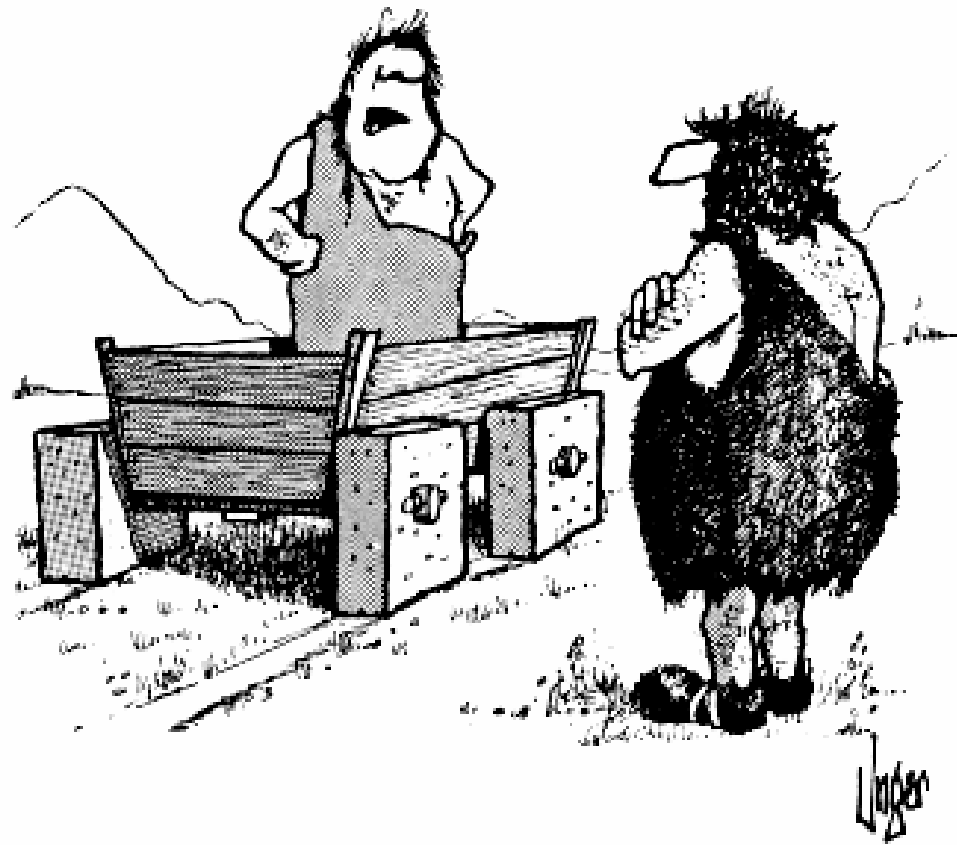
A knowledge translation strategy to:

- Move our knowledge of best care into practice
- Through strong partnerships
- With the CSN playing a critical role



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**"D'yer ever feel you're on the verge of
an incredible breakthrough?"**

