

ST. BERNARDS MEDICAL CENTER

Arkansas Stroke Team Improves Sub-60-Minute Door-to-Needle Rate by an Average of 48%



St. Bernards Medical Center is a 381-bed acute-care hospital in Jonesboro, Arkansas, and a regional leader in emergency care and behavioral health services.

Due to its commitment to excellence in stroke care, the St. Bernards stroke team holds an AHA Gold Plus Stroke rating and the Advanced Primary Stroke Certification from The Joint Commission.

KEY RESULTS

Since engaging consistent Pulsara usage for stroke cases in early 2023, St. Bernards has seen impressive improvements to treatment times including:

- ▶ Reaching the 60-minute door-to-needle benchmark 48% more often on average
- ▶ 30-minute door-to-needle time met in an average of 43% of cases,
- ▶ Record DTN time of 18 minutes

THE CHALLENGE

St. Bernards' stroke team has long held treatment time reduction as a top priority, but consistently achieving low door-to-needle (DTN) times remained a difficult benchmark.

"We could see that we needed to work on improving our door-to-needle times. That starts with reducing door-to-CT times, which can be a challenge," said Joanne Sullivan, RN, SCRNP, ASC-BC, CPAHA, Stroke Program Coordinator.



While Arkansas provided Pulsara to facilities across the state in 2020, the platform was primarily used by St. Bernards' cardiology program for STEMI alerts. The ER was still receiving stroke activations through phone calls, with limited possibility for early assessment, coordination, and CT preparation.

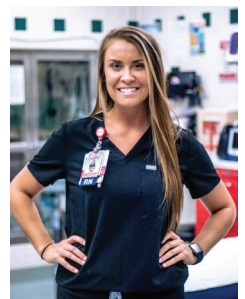
As the team honed in on getting average thrombolytic treatment times below

45-60 minutes, it became clear that communication and EMS to ED workflows needed to be refined.

THE SOLUTION

After seeing [success with consistent Pulsara usage in the STEMI program](#), St. Bernards made a decisive move in 2023 to prioritize using Pulsara for stroke care. The initiative brought together EMS, emergency department RNs, CT teams, and neurologists with a shared focus on efficiency and communication.

"Everyone was on board because they had realized how well it had worked with our STEMI program," said Brittney Yancy, RN, ED Stroke Coordinator. "We have a really competitive ER, so once we tell our nurses that we want to improve our stroke program, they want to jump in and get those good door-to-needle times."



By adopting Pulsara consistently across the care timeline, St. Bernards enabled earlier stroke alerts from EMS, pre-arrival coordination for CT, and faster team mobilization. The stroke team also leveraged Pulsara for creative improvement initiatives, including:

- ▶ Using pivot nurses and staged RNs to identify and triage walk-in stroke patients as early as the ED lobby, followed by internal Pulsara activation.
- ▶ Posting EMS Pulsara activation stats in the ambulance bay to encourage friendly competition and consistent alerts among EMS partners.

“Back in the day EMS was just giving us a telephone call... and I think what helps us the most is that they’re activating Pulsara and we can still communicate with them,” said Yancy. “It’s not just a one-time phone call and done.”

“It really helps everyone communicate in an effective way, without having to send multiple texts or multiple calls,” Sullivan added.

THE RESULTS

Since expanding consistent Pulsara usage across the stroke workflow in 2023, St. Bernards has seen a dramatic improvement in treatment times for EMS arrivals. The stroke team’s rate of achieving sub-60 minute door-to-needle times improved by 48%—climbing from an average of 62% to 92% of cases. In a two year span, St. Bernards only saw two months with a door-to-needle time above 60 minutes.

Cases achieving sub-45 and sub-30 minute DTN times also saw remarkable improvements. On the 45-minute benchmark, St. Bernards increased their average success rate from 27% to 79% of cases—an improvement of 192%. Prior to this initiative, only 2% of cases met the 30 minute benchmark, and now they’re seeing 43% of cases reach that mark—an astounding 2050% improvement. These incredibly fast treatment times include cases as low as just 18 minutes.

“In 2020, we were not seeing door-to-needle times that were under 30 minutes. Now that we’re consistently using it, we are seeing many



patients receive thrombolytics in less than 30 minutes,” said Sullivan. “They’re saving people’s function, it’s incredible. People’s outcomes can only be better because [our teams] are working so quickly.”

Looking to the future, the team at St. Bernards Medical Center plans to continue expanding their use of Pulsara. Now used for STEMI, stroke, and trauma, the platform will play a vital role as the hospital expands its stroke service offerings. “We will be utilizing Pulsara’s ability to integrate with RapidAI to streamline the care we provide for our patients,” said Sullivan. “It is going to be a key component in facilitating communications as we prepare for our thrombectomy-capable services.”

In the wake of these remarkable improvements by St. Bernards’ stroke teams, the facility has been recognized by both the American Heart Association and The Joint Commission—earning both their Gold Plus Stroke Award and Advanced Primary Stroke Certifications within just two years.

St. Bernards’ culture of continuous improvement and collaboration was the driving force behind their success in implementing a critical tool like Pulsara to help bring their vision to life. “Our focus is on process improvement. We’ve had a very strong focus on that for the last three years,” Sullivan said. “We are consistently monitoring and improving our workflow so our patients can have the best outcomes.”

