NORTHERN NEW ENGLAND CLINICAL & TRANSLATIONAL RESEARCH NETWORK

IMPACT PROFILE

Advancing Rural EMS Stroke Care



The Challenge

Emergency medical services (EMS) personnel play a critical role in identifying and responding to patients with suspected stroke. When recommendations for stroke treatment evolved after a new technique was developed, the role of EMS changed. In addition to identifying if there was a stroke, they had to determine its severity. **How well could the new recommendations be incorporated into rural EMS stroke protocols?**

The Approach

The Field Assessment Stroke Triage for Emergency Destination (FAST-ED) scale was developed as a tool to evaluate how severe a stroke is. Specifically, it aims to identify large vessel occlusion strokes (LVOS) which, thanks to medical advancements, can now be reversed if treated with in a short window of time.

Dr. Daniel Wolfson, Vermont State EMS Medical Director and emergency medicine physician at UVM Medical Center, wanted to test how effective the FAST-ED scale was in rural, multi-state EMS systems.

1. Connect with the NNE-CTR for pilot project funding and research support
2. Create a unified northern New England pre-hospital EMS stroke protocol and ensure EMS clinicians had training on the new FAST-ED scale and guidelins for diverting patients to a hospital capable of reversing stroke symptoms for LVOS
3. Study the effectiveness of FAST-ED across rural EMS systems, including how well the tool predicted LVOS and appropriateness of transporting patients to the right hospital

Research Highlights

- The FAST-ED tool accurately predicted large vessel occlusion stroke (LVOS).
- The FAST-ED tool accurately predicted appropriateness of transferring to one of the hospitals that is thrombectomy-capable.

The Impact

Because of this work, the team demonstrated that EMS can effectively use FAST-ED scores in a rural, multi-state region to reliability identify patients at risk for large vessel occlusion stroke and improve patient outcomes by diverting to the appropriate hospital.

Additionally, the Northern New England Unified Stroke Protocol group was formed for this project. Their work **continues to support EMS practices** in Vermont, Maine, and New Hampshire to ensure rural residents receive the most appropriate care.

Key Benefits

Implementing an EyeNuk AI DR camera provides ***clinical***, ***community***, ***economic,*** and ***policy*** benefits.

Clinical ▸ Procedures & Guidelines: Vermont, Maine, and New Hampshire have coordinated, up-to-date EMS protocols for responding to patients with suspected strokes, resulting in the most appropriate care and improved health outcomes

Community ▸ Health Promotion: Potential to reverse stroke symptoms and avoid more severe outcomes for rural northern New England residents

Economic ▸ Financial Savings & Benefits: Potential to reduce the social and economic costs for long term care and quality of life

Policy ▸ Advisory Activities: Formation of the Northern New England Unified Stroke Protocol group which continues to convene and make recommendations

Policy ▸ Policies & Legislation: Adoption of new EMS protocols around FAST-ED scores and diversion recommendations

The Research Team

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