THE UNIVERSITY OF CHICAGO
UChicago Medicine

Center for Healthcare Delivery Science and Innovation

AT THE FOREFRONT
UChicago Medicine
Ingalls Memorial

Streamlining Stroke Alert Standard of Care to Improve Patient Outcomes 100% of the Time

Authors: Karen Stanford MBA, BSN, RN, NEA-BC & Kathy Gardner, BSN, RN

Problem

In 2006 Ingalls was designated Certified Primary Stroke Center by Joint Commission, and later became the first designated Primary Stroke Center by DNV in 2009. Despite such, Ingalls faced inconsistent stroke practices in the Emergency Department, worsened by staff turnover, the integration of a new EMR system, and a high volume of agency staff with a 75% vacancy rate, leading to challenges in education provision. The Stroke committee noted that failure to meet "Get With The Guidelines" standards will impact patient outcomes. One of the primary challenges Ingalls has to mitigate are resource shortages since there are limited beds with a weighted scale and an inconsistent supply of medication administration pumps.
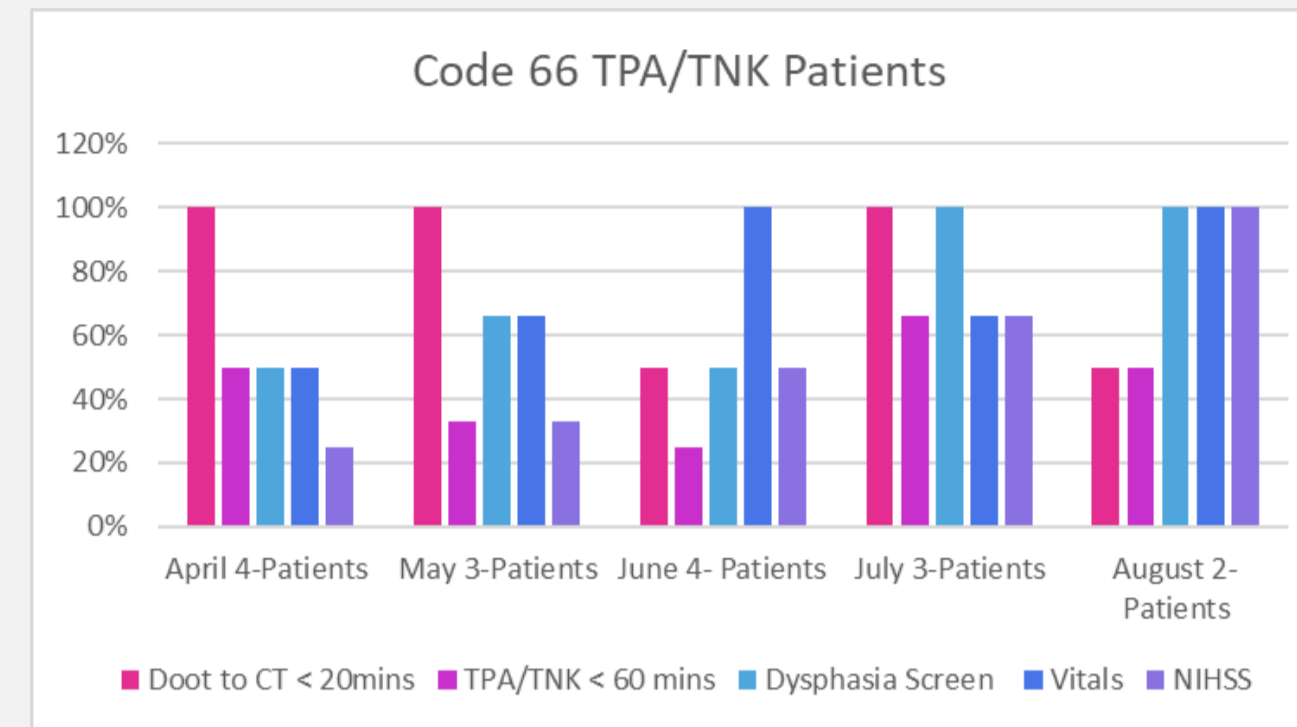
Streamlining standard of care for Ingalls is a priority to ensure quality, safe care. Each year, nearly 800,000 Americans experience a stroke, with the risk of a recurrent stroke being highest immediately after the initial event and decreasing over time. Approximately 25% will have another stroke within 5 years, and 3% will experience a second stroke within 30 days of their first one.

