



Specialty Care Update

San Luis Obispo County's Source for Trauma & STEMI News

Inside this issue:

Our First Issue!	<u>1</u>
STEMI System is Ready to Go	<u>1</u>
Not ANY Chest Pain	<u>2</u>
How Will it Work?	<u>2</u>
Early EMS Activation Goals	<u>2</u>
Prehospital Training Highlights	<u>3</u>
Referral ED Training Highlights	<u>4</u>
STEMI System Definitions	<u>4</u>

Our First Issue!

All of us at the SLO EMSA are very excited to bring you our first quarterly newsletter about trauma and STEMI care systems.

It has been the goal of many people in our EMS community to bring both trauma and STEMI specialty care to our residents, and after years of hard work, it

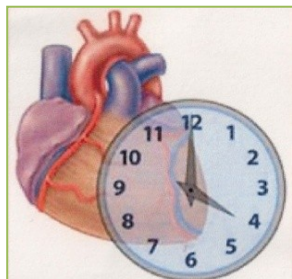
appears we are coming close to reaching those goals.

This first newsletter focuses on the new STEMI system, but look for exciting news about the trauma system in our future editions.

In each quarterly newsletter we will share with you the latest

news about the development of specialty care systems in our county, useful information for field and ED personnel, and system-wide performance data.

We hope you will find that it gives you the information you want about trauma and STEMI care in San Luis Obispo County.



Time is Muscle

STEMI System is Ready to Go

What does it mean?

A STEMI system provides an organized response of separate entities focused on getting the right patient to the right place in the right amount of time.

The San Luis Obispo County EMS Agency, in collaboration with community hospitals, physicians, and EMS providers, developed guidelines for a STEMI Receiving Center (SRC) in this county—the first step in implementing a STEMI system.

The next step was the designation of one or more SRCs, and French Hospital Medical Center has successfully completed the requirements to be designated our county's first SRC.

Why are we doing this?

Information published in 2007 by the American Heart Association (AHA) noted the annual incidence of acute myocardial infarction (AMI) in the United States was nearly 850,000,

with more than 150,000 people dying each year. Of this patient population nearly 400,000 were identified to have suffered a STEMI.

STEMI is considered to be the most critical type of heart attack; when quickly recognized and treated, the damage to the heart is reduced significantly, improving patient outcomes. It has been well documented and accepted that early reperfusion is the primary goal of therapy for patients suffering from a STEMI. It has also been noted that the prehospital component of an EMS system plays an important role in the management of a patient with AMI through early recognition and initiation of therapeutic treatment, along with notification and rapid transport to an appropriate facility that has the capability to provide definitive care.

Thus the recommendation and forward movement to include prehospital 12 lead ECG and a

prehospital STEMI notification plan has been implemented in San Luis Obispo County.

Are we ready?

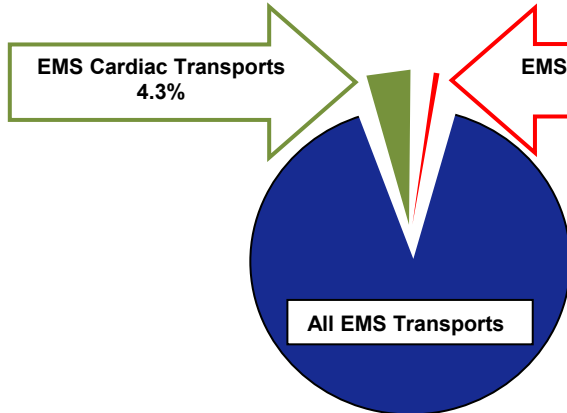


Yes we are. Training and treatment guidelines have been provided for prehospital personnel, MICNs, emergency department personnel and physicians. The STEMI system prehospital training program included patient triage and destination criteria, review of 12 lead ECG acquisition and data collection elements.

STEMI=ST-segment elevation myocardial infarction

...when quickly recognized and treated, the damage to the heart is reduced significantly, improving patient outcomes.

To learn more about our county's SRC designation process and criteria, please see Prehospital Policy # 201, available on our [website](#), or contact the SLO EMSA.



Not ANY Chest Pain

“STEMI Alert” activation applies to a very specific patient population (STEMI only—see triage criteria pg. 3). All other chest pain, ECG readings, and cardiac patients follow the SLO EMSA Chest Pain protocol utilizing the closest Base Hospital.

Out of 22,831 total EMS transports in 2009, 982 of those

were cardiac emergencies, including arrests, and only 64 of those were possible STEMI cases, which includes hospital transfers.

