HOW FAST CAN WE BE?: INTERDISCIPLINARY COLLABORATION ON IMPROVING STROKE METRICS USING DATA AND ANALYTIC-BASED METHODOLOGY

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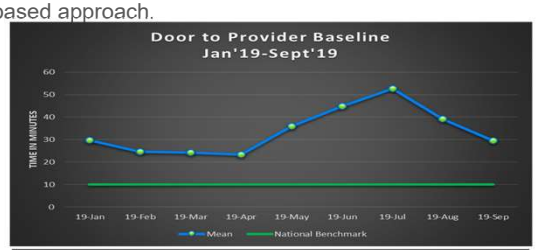
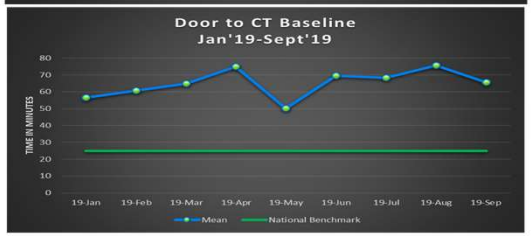
Background & Significance

- The UVMHN-Champlain Valley Physicians Hospital Stroke Committee consistently aims to implement the newest evidence-based best practices into the care of stroke patients, in order to achieve the best outcomes for this population.
- Through evaluation of core stroke measures, door to provider and door to CT times were specifically targeted for further improvement.
- Decreasing these time-based metrics leads to shorter door to needle times for thrombolytic therapy administration, which in turn results in improved outcomes.
- The stroke team aimed to improve these two core stroke measures through design and implementation of a new stroke triage/assessment protocol with an interdisciplinary team-based approach.





Clinical Question

Can an interdisciplinary team-based approach to stroke care in the Emergency Department improve door to provider and door to CT times to meet evidence-based best practice guidelines?

Evidence

- A literature search was conducted to review the evidence related to a team-based, interdisciplinary approach to stroke protocol development and implementation as well as its impact on stroke metrics.
- The evidence suggested that standardized protocols utilizing an interdisciplinary team to evaluate, assess, and treat stroke patients can lead to significant improvements in time metrics including decreased door to provider and door to CT times.

Intervention Implementation

- A team-based protocol (called a "FAST alert") was created to assess, triage, and manage suspected stroke patients.
- Input from a diverse interdisciplinary team of clinicians and staff was utilized during protocol development.
- Education about the new process was done throughout the organization in the two months before go-live.
- Stroke team members were present at monthly staff and provider meetings to provide data and updates as well as receive feedback about the protocol.
- FAST alert case reviews were also done to determine areas for revision and improvement.

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SUBJECT: *Rapid Identification of the Patient with Possible Stroke (FAST Alert)* — Section: Generic

FAST Alert Response Roles and Responsibilities — Attachment

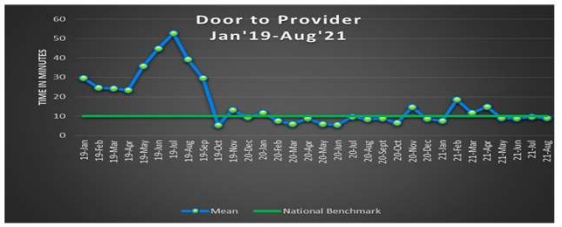
Patient W/Neurological Changes & Last Known Well Time <24 hours??

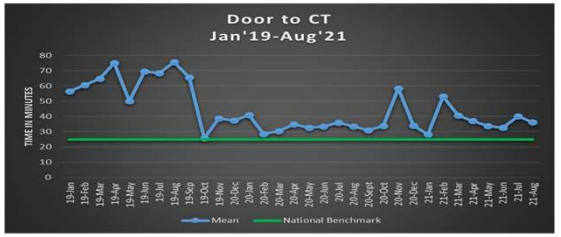
Call FAST Alert 6222

Inpatient	EMS/ED Triage
ICU RN- arrives and assesses pt. w/primary RN, collaborates with bedside RN and MD and prepares to take pt. to CT scan. Facilitates NIH Stroke Scale.	**EMS**- s/s stroke and last known well time (LKWT) less than 24 hours tell Triage RN to activate FAST Alert. Obtain FS glucose. 18 gauge AC IV.
CA- Obtains FS and prepares pt. as directed for transport to CT. Draws stroke panel as delegated.	**Triage/Charge RN**- activate FAST Alert 6222 per EMS indication or pt. presentation with yes to BEFAST. Place pt. on weighing stroke stretcher and proceed outside Rm 3 for rapid MD assessment and orders.
Primary RN- communicates to attending provider: onset, symptoms, neuro VS, FS glucose and LKWT. Requests Stroke Panel Inpatient and Brain Stroke CT and CTA Head and Neck. Calls pharmacy at 7106 with current measured wt.	**CA**- Obtains FS and prepares pt. as directed for transport to CT. Draws stroke panel as delegated. Bring Telestroke Camera to pt. room.
Transport/PCC (off shift)- brings Specialist on Call (SOC) cart to room and then brings stretcher for transport to CT or arranges for items to be brought.	**Transport/PCC (off shift)**- brings Teleneurology cart to room and then brings stroke stretcher for transport to CT or arranges for items to be brought.
Recorder- begins documentation on FAST alert flowsheet and assists with FAST alert flow for timely assessments and interventions.	**ED MD**- Respond to Registration area outside ED Rm 3. Assess pt., including NIHSS, and place Stroke Panel orders as appropriate.
IVT- Responds as possible and ensure 18 gauge IV in the AC and Stroke Panel labs drawn.	**Registration**- Respond to registration area outside ED Rm 3 and quick reg patient.
CT Scan Tech- hold table to perform STAT CT as ordered.	**ED RN**- Assist with rapid evaluation of pt. and begin NIH Stroke Scale with provider. Call pharmacy at 7106 with current measured wt.
Stroke NP- Responds as available and assists with NIH stroke scale and FAST alert process.	**Recorder**- begins documentation on FAST alert flowsheet and assists with FAST alert flow for timely assessments and interventions.
Stroke RN Coordinator- Responds as available and assists with NIH stroke scale and FAST alert process.	**IVT**- Responds as possible and ensure 18 gauge IV in the AC and Stroke Panel labs drawn.
Attending Provider- Respond and assess pt. Place Stroke Panel, Inpatient orders. Order Telestroke Consult as appropriate.	**CT Scan Tech**- hold table to perform STAT CT as ordered.
	Stroke NP- Responds as available and assists with NIH stroke scale and FAST alert process.
	Stroke RN Coordinator- Responds as available and assists with NIH stroke scale and FAST alert process.

Evaluation

Chart abstraction, metric review and analysis, staff interviews, and post go-live survey were the methods of data gathering utilized.





Results

This is an ongoing project. Since implementation, there has been an increase in the percent of patients meeting a door to doctor time of less than 10 minutes. There has also been an increase in the percent of patients meeting a door to CT time of 25 minutes or less. There has also been a decrease in the average door to provider and door to CT times.

Significance/Conclusion

Detailed tracking of metrics, feedback, and check ins with staff involved, and sharing of data, were all linked to subsequent improvement in reduction of door to provider and door to CT times. Establishing a routine feedback mechanism and visualizations of the goals in beneficial.

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