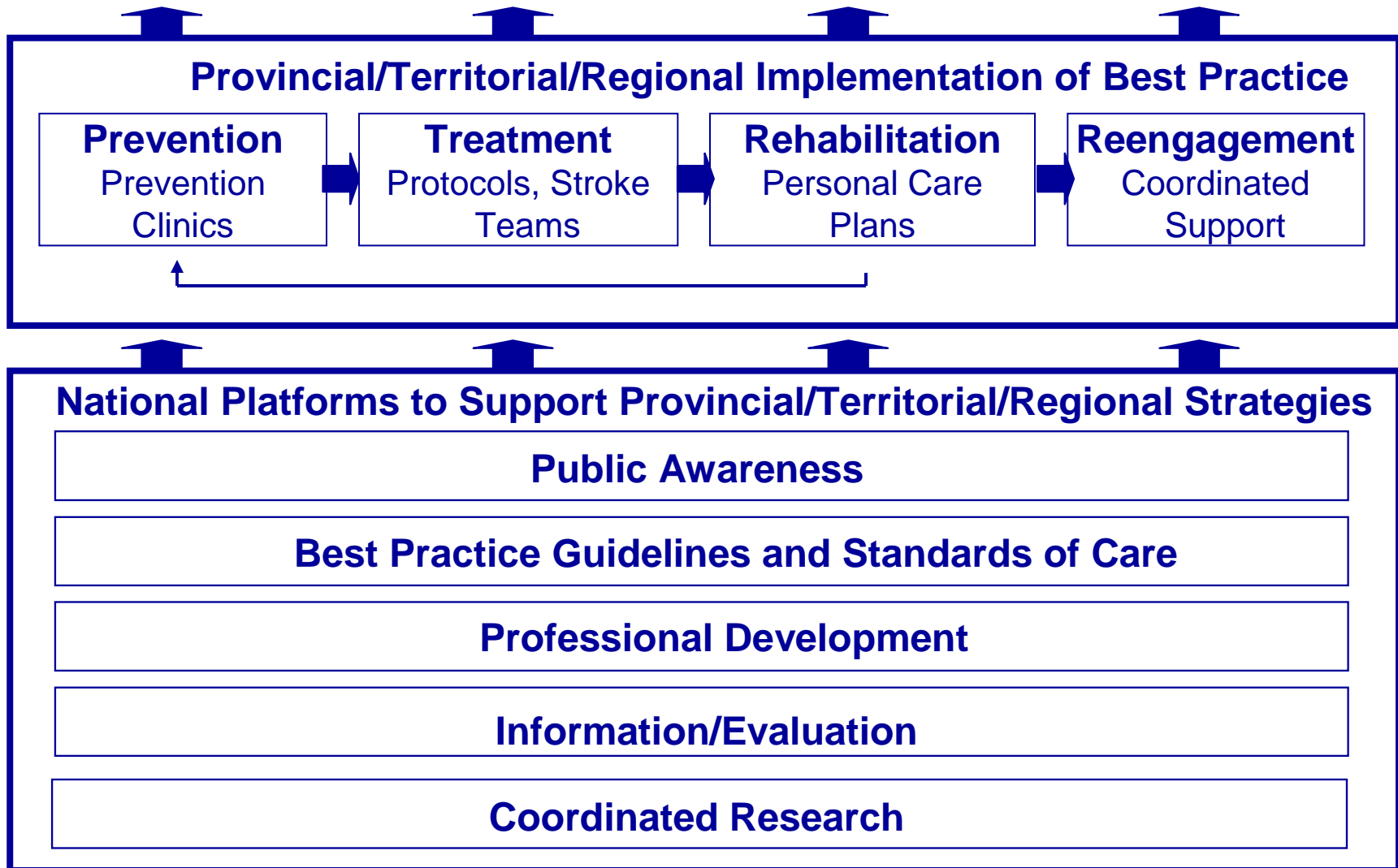


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The CSS Model

- Decrease burden of stroke
- Improve quality and efficiency of care
- Establish Canada as an international leader