Goal

Our goal is to adhere and exceed the guidelines to maintain stroke designation, as well as ensure the delivery of standardized care, provide the best opportunity for patient recovery and positive outcomes.
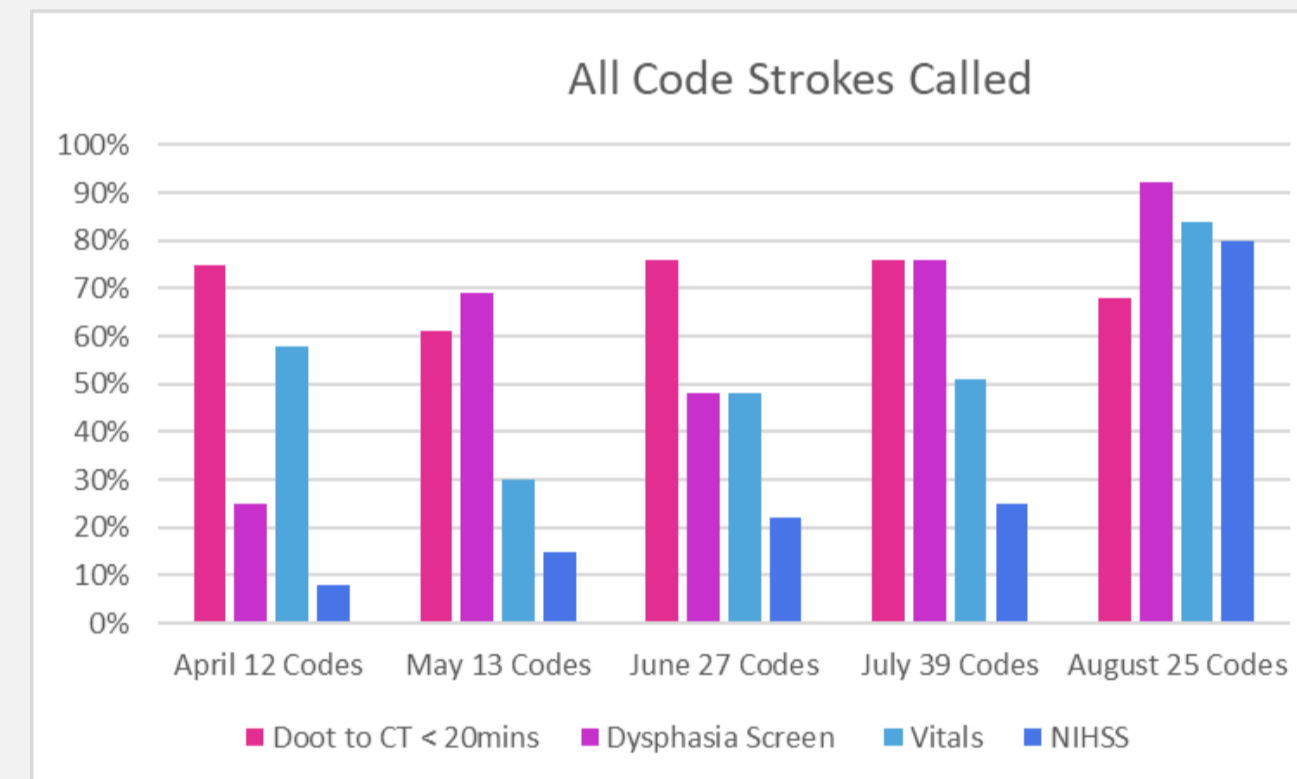
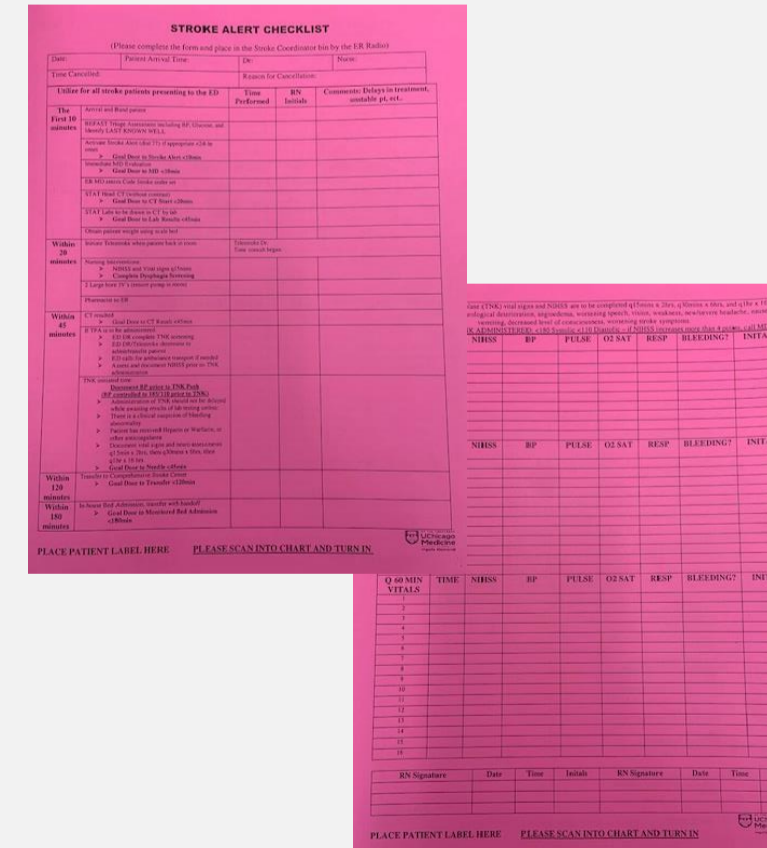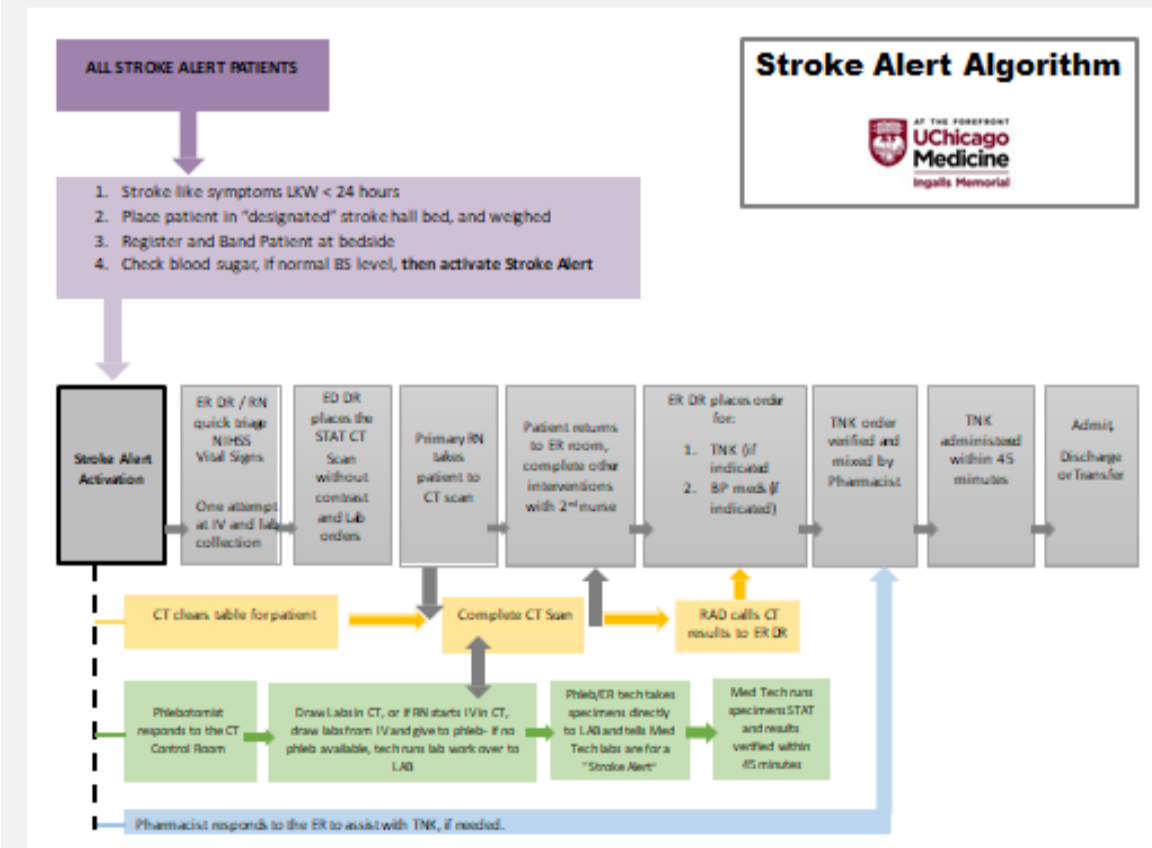| Activity	Goal
Door to MD evaluation	10 minutes
Code 66 to Tele-Stroke connection	20 minutes
Door to CT Head result time	45 minutes
Door to TNK administration	45 minutes 50% of the time
Door to TNK administration	60 minutes 75% of the time
Door to Transfer time	120 minutes
Door to Admit time	180 minutes
Dysphagia Screen	Completed prior to PO medications

