

Longview Regional Medical Center Achieves Record STEMI Treatment Times

Learn how one hospital is reducing door-to-reperfusion times by activating STEMI care sooner for patients arriving by ambulance.



THE PROBLEM

Longview Regional Medical Center (LRMC) has long had a well-designed and fully functioning process for identifying and rapidly treating STEMI patients. The hospital was meeting its goal of keeping door-to-reperfusion times under 60 minutes; as a result, patient outcomes were generally very good. Despite their satisfactory performance, the teams at LRMC believed they could reduce their treatment times even further to improve patient outcomes.


“Our EMS partners work so hard,” said Brian Hopkins, RN, the hospital’s Director of Emergency Services, “and we were seeing delays in time-to-treatment in the ER because the process to access and share field EKGs was flawed.” The LRMC team took a critical look at its process and determined that improving communication between EMS crews, emergency department staff, and cardiology teams would make a big impact.

EMS crews were able to transmit ECGs to an emergency department physician, who would review them and determine whether to activate the STEMI team; however, the process was not seamless. At times the transmission was never received at the hospital, and when it was, it arrived via fax—meaning the print-out could easily be misplaced or lost, and sharing it quickly with cardiology teams was not possible unless they happened to be in the emergency department.

As a result of these and other issues with the process, the number of STEMI activations made prior to patient arrival at the hospital was significantly lower than it could have been. The inability to effectively and efficiently transmit an ECG and activate STEMI from the field was costing LRMC valuable time.



THE CLIENT

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Longview Regional Medical Center serves a rural northeast Texas community, about two hours east of Dallas and an hour west of Shreveport, Louisiana.

BACKGROUND

The hospital is an accredited percutaneous coronary intervention chest pain center and Joint Commission Certified Primary Stroke Center. Despite meeting their goal times for STEMI treatment, the teams knew they could achieve even better outcomes for their patients.

HIGHLIGHTED RESULTS

- ▶ Reduced door-to-reperfusion (DTR) time for all STEMI patients by 13.4% in first year.
- ▶ EMS transported patients DTR time decreased by 34% in first year.
- ▶ Time continued to decrease, with a record time of just 17 minutes door-to-balloon time!

THE SOLUTION



The team at Longview Regional Medical Center knew that to improve their performance, they needed to start by improving their process. To do so, they needed a simple and reliable way to consistently transmit the ECG from the field to the hospital so they could better prepare for incoming STEMI patients. To meet those needs, the team chose to implement Pulsara, a healthcare communication platform that connects teams across organizations.

With a shared vision between LRMC and key stakeholders for improving patient care and outcomes the team built a new process where the entire care team could communicate clearly and easily via Pulsara, shaving precious minutes from the clock and eliminating communication errors during patient hand-offs.

Today, EMS crews have a rapid and reliable way to activate a STEMI sooner by capturing critical patient information, including 12-lead ECGs, and alerting the hospital – all within the platform. The emergency department physician can quickly review the information before activating the cardiology team. Each member of the cardiology team receives the notification and can access the information, allowing them to prepare the catheterization lab prior to the patient arriving at LRMC, expediting treatment and preventing ED crowding.



THE RESULTS

Only a year after implementing Pulsara, LRMC had reduced door-to-reperfusion time for all STEMI patients by 13.4% (From 59.7 minutes in the year prior to implementing Pulsara to 52.2 minutes). As anticipated, the largest reduction in door-to-reperfusion times was among patients transported by EMS, from 56 minutes to just under 40 minutes (a 34% reduction) in year one when using Pulsara.

Times continued to decrease in the second year; the average time to reperfusion for STEMI patients brought to LRMC by EMS using Pulsara is now an impressive 36 minutes after arriving at the hospital.

LRMC's efforts to improve STEMI treatment processes have paid dividends to those who matter most—the patients for whom these decreases in treatment time mean better outcomes and fewer complications. For example, in one recent case, the teams recorded a speedy door-to-balloon time of just 17 minutes.

“With conditions like STEMI, every second makes a difference,” said Brittney Nelson, RN, Client Services Manager at Pulsara. “We are thrilled when teams who are struggling with high treatment times are able to turn it around for their patients. But in cases like LRMC's, it's perhaps even more inspiring. They were already good, but wanted to be great, and it goes to show that settling is not an option in time sensitive emergencies.”

Despite their impressive improvements, the LRMC team isn't stopping there. They plan to work with EMS to develop protocols that allow crews in the field to bypass the emergency department and take STEMI patients directly to the cath lab to further reduce first-medical-contact-to-reperfusion time. They are also working with EMS to implement other Pulsara modules, including stroke, trauma and sepsis in hopes of reproducing their achievements with STEMI cases in other conditions.

“Effective communication plays such an important role in delivering high-quality care in time-sensitive emergencies,” says Michael Dabreu, RN, Stroke and Chest Pain Coordinator for Longview Regional Medical Center. “Pulsara improves our communication and drives improvement.”

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