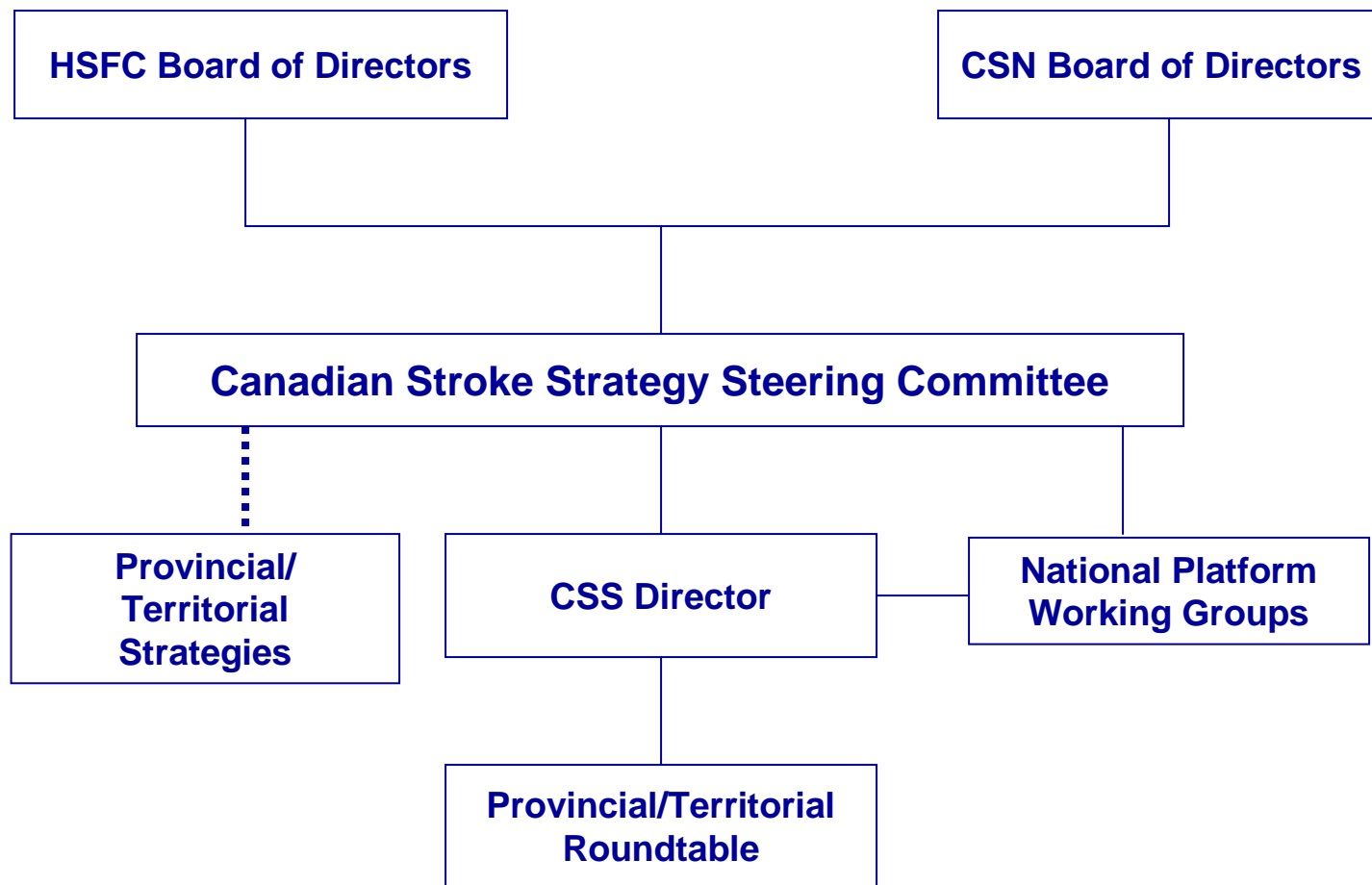


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CSS: Governance and Operational Structure





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National Platform Working Groups

- Information and Evaluation
(M Hill, P Lindsay)
- Best Practices, Guidelines and Standards of Care (S Philips, A McDonald)
- Professional Development and Training
(P Teal, A Shuaib)
- Coordinated Research
- Public Awareness



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Three Positive Lessons Learned

The process is just as important than the content

- Engage all stakeholders from the beginning and keep it collaborative, multidisciplinary
- You are implementing a system change that needs both champions and full-time “change managers”
- You need to measure and monitor the impact of your system changes



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Engagement

- Get everyone on board from the beginning
- Form partnerships between payers (government, insurance companies), providers (hospitals, health care workers - MDs, RNs, allied health), non-for-profit agencies (ASA, NSA), governmental agencies (CDC), patient and caregiver groups
- Keep it collaborative
- Make it interdisciplinary



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Creating a system change

- Seek out champions at all levels
 - Clinical champions (key)
 - Administrative champions (hospital)
 - Government (public servants and politicians)
 - Patient and caregiver
- You need full time staff
 - Stroke Managers for each province initially and then for each region



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You need data

- ideally start collecting data before you implement the change
- collect data form across the continuum of stroke care
- don't collect data on everything – go for data that drives Quality Indicators
- Make data collection part of the system change
 - use scales rather than clinical notes
 - make good documentation a measure of quality
 - Integrate the data collection into the medical record
 - go electronic



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Ontario: Stroke Evaluation Advisory Committee (SEAC)

