

# Pulsara Case Study: Des Moines

## REDUCTION OF TIME-TO-TREATMENT

How EMS and hospital teams in Des Moines worked together to create a regional system of care.



Learn how Des Moines EMS teams collaborated with hospital systems to employ mobile technology that improves patient care.

### BACKGROUND

Des Moines metro-area EMS agencies cover nine counties in central Iowa, including: Boone, Dallas, Jasper, Madison, Marion, Marshall, Polk, Story, and Warren.

### PROBLEM

Across the region, Des Moines metro-area EMS agencies and hospitals wanted to streamline care coordination during time-sensitive emergencies such as stroke and heart attacks. EMS and the emergency department used a legacy system of telephone calls when preparing a patient for critical care, making multiple calls to alert the appropriate care teams and relay important patient information including ETA, case type, vital signs and more.

The Central Iowa EMS Director's Association recognized a need for a solution that would get all members of the care team on the same page and potentially improve treatment times, patient care and team coordination.

### SOLUTION

The Central Iowa EMS Director's Association found a solution in Pulsara, a mobile app that streamlines communication among healthcare teams, and began implementing the technology in November 2017. The implementation included all of the hospital systems in the metro region of Des Moines, along with approximately 30 different EMS services.

Pulsara allows prehospital providers to quickly enter information about a patient into any iOS or Android mobile device from the field and instantly transmit it to the emergency department. Because the information is stored in the cloud, the platform is HIPAA-compliant and secure. It also allows the medic to upload a secure image of an injury or ECG, and automatically notifies the hospital of the ambulance's location and ETA based on GPS.

By equipping EMS providers with the Pulsara application on their department-issued mobile devices and training them on its

capabilities, EMS teams were able to communicate seamlessly with the regional hospitals.

In turn, emergency care teams at Mercy Medical Center and UnityPoint Health could appropriately prepare for patient arrival ahead of time with access to real-time information and updates. Both hospitals previously used outdated modes of communication that typically consisted of radio reports, pagers, etc.—resulting in delays in care and gaps in critical patient information.

### RESULTS

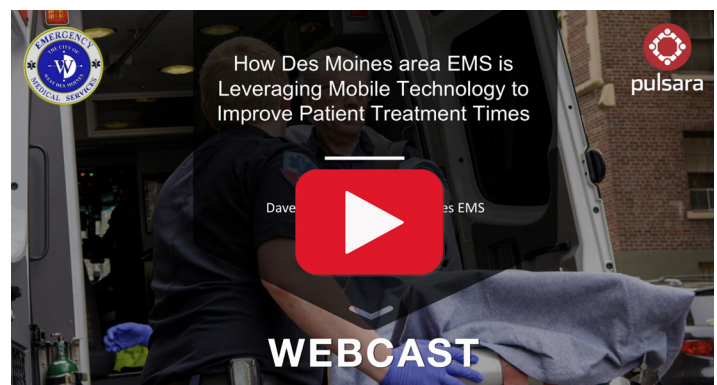
The greatest impact the Pulsara mobile solution has had for the region has been improved communication and increased efficiencies in patient care and coordination.

For example, taking possible stroke patients straight to a CT scan upon arrival, or alerting the cardiologist of an incoming heart attack patient and preparing them for the Cath Lab, is much more effective than taking them first to the emergency department. This streamlined approach has resulted in reduction in treatment times for critical cases.

Most impressively, Mercy Medical Center has observed improved outcomes for its stroke patients using the platform. In situations where every minute counts, this makes a significant difference for their patients. Using the new technology, the hospital's door-to-CT time improved by 21%, decreasing from 14 to 11 minutes; the door-to-lab time also improved by 13 percent, decreasing from 38 to 33 minutes.

In one case, the UnityPoint Health stroke team received all of the patient's information and vitals via the application prior to arrival; allowing EMS to bypass the emergency department entirely. This resulted in life-saving treatment times for the patient, including a door-to-CT time of less than 5 minutes, a door-to-lab time of 17 minutes, and door-to-tPA in 22 minutes.

The early success spawned a much greater awareness of the benefits of building a true regional system of care. The Des Moines patient-focused strategy continues to expand as more EMS and hospital systems join their initiative to provide the absolute best care for their community.



Listen to Dave Edgar, Assistant Chief of West Des Moines EMS, explain how healthcare providers in his region work together to reduce time to treatment.



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