The Connection

Effective solutions. Real results.

Volume 1, Issue 1

Reducing door-to-balloon time to speed up treatment.

"Our cardiac care center was recently rated No. 1 in the state. We couldn't have done it without the MUSE system. Now we can have the necessary medical personnel ready when the patient arrives."

— Beth Relle, RN, BSN, Clinical Lead, Advocate Good Shepherd Hospital

Advocate Good Shepherd Hospital, Barrington, IL, is a 183-bed facility with more than 600 physicians representing 45 specialties. It features a state-of-the-art, 56,000-square-foot emergency department and renowned cardiac care center.

To reduce door-to-balloon time and improve patient outcomes, the hospital trained paramedics to transmit 12-lead ECGs from their defibrillators directly to the emergency department via the MUSE® Cardiology Information System. This allows hospital staff to prepare the cath lab and gives cardiologists more time for diagnosis. "We even know what vessel is involved based on the ECG," says Beth Relle.

The Challenge

To more rapidly identify acute myocardial infarction patients and improve clinical outcomes, Advocate Good Shepherd implemented a program to reduce door-to-balloon time for emergency patients from 90 to 60 minutes. To achieve this goal, the hospital decided to use the GE MUSE Cardiology Information System's capabilities to streamline its patient workflow.

The Results

- Door-to-balloon time reduced from 90 to 60 minutes
- EMS training with the new system facilitated earlier detection
- Focused on improving clinical outcomes as a result of rapid intervention for acute myocardial infarction patients

Acquiring 12-lead pre-hospital ECGs

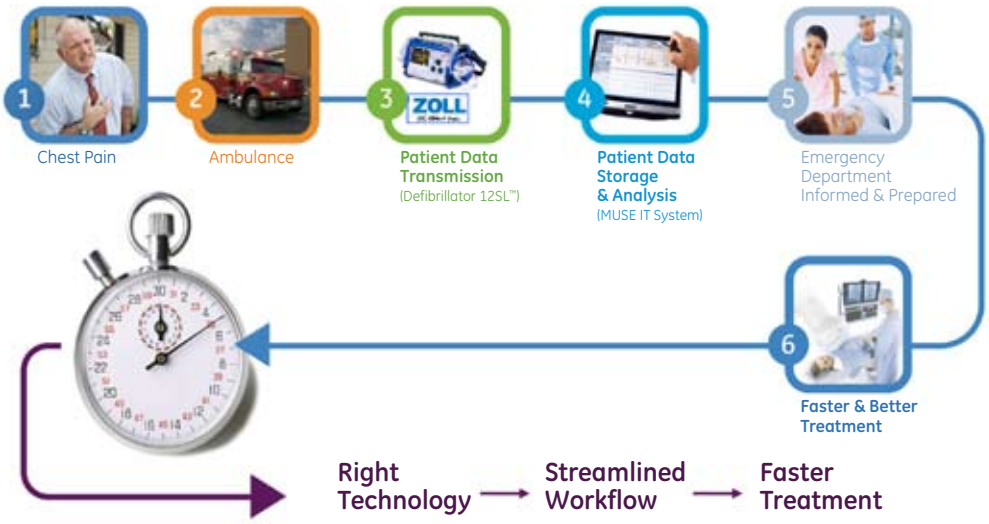
The hospital's old procedure for transmitting ECGs from the field was to fax them to the emergency department. This did not provide the emergency team with diagnosis-quality data, so treatment could not begin until a 12-lead ECG could be acquired at the hospital.

"We can begin preparation and diagnosis 15 to 20 minutes before patients arrive. Staff are waiting for patients, instead of the other way around."

— Chris Young, Cardio IS Administrator, Advocate Good Shepherd Hospital

To take advantage of the capabilities of the MUSE system, the hospital provided advanced training to its EMS departments to help them understand the whole process. This training enabled the EMS staff to acquire 12-lead ECGs in the field and call cardiac alerts.

Now the EMS teams are able to send the ECGs directly to MUSE, which allows for faster physician review. Additionally, since the same 12SL analysis program is used in the defibrillator that is used in the hospital's ECG device, the physician can compare the ECG from the ambulance to the patient's previous ECGs taken at the hospital. The MUSE serial comparison program provides a comprehensive overview of a patient's "cardiac history."



ECG information anywhere, anytime

Integrating the EMS process into MUSE allows pre-hospital ECGs to be viewed immediately and securely from anywhere in the hospital via the system's Web application. Physicians can connect securely from any desktop or laptop computer through the system's thin client solution. The system also lets emergency staff know if an ECG has been performed on that patient before. This has made a significant difference in diagnosis and treatment times.

The Connection *is presented by GE Healthcare. Special thanks to Beth Relle (R) and Chris Young (L) from Advocate Good Shepherd Hospital for their contributions.*

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imagination at work

DC-0202-04.09-EN-US