Resetting the Goal: Strategies to Decrease Door to Reperfusion Time for ST Elevation MI Patients

Cynthia Briner, MSN, RN
Brookwood Medical Center
Tenet Healthcare System
Birmingham, Alabama

Introduction

Background
Having consistently met the 90 minute door to reperfusion time for ST elevation MI patients, the STEMI Team focused on opportunities to decrease the door to reperfusion time to less than 60 minutes to improve patient outcomes.

Objective
The objective of the team is to identify process improvement opportunities through review of the medical record for adherence to identified time stamps, EKG findings, emergency room and cath lab processes, and patient outcomes. Rapid cycle process improvement strategies are developed and tested to address identified opportunities.

Team Composition
The team is led by the Cardiovascular Clinical Excellence Manager and includes staff members from the Emergency Room and Cardiac Cath Lab, hospital pharmacist, physician champion, and a representative from local EMS providers.

Interventions

Interventions are targeted to the process, reason for delay, or opportunity for streamlining. After presenting the new goal to the hospital cardiologists and emergency room physicians and obtaining their buy-in, the STEMI Data Sheet was changed to reflect the 60 minute door to reperfusion goal and the corresponding time stamps were adjusted.

Having the patient remain on the EMS stretcher rather than transfer to an ER bed allows for rapid patient assessment and serves as a reminder to everyone that time is limited. The patient is then transported to the cath lab on the EMS stretcher. If the EMS service has the technology, the EKG obtained in the field is faxed to the ER and immediately given to the ER physician, who can then activate cath lab and cardiologist notification.

The overhead page of “Code STEMI” by the hospital operator notifies any cardiologist in the hospital that a STEMI case is in the emergency room and a potential change in cath lab patient schedule may occur. The overhead page also notifies the Coronary Care Unit to assess bed availability for a potential admission.

Results

Average D2B Time with Rapid Cycle Improvement Interventions

Conclusions

Since changing our goal to 60 minutes for door to reperfusion in March 2010, our success rate for attaining the target was 59% (13/22) for the remainder of 2010. With continued evaluation and process improvement, the rate of door to reperfusion within 60 minutes was 71% (39/55) for 2011 with an current rate of 62.3%. As the majority of our strategies addressed process issues, no additional cost was incurred and required minimal change in physician related processes. Physician support remains positive and a sense of friendly competition for the fastest door to reperfusion time exists.