DOMAINS

- I. **Access** to appropriate health information and care (25 indicators)
- II. **Integration** of care across the continuum (9 indicators)
- III. **Outcomes** of care (23 indicators)
- IV. Client and provider **perceptions** (10 indicators)
- V. **Research** and **Innovation** (4 indicators)



DATA SOURCES

- **CIHI**
 - National Ambulatory Care Reporting System (NACRS)
 - Discharge Abstract Database (DAD)
 - National Rehabilitation Reporting System (NRS)
- **RCSN**
 - Continuous data from RSCs
 - Bi-ennial data from all Ontario hospitals through the Ontario Stroke Audit
- **MOHLTC**
 - Internal Databases – Ontario Home Care Administration System, others
- **Other**
 - Statistics Canada



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Canadian Stroke Quality of Care Study

- Acute Stroke Care
- Telestroke
- Secondary Prevention
- Rehabilitation



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Canadian Stroke Quality of Care Study: Identification of performance indicators for acute stroke care

M. Patrice Lindsay, Moira K. Kapral, Robert Holloway, David J. Gladstone, Jack V. Tu, Andreas Laupacis, Jeremy M. Grimshaw

Abstract

Background: Initiatives including regionalization of stroke care, clinical practice guideline development and quality-of-care improvement efforts are best supported using clearly defined performance measures and accurate, high-quality data sources. In Canada, there are no published consensus statements or guidelines, and consensus-based indicators to evaluate the quality of stroke care are lacking. We sought to identify a core set of quality-of-care indicators to evaluate acute ischemic stroke care in hospitals.

Methods: A Canadian expert panel was convened to select key quality-of-care measures for acute stroke using a modified Delphi process. A list of 51 potential quality-of-care indicators was compiled from 44 indicators chosen in a previous US study and others identified from a review of current stroke lit-

tem responsiveness and optimize patient outcomes after acute ischemic stroke. The best available evidence should inform these efforts, and their impact should be measured using validated, clinically relevant and empirically feasible stroke quality-of-care indicators.²⁻⁴

Research into quality-of-care measurement for stroke is in its early stages. Improving quality of care is best supported using clearly defined performance measures and accurate, high-quality data sources.⁵ Clinical trials in stroke have provided some of the needed data and established the effectiveness of a variety of interventions for acute stroke care and secondary stroke prevention, including thrombolysis in appropriate patients, care on an acute stroke unit, antithrombotic agents for ischemic stroke and carotid endarterectomy for carotid stenosis.⁶⁻¹⁰ These trials were in

Lindsay P. et al, CMAJ • FEB. 1, 2005; 172 (3)



Box 2: Final indicators for evaluating optimal acute ischemic stroke care selected in the Canadian Stroke Quality of Care Study*

- Patients with acute stroke should be managed on a designated stroke unit
- All patients with acute stroke should be evaluated for tPA eligibility
- NINDS inclusion/exclusion criteria should be applied for patient selection for thrombolysis
- tPA best-practice treatment protocol should be followed for tPA administration (e.g., AHA, AAN)
- All eligible patients should receive tPA, and within 1 h of arrival at hospital†



Box 1: Domains of potential quality-of-care indicators (no. of indicators) for evaluating acute ischemic care in hospitals

- Organization of stroke care delivery (2)
- Thrombolytic management (9)
- Emergent evaluation of acute ischemic stroke (8)
- Emergent supportive care and treatment of acute complications (7)
- Prevention of complications (12)
- Diagnostic testing in acute ischemic stroke (1)
- Secondary prevention (6)
- Nontechnical aspects of care (1)
- Telemedicine stroke (“TeleStroke”) care* (5)

*Not included in the original US study.²⁰

51
evidence-based
indicators



23
final indicators



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Ontario Stroke Audit

- stroke/TIA patients seen in the ED of 153 Ontario's acute care hospital sites
- 3,388 patients selected randomly from 25,905 patients in the DAD and NACRS databases with stroke /TIA (ICD-10 codes)
- IRB approval from all Ontario acute care hospitals
- charts abstracted using RCSN software by trained nurse abstracters
- chart audits complete for Apr 2002 - Mar 2003
- will provide **population based data** on stroke care in Ontario

