Achieving a “consistent” ST Elevation Myocardial Infarction (STEMI) Door-to-Balloon (D2B) Time 24/7/365
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The time of day a STEMI patient presents should NOT be a factor that determines D2B time.

Extensive standardization of protocols and systems alone will not ensure a < 90 D2B time if trained staff are not available to start the PCI procedure.

Key Points of the Program

- Collaboration with ED and in-house RR Team to get PCI STEMI procedures started prior to arrival of the on-call CCL team.
- Standardization of “ALL” aspects of the process.
- Define the “Scope of Practice” for all STEMI RR team members.
- Provide educational and clinical hands-on experience to non-CCL RN’s
- Transparent response to all STEMI patients to ensure consistent D2B time.

Global Standardization

- Performance parameters
- Scripted group text paging
- Hands-off report forms
- Procedure protocol
- Medication kits
- STEMI supply cart
- Back-up protocols
- Treatment protocols
- Admissions process
- Response protocol
- Follow-up communication

Page Notification to Cath Lab Admit

Average Minutes by Month

Average Time savings = 15 minutes
(41 Average Minutes Pre-change in practice)
(26 Average Minutes Post-change in practice)

Structured CCL Orientation for all non-CCL RN’s

Group Paging Protocol

- Detailed orientation manual
- 8 hours orientation with Classroom and hands-on experience
- Medication administration: abciximab, eptifibatide, bivalirudin
- Patient set-up: EKG electrode placement, pulse oximetry, defibrillator pad placement, arterial transducer calibration
- Radiation safety
- Nursing/medication documentation
- Step-by-step computer operation guide
- Transfer protocols

Making the Catheterization Laboratory a “user friendly” environment

- STEMI medication kit
- Medication reference tables
- Every supply visible
- Prep supplies on table
- Daily checklist for room preparation
- Task reminder cards/wall poster

Define the “Scope of Practice” for all STEMI Rapid Response Team Members

Nursing
- ED and RR RN’s - direct patient care and documentation.
- Structured orientation program - all non-CCL RN’s
- CCL - direct patient care and CCL technical support
- PCA - CCL room preparation, patient care support
- Supervisors - back-up resource

Cardiology Fellows
- Cardiac evaluation and initial PCI decision making, CCL technical support until CCL on-call staff arrive, assist with direct patient care as needed (patient prep).

Respiratory and Circulatory Support
- Immediate response, standby support, and assist with patient transfer

Telecommunication
- Accurate and timely notification of STEMI RR Team via group paging protocols

Admissions
- Streamline admission process, secure patient valuables, armband < 5 minutes, bed assignment

Hospital Administration
- Actively supports all activities, employee recognition, recognizes team achievements

Chaplain Services
- Provide 24 hour emotional support for patient and patient families during initial admit and PCI procedure.

STEMI Coordinator
- Communication with all team members, problem solving, patient care follow-up

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ABSTRACT 1

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TITLE: Achieving a “consistent” ST Elevation Myocardial Infarction (STEMI) Door-to-Balloon (B2B) Time 24/7/365

BACKGROUND/OBJECTIVE: Time of day a patient presents for treatment is a factor that impacts STEMI D2B time performance. Waiting for the Cardiac Cath Lab (CCL) on-call staff to start a catheterization procedure extends the D2B time. Cardiovascular centers that elect percutaneous coronary intervention for primary treatment of STEMI should develop a rapid response program to achieve a "consistent" 24/7/365 D2B time performance. Program objective was to provide a cost effective quality alternative to adding CCL staff to the night and weekend shift in order to maintain a consistent STEMI D2B time performance.

METHOD: Qualified RN’s from the Emergency Department and Rapid Response in-house staff were identified. Two in-house cardiology fellowship physicians, a respiratory therapist, and a circulatory support technician were also added to the team. A list of responsibilities for all members of the Critical Care STEMI Rapid Response Team (CCSRRRT) was developed and an orientation program was implemented. Time parameters and paging protocols were established and monitored. The CCSRRRT program was designed to respond to 1)walk-in emergency department chest pain patients, 2)Emergency Medical Services (EMS) chest pain patients, 3)Pre-notification STEMI EKG direct-admit patients, 4)In-house chest pain patients. Modifications were made to the CCL procedure room to facilitate a more user-friendly atmosphere.

RESULTS: A retrospective review of the time from initial STEMI Team page to CCL admit was performed. A total of 48 after-hours cases were reviewed over a 17 month period of time, 20 cases prior to a change in practice (average time of 41 minutes) and 28 cases after a change in practice (average time of 26 minutes). An average reduction of 15 minutes response time (37% improvement) was reported after the implementation of the in-house non-CCL Critical Care STEMI Rapid Response Team.
CONCLUSION: (402)
The development and utilization of an in-house non-CCL Critical Care STEMI Rapid Response Team lowers response time and improves quality of care evidenced by a lower D2B time. The practice of cross-training non-CCL critical care registered nurses to get STEMI procedures started after hours is a viable, efficient, and cost effective alternative to ensure a “consistent” 24/7/365 D2B time performance.

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