

STEMI NEWS

June 2009

Contra Costa STEMI System Performance 2009 Quarter 1 (January 1, 2009 to March 31, 2009)

Contra Costa STEMI Average Times	2009 Q1
Performance Benchmarks (minutes)	
EMS* to Intervention (PCI) Time	75 minutes
National Benchmark < 90 minutes	
EMS* Scene Time	12 minutes
Local EMS Performance Goal < 15 minutes	
911 Call to Intervention (PCI) Time	83 minutes
National Benchmark < 120 minutes	
First + STEMI 12 lead ECG to First PCI Time	71 minutes
EMS* = First Contact with EMS provider	

The Contra Costa STEMI System was launched on 9/8/08

Team STEMI: CoCo STEMI System Stats Rock!!!!

On June 16th STEMI Center and Prehospital CQI Coordinators sat down to review our STEMI System Quarterly statistics. There is much to celebrate this quarter and at EMS we are blown away by the tremendous efforts of all parties who have collaborated to achieve these results. First responders, transport providers, emergency department and cardiac catheterization personnel working 24/7 to provide an outstanding level of care to Contra Costa.



Examples include a recent door intervention time of 21 minutes with pass thru ED (direct to cath lab) process improvement. Several cardiac arrest patients have gone to intervention from the field with excellent outcomes. Fire first responders are improving their 12 lead accuracy to alert facilities prior to transport arrival, giving our STEMI Centers even more time to "ramp up" in order to speed patients to life-saving intervention when they arrive. Corrective feedback to our prehospital providers about patient outcomes is helping improve field decision-making. Kudos to those ED physicians and cardiologists who are taking advantage of "teachable moments" at the time of patient arrival to help our prehospital providers when false activations or confusing clinical presentations occur. It takes a village of dedicated STEMI System Champions to make this all happen.

Overall STEMI System Performance Measures such as "911 to Intervention" improved 14 minutes with 100% of patients meeting less than 90 minute door to intervention national benchmark. In addition our quarterly data revealed that Contra Costa prehospital diagnostic 12 lead to intervention times were less than 90 minutes 93% of the time. What that means is that our STEMI system is functioning at a level of excellence that is extraordinary! We could not do this without tremendous teamwork among all our STEMI partners.

Even with this high level performance we still have work to do. Preventable prehospital false positives were attributed to artifact in 6 cases. That is why 12 lead accuracy continues to be a strong focus of prehospital STEMI System CQI. For more information about our Quarter 1, 2009 STEMI System performance go to www.cccems.org!

The Timeline

911 call
1755

Fire at
patient
1758

★
First 12
lead ECG +
STEMI
1802

STEMI
ALERT
1805

Transport
arrives
1810

Patient en
route to ED
1816

EMS/pt
arrival ED
1830

Patient
Arrests in
ED during
handoff
1831

Patient to
Cath Lab
CPR in
progress

First PCI
1920

Case Study... First Responder Activation

Many fire first responders have 12 lead capability. Check out this extraordinary effort of all involved!

Situation: 71 year old male lying on ground with severe chest pain. Weight about 60 kg. First responder 12 lead ***Acute MI*** uniform PVCs < 6 minute.

Background: Chest pain started unprovoked 30 minutes prior to first responder arrival. Medical history positive for glaucoma, no allergies, no medications.

Assessment: HR 62 weak irregular, RR 20 labored, B/P 102/72, 97% sat. Pain scale patient unable to rate but states severe. Alert and oriented x4.

RX: O2 non-rebreather 15 liters, IV access, ASA 325 mg/po and Nitro 0.4 mg x2, MS x1. STEMI Center activation and transport.

Prehospital progression: During transport pain improves now called moderate. VS stable. Feeling nauseated.

STEMI Center: ED crew ready on arrival. Patient suddenly arrests during patient handoff. Code called. Patient to cardiac catheterization lab with resuscitation in progress.

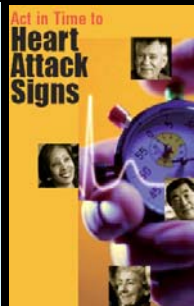
Outcome: Patient discharged home!

STEMI Case Statistics

- 18 minute scene time
- 14 minute transport time
- 32 minute first EMS provider contact to ED time
- 28 minute first + STEMI ECG to ED time
- 50 minute door to intervention
- 78 minute first + STEMI ECG 12 lead to intervention
- 82 minute EMS patient contact to intervention

**85 minute
911 Call to Intervention!**

This case is an extraordinary example of how minutes make the difference in complicated STEMI patients. Outstanding teamwork from beginning to end!



Public Education Starts With Us!

The national goal is to increase the number of

STEMI patients using 911 versus walking or driving in. Over 50% of STEMI patients transport themselves to the hospital and statistically we know that these actions impact patient care adversely.

Contra Costa EMS has made the National Institute of Health (NIH) best practice patient education program "Act in Time" with its excellent patient educational materials available on our website.

The materials are free and can be duplicated for health fairs, clinics, physician offices or just personal use. We encourage you to download these materials and let your friends and family know that if chest pain occurs....**Act in Time by calling 911.**

Contra Costa STEMI System Top Prehospital Improvement Goal! Get Rid of Artifact!

STEP I	<ul style="list-style-type: none"> • Check your own performance • Self review • Peer review • ED feedback
STEP II	<ul style="list-style-type: none"> • Review procedures. • Get help from your trainers. • Youtube.com: review Tim Phelan's outstanding 12 lead clips.
STEP III	<ul style="list-style-type: none"> • Find a peer expert. • Seek out "lessons learned". • Screen 12 leads for artifact and repeat as needed.
STEP IV	<ul style="list-style-type: none"> • Practice skin prep! • Practice lead placement! • Control for patient movement!