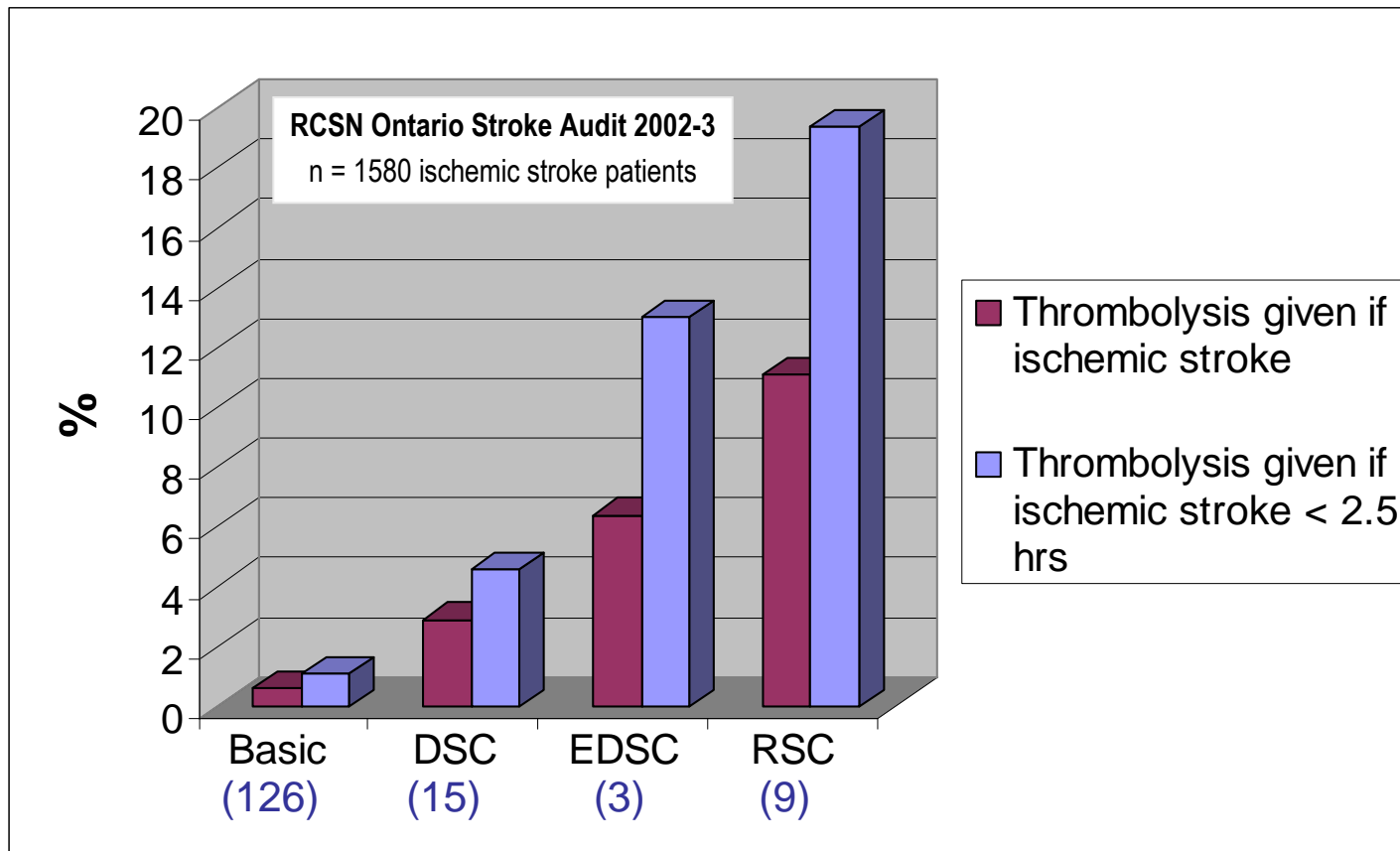


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Thrombolysis Rates by OSS Hospital Type



