



BC Stroke Strategy

Presentations to the Canadian Stroke Congress

Abstracts

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1.0 Rapid Tia Units—How Fast Is Fast Enough?

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Background:

Rapid TIA clinics are proliferating but no data identify how “rapid” these must be. The SRAU is a rapid access, ambulatory TIA unit serving Vancouver Island (VI). Accessibility has varied since opening in 2005. This study relates speed of SRAU access to stroke admissions into south VI hospitals. Methods: Historical cohort study comparing SRAU performance (annual median TIA-to-Unit time) to annual stroke hospitalizations (ICD-10 discharge codes) from 01/2005-12/2008. Linear regression analysis between hospitalizations and performance time. Stroke admissions for 3 years prior to SRAU also collected as baseline. Data sources: SRAU stroke guidance system database, Vancouver Island Cerner database.

Results:

Total patients from south island 2608. TIA/mild stroke 57%. TIA-mild strokes/1000 population/year 0.8 - 1.1 (85% of EXPRESS trial treatment penetration). Annual median TIA-to-Unit time 2.3 – 4.0 days. Annual stroke admissions 1.42 – 1.70/1000, with 1.66 – 1.75 prior to SRAU. Hospitalized stroke fatality rate unchanged. Stroke admissions were proportional to SRAU wait-time with 0.15/1000 excess strokes/24 hr delay (R^2 0.95, p 0.026). Intercept of 1.06/1000 is equivalent to a theoretical ARR of 38% from baseline with no delay. Conclusions: If causal this would predict an 8.7% absolute reduction in stroke admissions per 24 hour reduction in SRAU wait-time. Wait-times over 4 days may be associated with worsening from previous standard care.

2.0 The British Columbia Stroke Strategy (Bcss): A Comprehensive Measurement And Evaluation Plan

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Background:

The BCSS developed a comprehensive evaluation strategy at the outset of implementation, to track and report on any improvements in care. Methods: Various evaluation strategies were employed for the BCSS. The literature was searched for performance measures relating to stroke and TIA care. Using consensus methods, clinical, administrative and measurement experts were consulted to define B.C. specific indicators. An administrative database registry (The B.C. Stroke Registry) was developed and refined. Both quantitative (structure, process and outcome measures) and qualitative (care provider surveys) methods were employed to measure the impact of the BCSS priority initiatives.

Results:

A total of 22 performance measures were agreed upon, with 5 key indicators acting as the core reporting measures, with proposed benchmarks up to 2012. The Registry was refined and adopted as the primary data collection vehicle. From the Registry, incidence, prevalence and conversion rates have been reported. Two of the BCSS priority initiatives – TIA Rapid Assessment and Telestroke Initiatives – had implementation assessments and initial impact evaluations. Knowledge translation is embedded with decision makers and care providers to ensure rapid uptake of data. Conclusions: A comprehensive measurement strategy can be developed to measure any improvements in care for a provincial stroke strategy.

3.0 Rapid Assessment Of Transient Ischemic Attack (Tia) Patients Through An Emergency Department (Ed) Observation Unit: The St. Paul's Hospital Tia Care Pathway

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Background:

Most stroke prevention after TIA occurs in stroke prevention clinics or private offices. Due to the very early risk of stroke after TIA and necessity for urgent evaluation, an ED observation unit is well suited to provide a secondary prevention function. Methods: The Departments of Emergency Medicine, Neurology and Radiology, St. Paul's Hospital, Vancouver, B.C., collaborated to develop a care pathway for patients who presented to the ED with symptoms of TIA. Literature on best practices and benchmarks was consulted to develop the pathway. The Diagnostic and Treatment Unit (DTU) of the ED was proposed as the primary site of care delivery. Performance measures are embedded.

Results:

The St. Paul's Hospital TIA DTU Care Pathway was launched in November 2009. Patients have initial investigations (labs, ECG), risk stratification, then admission to the DTU. All patients receive CT head and carotid imaging (CT angiogram or ultrasound) within 12 hours of admission to the ED. Patients are continuously observed; thrombolytic therapy may be rapidly administered if deterioration occurs. Neurologic consultation is performed on all patients within 24 hours of admission. Computer order entry facilitates care and outcome measurement. Conclusions: An ED observation unit provides a safe and efficient location for managing TIA patients.

4.0 Different Strokes, Same Folks: British Columbia's Acute Cerebrovascular Syndrome Registry

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Background:

Using administrative data to identify stroke and transient ischemic attack patients is often based on unlinked hospital data, resulting in incomplete information on incidence, prevalence and recurrence. Methods: The British Columbia Stroke Strategy, together with the B.C. Ministry of Health, has developed an Acute Cerebrovascular Syndrome (ACVS) Registry which links provincial-level hospitalization and physician billing data over a sixteen year period. The Registry allows for a more robust capture of incident and prevalent TIA and stroke, assessment of trends over a longer period of time, identification of conversions from TIA to full stroke (both rate and time between events) and the identification and tracking of recurrent stroke.

Results:

Preliminary results suggest that

- The age-standardized incidence of stroke in B.C. has decreased by over 20% during the last decade.
- Approximately 50% of incident TIAs and 25% of incident strokes are not hospitalized and thus missed when only hospital data is utilized.
- An estimated 10-15% of hospitalized incident stroke cases may be missed using hospital data alone, possibly due to inaccurate coding.

Conclusions: Access to long-term, linked hospitalization and physician billing data significantly enhances the accuracy of a provincial ACVS registry based on administrative data. Further validation of the registry is required. cost-effective intervention is possible, given the appropriate funding, leadership, and co- operation between regional health authorities.