It may seem like a lot of fuss for just a quarter of one percent (.28%) of our EMS transports, but the opportunity to save heart muscle is significant!

How Will it Work?

The STEMI triage and destination policy applies to adult patients with chest pain or other symptoms suggestive of Acute Coronary Syndrome (ACS) with a 12 lead ECG demonstrating elevated ST-segments indicating a specific type of myocardial infarction.

The “STEMI Alert” activation of an SRC occurs in two ways: through a prehospital 911

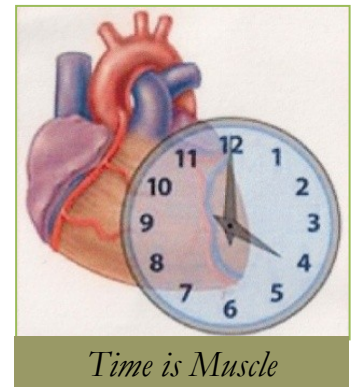
STEMI identification or a hospital/emergency department identified STEMI.

In the prehospital setting, an SRC shall be utilized as the Base Hospital for all “STEMI Alerts” and any destination or consultation needs.

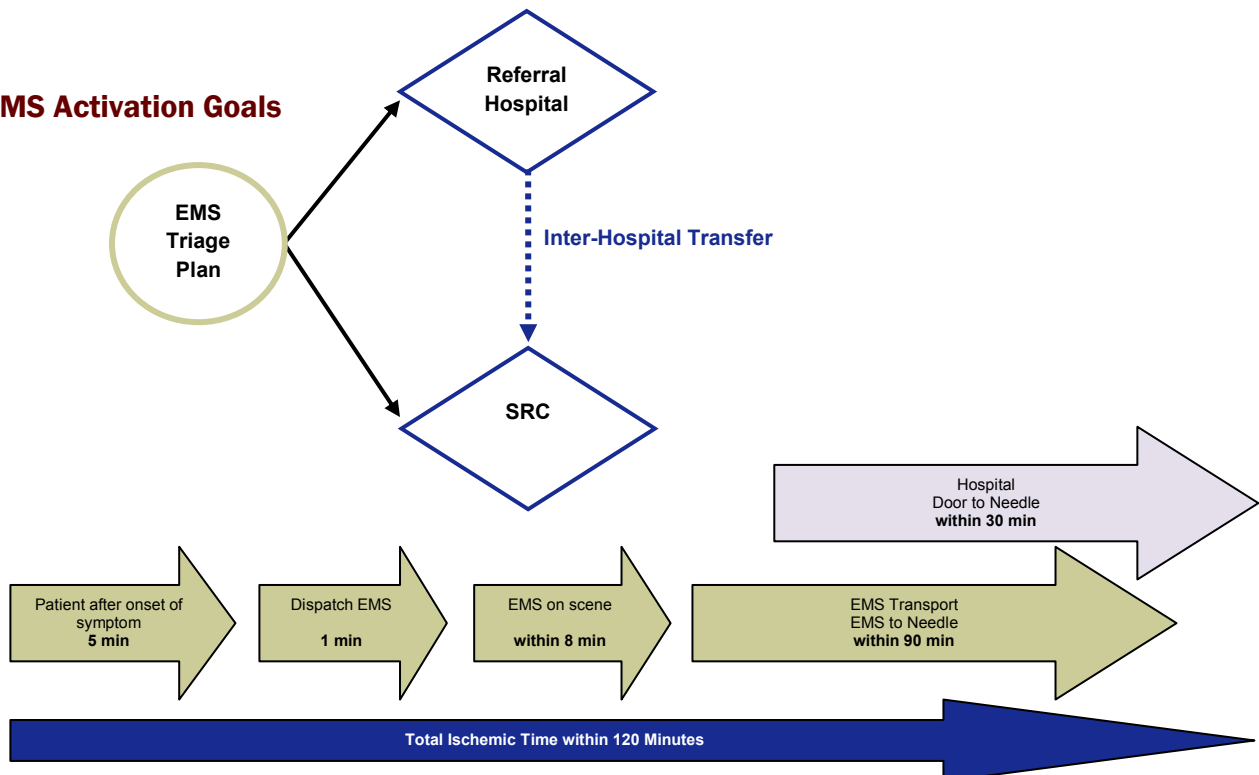
For patients identified with a STEMI at a referral hospital ED (non-SRC), the ED shall activate an SRC through the SRC Nurs-

ing Supervisor and immediately call MedCom for a code 3 transport to the SRC. The referral ED **is not** required to make contact with the interventional cardiologist prior to the transport.

