

Case Study

Baylor St. Luke's Medical Center Transforms Care Delivery with Life-Saving Outcomes



Overview

Located in Houston, Texas, Baylor St. Luke's Medical Center (BSLMC) is a 700-bed hospital, internationally recognized as a leader in research and clinical excellence. They are the first hospital in Texas and the Southwest to be designated as a Magnet hospital in nursing excellence, awarded for four consecutive years.

In order to reduce treatment times and deliver faster care, BSLMC began a new strategic initiative to improve the quality of care and outcomes for stroke patients.

Challenge

"Stroke is the number one cause of morbidity and disability in the US, accounting for 20-30% of expenditures," said Dr. Chethan Rao, Section Head of Vascular Neurology and Neurocritical Care at BSLMC.

Door-to-needle time is the time from the presentation of a patient with stroke symptoms at the hospital ER to the start of intravenous treatment with tissue plasminogen activator (tPA). Identifying and treating stroke patients with tPA as early as possible is paramount to providing timely care to patients. Prior to the strategic initiative, BSLMC's average length of time to



St. Luke's Health



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Dr. Chethan Rao

Section Head of Vascular Neurology and Neurocritical Care, Baylor St. Luke's Medical Center (BSLMC)

intervene through tPA was 62 minutes, which is slightly behind the American Heart Association's guideline recommendation.

"Every minute a stroke patient goes without blood flow to the brain, patients lose two million neurons," says Dr. Rao. "This has a significant impact on the brain and directly affects their ability to recover and rehabilitate."

Solution

BSLMC needed a solution that would provide cohesive collaboration between all team players within the system. They recognized that improving communication and clinical workflows would help them rapidly assess stroke patients and deliver life-saving treatments. BSLMC adopted the TigerConnect Clinical Collaboration Platform with Roles functionality as their main communication platform and integrated it with Decisio, a clinical decision support tool, to enable real-time stroke alerts and address these main goals:

- Reduce treatment time: In order to decrease the "door-to-needle" time, BSLMC set incremental time reduction goals at each phase of the improvement initiative. Phase 1 was to achieve 45 minutes and Phase 2, with further process changes, was 30 minutes.
- Improve provider communication: Communication was key in reducing treatment time and connecting providers with acute stroke care facilitators in the moment.

"We wanted not only a communication tool, but an artificial intelligence tool to constantly remind us," says Dr. Rao. "We wanted a reminder to go out for every single key player of stroke service to alert their

role on a timely basis. The right people need to be alerted at the right time."

BSLMC deployed the TigerConnect Clinical Collaboration Platform and API integration with Decisio for real-time stroke alerts to 25 stroke team members across ER, Neurology, and Imaging departments including Residents and Fellows. From the moment a stroke order is set in the ED, a Decisio alert triggers an automated text from TigerConnect to the established stroke team Roles including the Neuro Transfer Center On-Call, Stroke Fellow, ED Charge Nurse, Stroke NP, Stroke Resident, and Stroke Coordinator. An alert is continuously distributed to the stroke team in 10-minute increments.

These alerts have helped BSLMC attune their processes and focus on the moment care delivery was needed most. In addition to reducing treatment and reaction time, the live feedback helps them quickly resolve issues and prevent them in the future.

Results

BSLMC's initiatives for process improvement began in 2019. Upon the second wave of the COVID-19 pandemic, there were shortages in personnel as well as challenges in the ability to address stroke patients on time. Protocols had changed and processes were becoming more time-consuming.

Despite these challenges, BSLMC continued process improvements and achieved excellent success:

- 50% reduction in door-to-needle time
- Estimated 75 yearly stroke lives saved*
- \$600K+ estimated reduced readmissions cost savings*

* Man, S., Xian, Y., Holmes, D., Matsouaka, R., Saver, J., Smith, R., Bhatt, D., Schwamm, L. & Fonarow, G. (2020) Association Between Thrombolytic Door to Needle time and 1 year Mortality and readmission in patients with acute ischemic stroke. JAMA; 323(21): 2170-2184

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- Advanced communication between stroke team
- Improved chances of recovery and rehabilitation

Using the TigerConnect Clinical Collaboration Platform with Roles helped BSLMC deliver more efficient care. The team was able to provide the backup support needed for healthcare providers through real-time communication within the platform.

"TigerConnect has worked incredibly well with us to help our ability to deliver the best care to our patients," says Dr. Rao. BSLMC continues to use cases for TigerConnect. As they further analyze processes and data, they will continuously improve patient outcomes and decrease treatment time.

About TigerConnect

TigerConnect transforms healthcare with the industry's most widely adopted clinical collaboration platform – uniquely modernizing how doctors, nurses, care teams, patients, and data connect. With solutions spanning care communication, patient engagement, scheduling, alarm notifications, nurse call, and more, TigerConnect accelerates productivity, reduces costs, and improves patient outcomes, safely and securely. Trusted by more than 7,000 healthcare entities for user-friendly yet enterprise-ready solutions, TigerConnect delivers 99.995% verifiable uptime for more than 10 million messages each day.

Contact us

To schedule a demo or learn more about how TigerConnect can improve clinical communication efficiency for your organization, [contact us](#).