

# STEMI NEWS

## January 2009

### Contra Costa STEMI System Performance

NOTE: Variations in statistics previously reported based on corrected data

Contra Costa STEMI Average Times	30 day	60 day	90 day	120 day
# of STEMI field alert pts to PCI since 9/8/08	11	17	22	27
<b>Performance Benchmark (minutes)</b>				
<b>EMS* to Intervention (PCI) Time</b>	78	81	83	83
<b>National Benchmark</b>	< 90 minutes			
<b>EMS* Scene Time</b>	14.3	14.4	14.7	15
<b>Local EMS Performance Goal</b>	< 15 minutes			
<b>911 Call to Intervention (PCI) Time</b>	85	91	92	93
<b>National Benchmark</b>	< 120 minutes			
<b>EMS* = First contact with EMS provider</b>				

The Contra Costa STEMI System was launched on 9/8/2008



### Team STEMI: Measuring System Performance

STEMI System Performance is dependent on many factors; some are in our control and others are not. As we look at the performance of our system it is important for all STEMI system team members to understand what is being measured and why.

**EMS to Intervention Time:** This is the time between first patient contact with an EMS provider and the time PCI (Percutaneous Cardiac Intervention) re-establishes blood flow to the patient's heart muscle. This is a national benchmark set by the American Heart Association. Factors that influence this benchmark include on scene time, distance from the ED and door to intervention time at the STEMI receiving center.

**EMS Scene Time:** This is the time between the first patient contact with an EMS provider and the time paramedics leave the scene with the patient. Factors that influence this performance measure include patient cooperation, stability, accurate prehospital assessment and timely performance of 12-lead and any initial treatment to stabilize the patient.

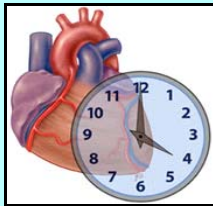
**911 Call to Intervention Time:** This national benchmark reflects the time between when the call was first received by 911 fire-medical dispatchers to PCI. Contra Costa is fortunate to have the excellent response times, 1,146 prehospital providers, 81 ambulances, 5 outstanding in-county STEMI Centers and 2 out-of-county STEMI Centers (Pleasanton's Valley Care and Oakland's Summit Hospital in neighboring Alameda County) participating .

Factors in our control such as scene time have the opportunity to be improved while variables like distance from STEMI Centers are fixed. The challenge is to maintain a high level of performance with trained, knowledgeable STEMI system providers. Dispatchers, EMT's, paramedics, doctors, nurses, cath-lab personnel and cardiac interventionalists, all working in concert to provide rapid safe intervention for the STEMI patient. STEMI System Quality Improvement Coordinators evaluate each case for opportunities for improvement and recognition providing feedback to the providers involved. Contra Costa STEMI program has had a great start, and we believe we are well on our way to becoming a high performance STEMI System. The real measure of success will be to *maintain* a high level of performance over time. **Keep up the good work!**

## STEMI Systems and the Public... What's the message?

Recently we have had several articles on our STEMI system published in the local print and electronic press. Contra Costa is one of eleven STEMI Systems in the state of California. Getting the word out about our STEMI program is a great way to celebrate our accomplishments and to highlight the benefits of the program. In addition a core function of a STEMI System is a strong commitment to public education. That public message is not only a system responsibility it is also an individual responsibility. **What are our core public messages?**

- Know signs/symptoms of chest pain
- Call 911 early
- Don't drive to the hospital
- Time is muscle



Contra Costa STEMI system uses the nationally recognized best practice public education materials from the National Institute of Health and the American Heart Association. These materials are available for download from our website at [www.cccems.org](http://www.cccems.org). All STEMI receiving centers have been strongly encouraged to use these materials as part of any public education activity. **What can you do?** Make sure your family, neighbors and friends know what to do in the event of chest pain. It really does start with us!

## the BOTTOM LINE

## Repeat 12-Lead ECGs.... Now An Expectation!

A review of our STEMI system cases revealed that 12-leads were not always being repeated during patient handoff with first responders or after the initial 12-lead was performed. Repeat 12-leads help pick up STEMIs in progress and can decrease the chances of false positives becoming a problem in the system. We have had some missed opportunities since our program was launched. In reviewing our prehospital training on the topic, repeat 12-leads were strongly recommended making it sound like it was up to the discretion of the paramedic to perform. **In an effort to improve our 12-lead performance in this area we now have a NEW message.**

***Repeat 12-leads are essential!  
They are not judgment calls and are best practice!***

Improve the accuracy of your 12-lead ECG and don't forget to repeat those field 12-leads! We know that getting these messages and expectations "hard-wired" in our providers will take time and will never eliminate all operator-related 12-lead ECG issues, but what we learned in this situation is that giving clear messages helps everyone perform at a high level. If you need a refresher on 12-lead seek out your training coordinator. ***They have lots of resources to help you become "expert" at 12-lead!***



## STEMI False Positives and "youtube.com" Tap into new resources for a great 12-lead!

False positive STEMI activations are one of most common factors to go sideways in a STEMI System. As discussed in our last STEMI newsletter machine-generated false positives are not in our control and the long term solution is to build hospital ECG transmission into the system. 12-lead vendors are also looking at refining the computer ST elevation algorithms used in prehospital 12-lead devices. Upgrades will eventually be available to improve the device's reliability.

However it is operator-related false positives that are more frequent and are definitely something prehospital providers can do something about with training and practice. Tim Phelan, nationally renown paramedic expert in 12-lead, recently conducted two trainings in Contra Costa County. If you need a quick refresher from Tim his 5-minute 12 ECG Placement videos are on **youtube.com!** NO KIDDING! They are just terrific and available 24/7. The links are:

12-lead ECG Placement part I <http://www.youtube.com/watch?v=eA5HmQSMGHE>

12-lead ECG Placement part II <http://www.youtube.com/watch?v=TFcyiCKyaZ4>

Topics covered including male and female 12-lead placement, troubleshooting for wandering baseline, 60-cycle, skin prep, and other troubleshooting techniques. If you haven't seen these resources check them out!