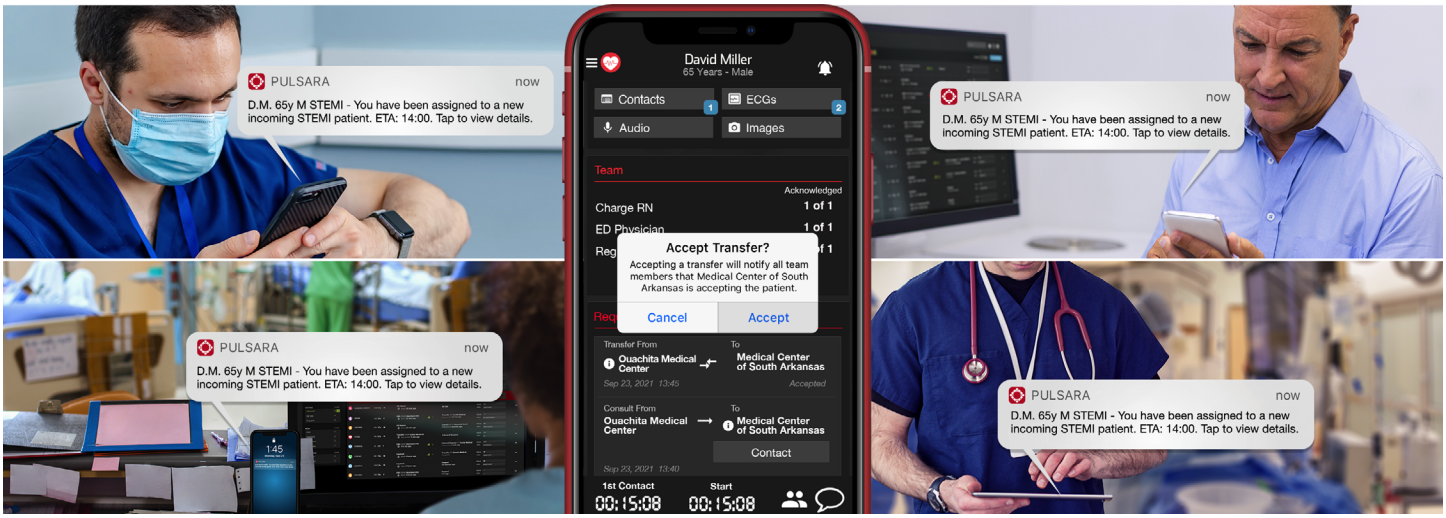
CASE STUDY

OUACHITA COUNTY MEDICAL CENTER

Arkansas Hospital Cuts Their Time-to-Treatment for STEMI Patients by Half



THE CHALLENGE

Previously, when a patient arrived in the OCMC emergency room with a STEMI, whether by ambulance or private car, staff would first page a cardiologist at the patient's preferred receiving facility, then wait for the physician to call back. Only then could they start the process of transferring the patient to a percutaneous coronary intervention (PCI) facility that could provide critical care.

"Then we had to get a bed confirmed, and then we had to wait to get our EMS service to take the patient. And then, usually, most of those patients at that time went to Little Rock, which is about an hour and a half from where we are," explained Jennifer Ray, RN, OCMC's ER and ICU manager. "So the timeliness of the patient getting in and out was very, very slow."

How slow? During 2017, the average door-in, door-out (DIDO) time was 72 minutes for the 19 STEMI patients who came into the OCMC ER—more than double the 30 minutes or less recommended by the American College of Cardiology Foundation and the American Heart Association.

THE SOLUTION

Seeking a way to dramatically, quickly, and cost-effectively improve DIDO times across the state, the Department of Health launched a pilot program in 2018 to implement Pulsara, a mobile healthcare communication program that unites care teams on a single patient channel. OCMC was among the sites chosen for the pilot. The goal, said Ray, was to "facilitate the transfer of these patients from non-PCI hospitals [like OCMC] to PCI hospitals more effectively and in a more timely way."

Gone are the days of making multiple phone calls to coordinate and communicate the arrival, status, and transfer of a patient. With the click of a button, the team at OCMC and the cardiac catheterization lab team at Medical Center of South Arkansas, 30 miles away in El Dorado, are notified.

OCMC Ouachita County Medical Center

Ouachita County Medical Center (OCMC) is a not-for-profit hospital with 99 beds, serving residents of the rural community surrounding the city of Camden in southern Arkansas, about 100 miles from Little Rock. As a smaller, non-PCI facility, OCMC often coordinates transfers for their STEMI patients to PCI facilities.

KEY RESULTS

- 50% decrease in door-in, door-out times for STEMI
- Team notifications for incoming STEMIs
- Streamlined process for STEMI transfers

"As soon as we identify a STEMI, we activate [Pulsara] and there are no phone calls we need to make to El Dorado," Ray said. EMS is notified simultaneously, too, she added. "They come around and as soon as we have done everything we're going to do [for the patient], we put them in the back of an ambulance."

It helped immeasurably that OCMC's physicians were enthusiastic about trying the new platform. A group of OCMC staff trained on how to use Pulsara at a nearby PCI facility, and they passed along what they'd learned to the rest of the team. EMS crews are also using Pulsara in the field, which is helping them facilitate even faster treatment by getting the right patient to the right place in the right amount of time. "If they identify a STEMI in the field," Ray explained, "they bypass our hospital and go straight to the PCI hospital."

THE RESULTS

Using Pulsara has led to dramatic improvements for Ouachita County Medical Center. After implementing the platform in early 2018, their average DIDO time for STEMI patients quickly dropped from 72 to 41 minutes—a 43 percent decrease. Halfway through 2021, that number continued to decrease to 36 minutes, despite the impact of the COVID-19 pandemic. Within just a few years on the platform, OCMC cut their DIDO by 50 percent. That's nearly 4 times less than the average 140 minute DIDO time when transferring to another of their frequent referral hospitals.

Since then, however, all of their frequent referral facilities have also chosen to implement Pulsara, and the team at OCMC is excited to see how the platform continues to help improve their DIDO times across the board. The OCMC team is so enthusiastic about Pulsara, in fact, that they recently attended training to expand their use of the platform to include patients with other time-sensitive conditions, such as trauma and sepsis.

"With other things like trauma, we can use it just like we do with STEMI in the field," said Ray. "We can activate a level-one or level-two trauma so that we have some information before the patient gets here and we don't have to make five phone calls to our surgeon and surgery team. They are automatically notified from the field, so they can respond and come to the ED even faster than before."

In the end, the value of Pulsara is clear to Ray. "Everyone is looking for any possible way to make life easier," she said. "And so we're always looking for ways to streamline any process to make things more efficient for physicians and, these days, especially for nurses, to provide safe, quality care to our patients."

A walk-in ED patient is having chest pain. After reviewing the ECG, OCMC staff sends a transfer request to the closest PCI facility. Upon acceptance, the facility is immediately added to the patient channel, where they can view all of the patient's information. Their STEMI teams are alerted with a tap, and are ready for the patient when she arrives.