



Midsize Hospital in Tennessee

About the Hospital

This 430-bed hospital has a robust neuro service line that has been working on its door-to-needle (DTN) performance and optimization of stroke care across the continuum. In addition to quicker DTN times, the team also wanted to ensure that its thrombectomy cases had favorable revascularization turnaround times.

The Problem

During 2022, there was variation in the DTN times. The stroke program team evaluated the current stroke flow process to identify opportunities for improvement. Their goal was to adopt nationally recommended best practices and time targets. Some of these issues stemmed from a lack of pre-arrival notification from EMS, prolonged time spent with patients in the ED prior to imaging, ease of obtaining/administering thrombolytic, and early collection of accurate patient weight.

The Result

Based on the hospital's current stroke workflow, the following key strategies were identified:

- Training/case-specific feedback was given to the nursing staff with a focus on early recognition of stroke symptoms.
- EMS pre-arrival notification with concurrent TeleSpecialists notification for any BEFAST+ case.
- Consistent use of a weighted stretcher.
- Reduction of time spent in the "pit stop" prior to radiology transfer.
- Additional provider coverage (mid-level neuroscience nurse) to expedite the stroke alert process (information gathering, medications, past medical history, and potential thrombolytic contraindications).
- Easily accessible Pyxis located in the CT area.

In addition to a reduction in DTN average, this hospital also noted a 53% reduction in DTN median, 17% increase in DTN cases < 30 minutes, and an 8% increase in EMS activations < 10 minutes between Q4 2023 and Q1 2024.

The Takeaways

- ✔ The hospital wanted to improve their stroke flow process to align with nationally recommended best practices and time targets.
- ✔ Key improvements included staff training for early stroke recognition, EMS pre-arrival notifications, using a weighted stretcher, and minimizing pre-radiology delays.
- ✔ The hospital achieved a 53% reduction in median DTN time, a 17% increase in cases treated within 30 minutes, and an 8% increase in rapid EMS activations.

DTN Average 2022 - Current Month 2024