The SRC Nursing Supervisor activates the cardiac catheterization team and notifies the interventional cardiologist to call the referral ED physician.



Early EMS Activation Goals



Highlights of Prehospital Training

Here are a few highlights of training provided to prehospital EMS personnel to prepare them for their role in the new STEMI system.

From STEMI Triage and Destination Policy #201.2

Triage Criteria :

Patients meeting STEMI Alert:

- Computerized 12 lead ECG reading of ***Acute MI Suspected*** or ***Acute MI*** (or other monitor reading equivalent) free of artifact
- Post cardiac arrest patient with a Return of Spontaneous Circulation (ROSC)

Destination:

Patients meeting STEMI triage criteria shall be transported to the nearest SRC—this may mean that a hospital is bypassed in order to minimize time from event to intervention.

The SRC shall be consulted for destination if:

- The patient is unstable with a BP < 90 mmHg and the transport time to the SRC would add more than 30 minutes to the transport time to a STEMI Referral Hospital (SRH)
- The patient is uncooperative with the ECG procedure and/or expresses a personal preference for a destination other than the SRC (*Policy 122: Patient Refusal of Treatment or Transport* shall apply)

SLO EMSA STEMI Triage and Destination Policy #201.2 is available on our [website: www.sloemsa.org](http://www.sloemsa.org)

Prehospital treatment considerations:

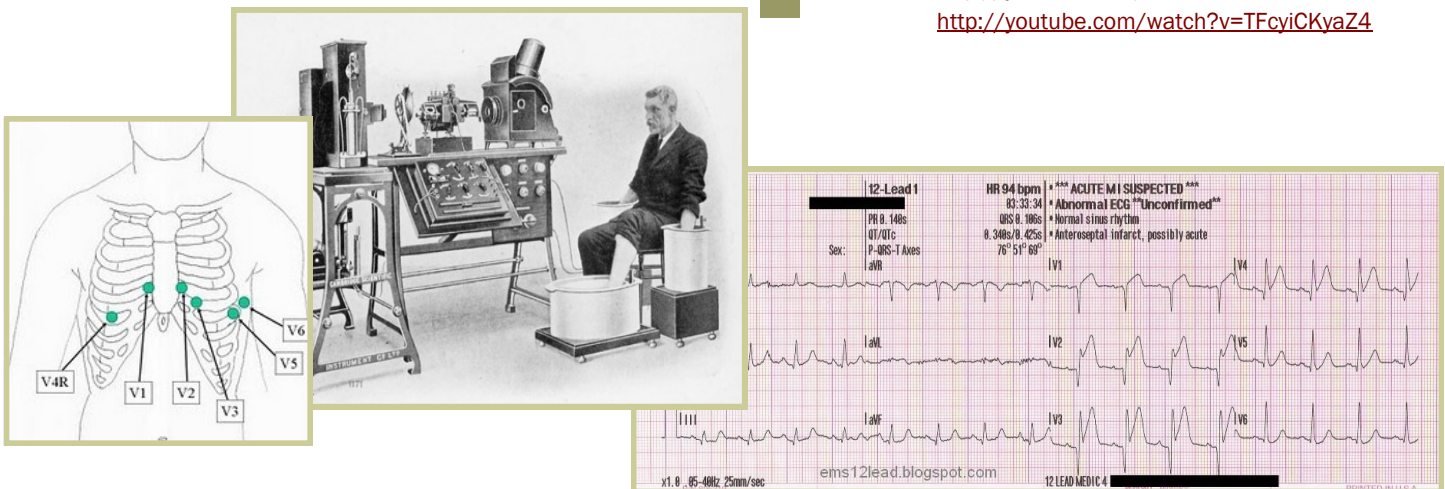
- Early ECG identification and notification of SRC
- Follow Chest Pain protocol
- Serial ECG – time permitting
- Place defibrillation pads
- ASA 162 mg p.o. (chewable preferred)
- Two (2) IVs 18ga or 20ga —Do not delay transport
 - IV Normal Saline
 - Normal Saline Lock

12 Lead ECG Acquisition

- Success based on good quality tracings with no significant artifact
- Common causes of 12 lead ECG artifact:
 - Patient position—supine/semi-fowlers best
 - Poor contact between skin and electrode—good skin prep a must, rub vigorously with gauze or towel
 - Inappropriate electrode placement
 - Patient movement— try having the patient hold their breath
 - Faulty lead wires or connections—check your equipment

Resources:

- Tim Phelan training videos, 12 Lead Part I and II
<http://youtube.com/watch?v=eA5HmQSMGHE>
<http://youtube.com/watch?v=TFcyiCKyaZ4>



Highlights of Referral ED Training

Here are a few highlights of training provided to ED personnel at referring hospitals to prepare them for their role in the new STEMI System.