Intervention Design

Figure 1: Stroke Alert Algorithm

Figure 2: Stroke Bed

Figure 3: Stroke Alert Checklist

During implementation, the Stroke Alert process was evaluated, changed and strategically re-educated to staff to hardwire the new process. Notable changes included:
- addressing the absence of dysphagia screening in Epic
- designating an ED bed specifically for Stroke with needed resources readily available

Key players included the Director of Emergency Services & Urgent Aids, the ED Patient Care Manager, APCMs, as well as collaboration with stakeholders from the Pharmacy, Lab and the Inpatient units. Real-time coaching was provided during Code 66(Stroke Alert) incidents. PDSA, multidisciplinary education sessions and success audits were implemented to evaluate and track change. Build and integration of stroke order sets into the EHR was also prioritized to complement the new process.

Results to Date

Code 66 TPA/TNK Patients

Legend: Doot to CT < 20mins, TPA/TNK < 60 mins, Dysphasia Screen, Vitals, NIHSS

All Code Strokes Called

Legend: Doot to CT < 20mins, Dysphasia Screen, Vitals, NIHSS

For the intervention, the ED Team streamlined the Stroke Process to follow the new stroke algorithm, re-educated staff in real time and post audits.

Over the course of 5 months, Code 66 TNK cases and All Code Stroke cases were audited. Even with a low volume of TNK administration, we saw an upward trend in Dysphagia Screening, Vitals, and NIHSS scores being documented.

Next Steps

Our primary focus is to continue enhancing patient care and providing the team with clear, consistent, and effective standard procedures. This includes the integration of stroke order sets into EPIC and an ongoing commitment to data review and process optimization, with the ultimate aim of achieving a 100% success rate.

Acknowledgements