



Raising the Bar in Emergency Cardiac Care

By Pat Lucken, M.S.N., F.N.P.-C., and Omer Ahmed, M.D., F.A.C.C.

In the less than two years since the American College of Cardiology launched the national and international Door to Balloon (D2B) Campaign, more than 1,000 hospitals have joined the campaign. St. Mary Medical Center (SMMC) in Apple Valley, Calif., an 188-bed acute care hospital in the St. Joseph Health System (SJHS), has been a participating D2B hospital for the past 18 months.



Lucken

Our facility is located in the Mojave Desert in San Bernardino County, which at 20,105 square miles is the largest in the U.S. The population distribution varies with some very sparsely populated areas and some very dense areas. The distribution and large area present unique challenges for our D2B campaign.



Ahmed

Where we were

Previous to the campaign, SMMC struggled with achieving percutaneous coronary procedure (PCI) times < 120 minutes. SJHS ministries participate in monthly conference calls for acute myocardial infarction (AMI). Our goal for AMI patients is perfect care, which includes —

- Aspirin and beta blocker at arrival and discharge
- ACE or ARB for ejection fraction < 40% or documented contraindications
- Smoking cessation advice

- Thrombolytic administration < 30 minutes
- PCI time < 90 minutes.

Current test measures include a statin for LDL > 100 and if a cholesterol level was performed. In April we will include whether the patient was on a statin prior to arrival.

In the last few months we achieved a 1.7% failure rate for these aggregated measures. In the last 10 months we had two fallouts out of 20 eligible cases for PCI — a 10% failure rate. In one instance, there were difficulties reaching the on-call cardiologist; the other was difficulty paging the on-call staff.

The Importance of Recognition

Recognizing everyone's efforts is important to the success of these programs. SMMC honors the work of the pre-hospital personnel by writing their names and PCI times on colorful poster boards and displaying them in the ambulance bay area. They do the same for the cath lab and emergency department nursing, ancillary and physician staff on duty and the interventional cardiologist.

Where we are going

Currently, our Inland Counties Emergency Medical Agency (ICEMA) is developing protocols for chest pain destination centers. Once designated, the centers will accept chest pain patients from the field who have 12-lead EKG changes suggestive of AMI. Patients within 30 minutes of a chest pain center will be routed to that facility per protocol.



Our success in reaching this point with the centers was the result of the efforts of many people. Draft protocols for the centers and 12-lead EKG were opened for a 45-day public comment period. Then, all facilities were invited to participate in the ICEMA Medical Advisory Committee (MAC Committee) discussion of the protocols. All area facilities participated and sent hospital administration representatives, cardiologists, nurses and pre-hospital personnel.

One of the ICEMA quality committees, the North End Group, has worked together with multiple agencies, including SMMC, to ensure successful implementation of the new process. Many local agencies have purchased their 12-lead EKG machines and received training.

At our monthly quality committee meeting, we review the runs in which patients with a field 12-lead EKG indicative of AMI were taken to emergent angiography and what the D2B time was.

In the 18 months since we joined the D2B Alliance, SMMC has implemented many changes to facilitate successful D2B times. They include —

- Work with pre-hospital personnel on cardiac calls involving 12-lead EKGs
- Feedback to EMS crews
- PCI flow-map tracking for all STEMI patients
- Review of PCI fallouts with the Cardiac Perfect Care Team
- Hospital's executive management team review of AMI fallouts

Expanded CE Offerings Available on Cardiosource.com

A new group of CCA team leaders have joined Associate Editor **Suzanne Hughes, M.S.N., R.N.**, to expand Cardiosource's CE content for CCA members. **Suzanne Wingate, R.N., Ph.D., C.R.N.P.**, who specializes in heart failure; **Melanie Gura, R.N., M.S.N., C.N.S.**, who specializes in electrophysiology; and **Leann Bauch, R.N.**, who specializes in interventional cardiology, have joined to generate CE content. Hughes covers prevention and general clinical cardiology. As a result, Cardiosource now offers more than 150 CE content pieces and 38 CE credit hours with new content added weekly.

For the latest CE, go to www.cardiosource.com and click on the Cardiac Care Associates/CE quick link. To register to receive the monthly Cardiac Care Team eNewsletter, click the "Sign Up Now" button in the top right corner.



Hughes



Wingate



Gura



Bauch

- ICEMA quality group monthly review of AMI calls
- ED physician authority to call the cath lab and cardiologist simultaneously
- A STEMI page system
- Immediate feedback on PCI times to ED, cath lab personnel and cardiologists

We are also working with a local air ambulance company regarding remote areas of county and expeditious STEMI transport.

The ACC D2B program goal is PCI times < 90 minutes, 75 percent of the time. We have achieved 90 percent success in the past 10 months. Our future plans include assessing ways to obtain pre-hospital transmission of EKGs, thus beating the clock even further.

Lucken is director of the Cardiac Service Line, and Ahmed is an interventional cardiologist and chair of the Cardiac Care Committee. Both are at SMMC.