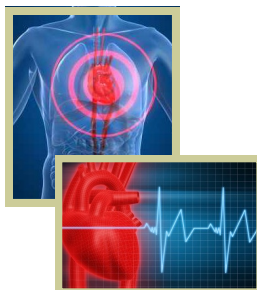
From STEMI Triage and Destination Policy #201.2

Referring ED and In-House Patients:

- MedCom request for code 3 STEMI transfer
- Contact SRC Nursing Supervisor
 - SRC activates team and notifies cardiologist
- Begin transfer upon ambulance arrival
- SRC cardiologist will contact referral ED physician
- Standardized medication orders:
 - ASA 324 mg. p.o.
 - Heparin 70 units/kg bolus (no max)
 - NTG and MS as needed
- Fax paperwork, labs, and ECG to SRC

South County Considerations

Both French Hospital Medical Center (FHMC) and Marian Medical Center are recognized as STEMI Receiving Centers. For patients going to Marian, continue to use Sierra Vista Regional Medical Center as the Base Hospital. All other STEMI patients should utilize FHMC. Remember all other cardiac cases and EMS calls shall continue to go through the normal Base Hospital contact procedure.



[Request issues of Specialty Care Update by email](#)

[Request to be removed from the Specialty Care Update email list](#)

[Please let us know what you think about this Specialty Care Update](#)

Thank You!

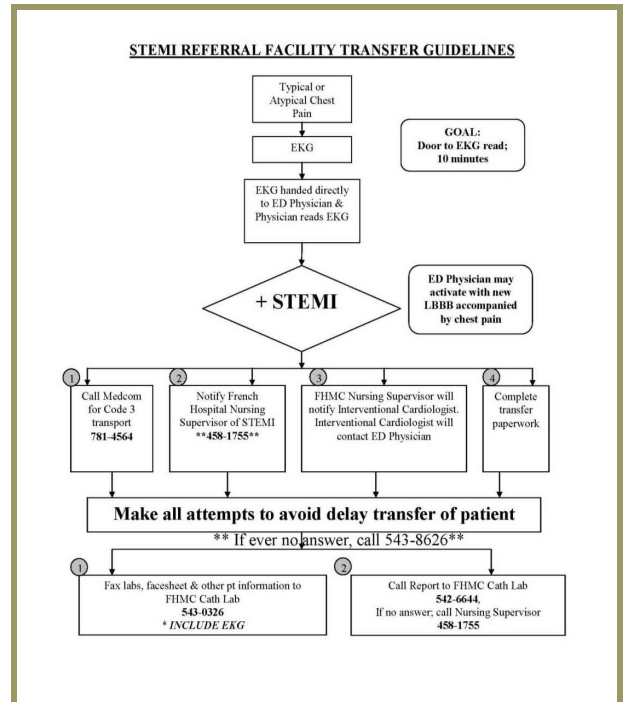


San Luis Obispo County EMS Agency

Phone: 805-546-8728 Fax: 805-546-8736

712 Fiero Lane, Unit 29, San Luis Obispo, CA 93401

French Hospital Medical Center (SRC) transfer guidelines



STEMI System Definitions

Percutaneous Coronary Intervention (PCI): A broad group of percutaneous techniques utilized for the diagnosis and treatment of patients with STEMI.

STEMI: An acute myocardial infarction that generates a specific type of ST-segment elevation on a 12 lead ECG.

“STEMI Alert”: A report from prehospital personnel or SRH that notifies a STEMI Receiving Center as early as possible that a patient has a specific computer-interpreted prehospital 12 lead ECG indicating a STEMI, allowing the SRC to initiate the internal procedures to provide appropriate and rapid treatment interventions.

STEMI Receiving Center (SRC): A facility licensed for cardiac catheterization laboratory and approved to operate as an SRC by the San Luis Obispo County Emergency Medical Services Agency.

STEMI Referral Hospital (SRH): An acute care hospital in San Luis Obispo County that is not designated as a STEMI Receiving Center.