Effectiveness of a New Evidence Based Triage Toolkit for Transient Ischemic Attack and Mild Non-Disabling Stroke in Northwestern Ontario, Canada

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Summary of Findings

The Northwestern Ontario (NWO) Transient Ischemic Attack (TIA) and Mild Non-Disabling Stroke (MNDS) TRIAGE Toolkit created a pathway that facilitates access to the right care at the right time in the right place in a region with urban, rural and remote communities. The Toolkit has the potential to be adapted in similar geographical areas throughout the world.

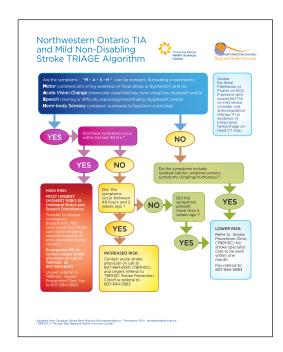
Background

A major barrier in NWO is the vast geography (size of France), limited stroke specialists/neuro-imaging/ transportation routes, sparse population (approximately 231,000¹) and remoteness of some communities.

To meet the Canadian Stroke Best Practice Recommendations (CSBPR) for the management of TIA & MNDS, clear risk stratification and a process for primary care and emergency settings was developed.

Objective

To evaluate the effectiveness of the NWO TIA/MNDS TRIAGE Algorithm in achieving the CSBPR for Outpatient Management of TIA & MNDS.²



Methods

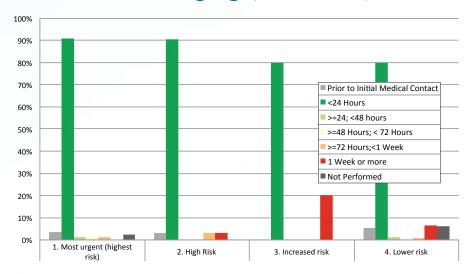
The Toolkit* was launched to targeted sites in June 2015. 556 charts were reviewed from the period of Sept 2015 - Aug 2016. Referrals utilizing the new TBRHSC SPC referral (N=281) were included in the study.

Excluded were patients that were seen in the SPC but did not utilize the new Patient Referral (N=275).

Results

Targeted results were analyzed descriptively

Time to Head Imaging (CT or MRI)



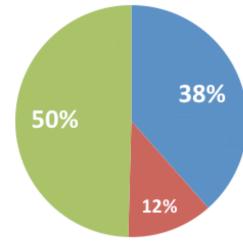
 The Highest (94.2%) and High Risk Group (93.5%) had access to **head imaging** (CT or MRI) in < 24 hr

Highest & High

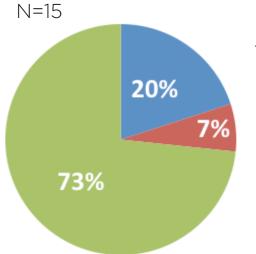


Final Diagnosis

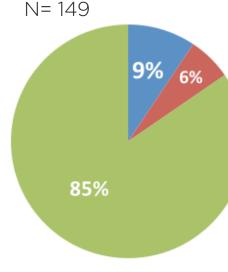
by Risk Category



Increased Risk



Low Risk



- TIA/Stroke Query TIA/Stroke
- Non-Stroke

Diagnosis within Triage Levels

Across the risk categories (Highest and High, Increased, Low) the majority of those ultimately diagnosed or queried with TIA/stroke were categorized by the algorithm as high risk (59 of 86; 69%).

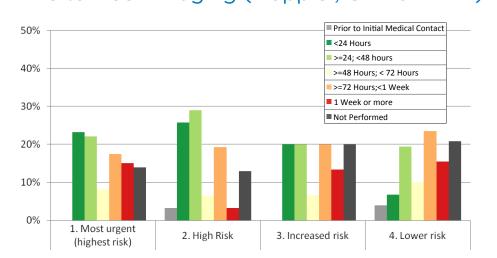
Within risk categories, 50%, 27%, and 15% of patients triaged as Highest and High, Increased, or Low risk respectively, were diagnosed or queried with TIA/stroke.

Discussion

The study findings indicate:

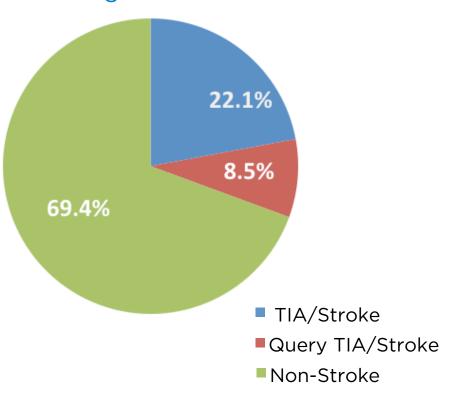
- Most patients received diagnostic investigation in acceptable timelines.
- Target times to head imaging were met. Effort to improve time to neck imaging are currently underway.
- 69% of patients were diagnosed as non-TIA/ Stroke. The literature³ indicates up to 60% of patient referrals to a SPC do not have a final diagnosis of TIA. However, the risk stratification approach presented in the CSBPR has not yet been proven in clinical trials⁴; therefore comparisons to the findings of this study are not available.

Time to Neck Imaging (Doppler, CTA or MRA)



• 48% of patients determined as Highest or High Risk had neck imaging (Carotid doppler, CTA, or MRI) completed in < 48 hours of initial contact

Final Diagnosis



• 30.6% of the patients were ultimately diagnosed with a Stroke, TIA, or Query TIA/Stroke.

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References: