Team STEMI: STEMI 12-lead transmission is on its way!

Mia Fairbanks RN, CEN Prehospital Care / STEMI System Coordinator

STEMI 12-Lead transmission is on its way! In the coming months we are looking at all of the STEMI receiving centers having the capability to receive real-time 12-lead transmissions from the field to the Emergency Department. This new technology allows for the wireless transmission of diagnostic quality 12-leads from the ambulance or patient’s home to the ED and hospital staff.

System Benefits

- Reduction in number of false STEMI alerts (secondary to over-triage by field monitors).
- Reduction in Door-to-Intervention time (through early alerting of both Emergency Department and Cath Lab staff).
- Enhanced data management through collection of 12-Lead information that can be used for system enhancements.

Timeline

- 20 additional modems have been ordered and should be arriving by September 1, 2011.
- Fire Department and Ambulance Agencies have been training this quarter on STEMI activations and transmission of 12-leads.
- American Medical Response and Moraga-Orinda Fire District are scheduled to complete training and go live with new modems beginning October 1, 2011.

<table>
<thead>
<tr>
<th>Performance Criteria</th>
<th>Performance Benchmarks</th>
<th>Contra Costa 2009</th>
<th>Contra Costa 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS* to Intervention (PCI) Median Time</td>
<td>&lt;90 minutes (National)</td>
<td>81 minutes</td>
<td>87 minutes</td>
</tr>
<tr>
<td>EMS* Scene Median Time</td>
<td>&lt;15 minutes (Local EMS)</td>
<td>14 minutes</td>
<td>14 minutes</td>
</tr>
<tr>
<td>911 Call to Intervention (PCI) Median Time</td>
<td>&lt;90 minutes (National) **</td>
<td>90 minutes</td>
<td>91 minutes</td>
</tr>
<tr>
<td>Door to first PCI Time with Field Activation</td>
<td>&lt;60 minutes (National) **</td>
<td>54 minutes</td>
<td>60 minutes</td>
</tr>
<tr>
<td>Percentage of Time Door to PCI &lt; 90 minutes</td>
<td>&gt; 75% of time (National)</td>
<td>100%</td>
<td>93%</td>
</tr>
</tbody>
</table>

EMS* = First contact with EMS provider

** High Performance STEMI System Benchmarks
Case Study
Mia Fairbanks, RN, CEN, STEMI System Coordinator

Situation: May 26, 2011, 68 y.o. male pulseless with agonal respirations on a boat with bystander CPR in progress.

Background: Patient c/o chest pain, dizziness to friend, sat on couch and slumped to the floor. 911 called and bystander CPR initiated.

Assessment: Bystander CPR for 10 minutes prior to Fire Department arrival. Shocked once with AED, Lucas applied. Patient had ROSC, 12-lead EKG done showing STEMI. Hypothermia initiated in the field.

RX: STEMI Alert called and patient transported code 3 to STEMI Receiving Center.

STEMI Center: Patient had 100% occlusion of his LAD with one stent placed. Patient coded multiple times after stent was placed, hypothermia continued through May 27, 2011. Patient was discharged on June 3, 2011 with no neurological deficits!

This is an example of the “The Chain of Survival.” Everything worked the way it should, starting with bystander CPR and ending with the patient being transported to a STEMI receiving center and receiving the appropriate care. We would like to recognize the following people for the outstanding care they provided during this patient’s journey through our system: Richmond Fire Captain Paul Schmidt, Engineer Scott Duncan and Fire Fighter Pat Jackson. AMR Paramedics Matthew Steele and Melinda Trost. The Cath Lab and all units caring for the patient at Doctors Hospital San Pablo. Great Job!!

Transition and Change
It has been a year since the last STEMI newsletter was published and there has been and will continue to be significant change within our system. Doctors San Pablo and Kaiser Walnut Creek are thriving in their roles as STEMI receiving centers. The 12-Lead Transmission Project is moving forward with a projected start date of October 1, 2011. A transition in personnel here at Contra Costa EMS will allow us to provide more consistent feedback and assistance to all of our hospitals as they each play a role in making the STEMI system the best it can be. We are committed to this and to the continued exceptional care that all of our STEMI patients receive.

Team STEMI Introductions!

Two new employees joined Contra Costa EMS this June. Maria (Mia) Fairbanks, RN, CEN and Brian Henricksen, EMT-P come to EMS with a background in hospital and pre-hospital care and bring new and unique experience to their respective positions.

Brian Henricksen comes from AMR with years of experience as a field provider and most recently as the Paramedic Field Training Coordinator. Brian worked on the STEMI 12-Lead Transmission pilot at AMR and will continue to lead this project here at EMS. Brian’s new role at EMS is Emergency Preparedness Training Coordinator.

Mia Fairbanks comes to EMS from John Muir Concord Campus. Mia started at John Muir in the Emergency Department in December of 2008 and served on various committees in the ED and the hospital. In her past life, she was a Paramedic for 10 years in a suburb of Pittsburgh, Pennsylvania. Mia is the new Prehospital Care/STEMI System Coordinator.