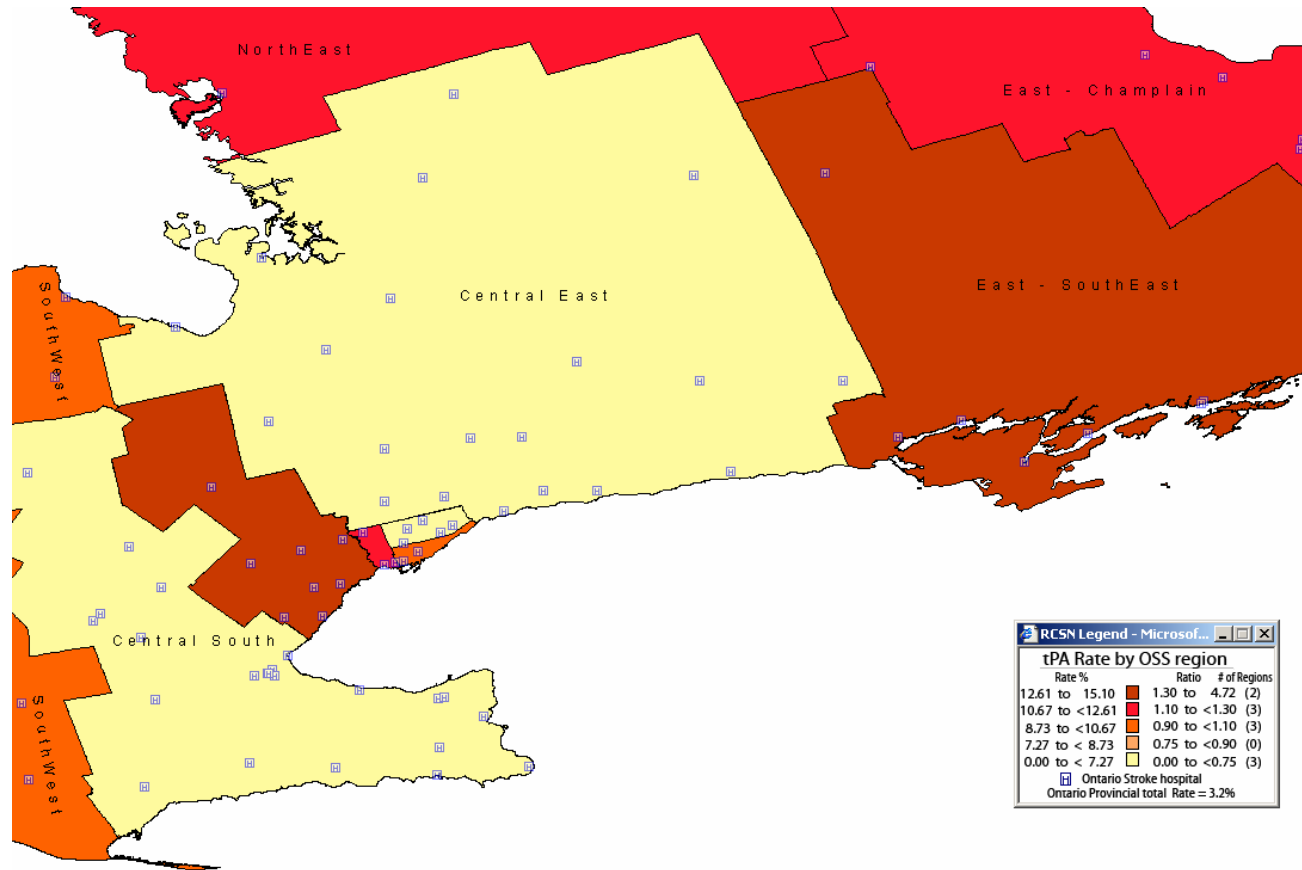


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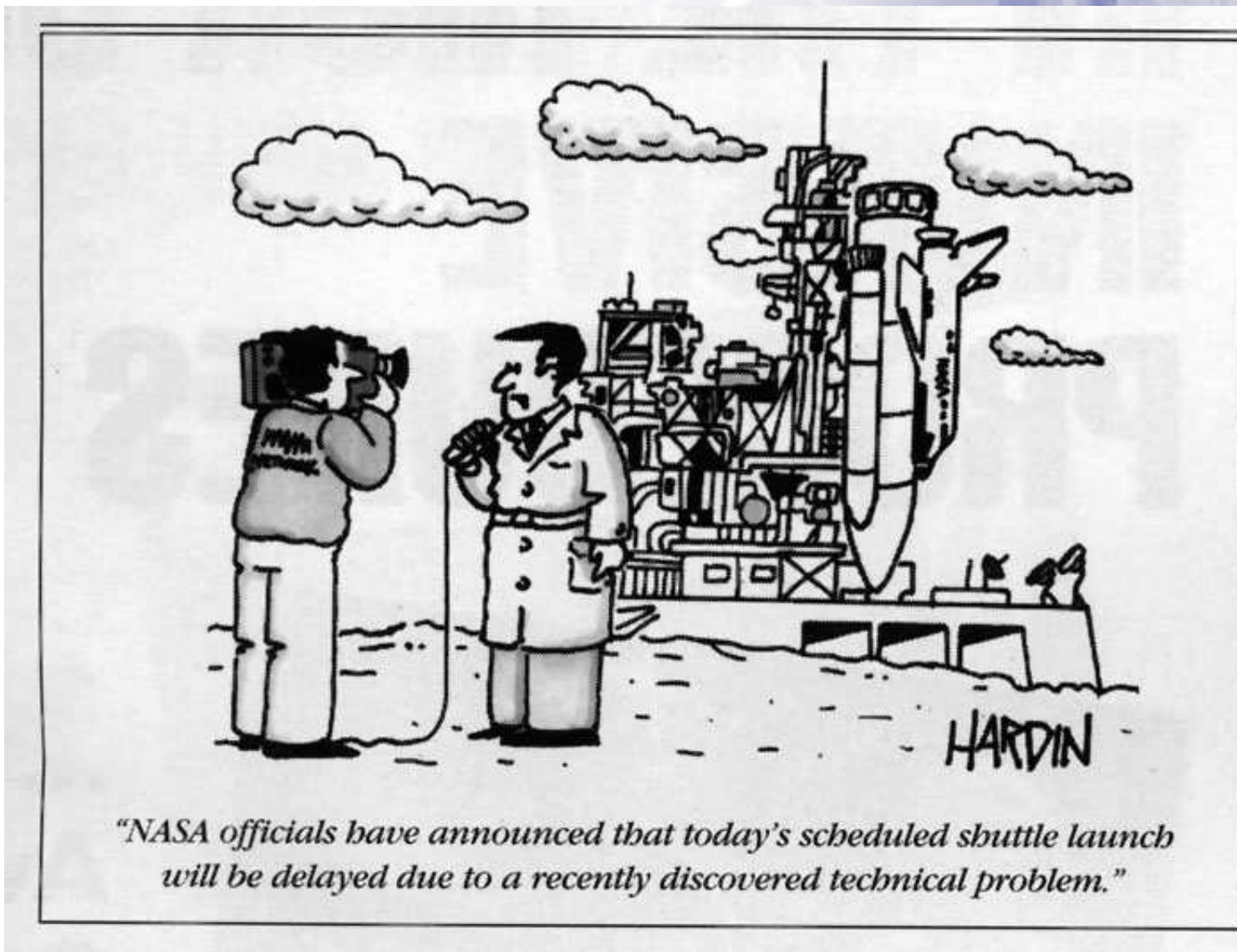
tPA Rates by OSS Region





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Three (Four) Ideas that Didn't Work

- Requiring patient consent for data collection
- Saying that your system covers the continuum of care but giving rehabilitation and community care less emphasis
- Using clinical champions / “change agents” that do not have the knowledge or experience of working with administrators and government
- Engaging government too late
 - going to government without an economic stroke model



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What makes the CSS unique? Why will it succeed?

- Commitment and leadership of the non-profit partners
- Commitment to make this true partnership with governments, other partners and stakeholders
- National strategy is there to support provincial/territorial strategies – where the rubber meets the road
- The opportunity to truly bridge the gap from research to policy and practice
- The opportunity to have practice inform further research
- Integration at all levels: best practices integrated into training and development programs with ongoing monitoring and evaluation
- Commitment to work with integrated chronic disease prevention initiatives – recognizing common risk factors



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*“We know what to do about stroke
and it’s time to do it.”*

Debra Lynkowski

Director, Canadian Stroke Strategy



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