**Mission: Lifeline** is the American Heart Association’s **national** initiative to advance the **systems** of care for patients with ST-segment elevation myocardial infarction (STEMI) and those resuscitated after experiencing an Out-of-Hospital Cardiac Arrest. The overarching goal of the initiative is to **reduce mortality and morbidity** for STEMI and Out of Hospital Cardiac Arrest patients and to **improve their overall quality of care**.
STEMI & CARDIAC RESUSCITATION

IDEAL SYSTEM

**Cardiac Arrest**
- Unresponsive
- Not breathing normally

**Community**
- Hands Only CPR | Bystander CPR
- Early activation of 911
- Apply AED before EMS arrival

**EMS ON-SCENE**
- Minimize interruptions of CPR
- Encourage 12-lead ECG after ROSC
- Consider Destination Protocol

**Receiving Hospital (PCI-capable)**
- Initiate hypothermia <6 hrs from onset of arrest
- Consider early PCI
- Refer Prognosis assessment for 3 days
- Consider need for ICD before discharge

**EMS Triage Plan**

**Interhospital transfer**

**Referral Hospital (non PCI-capable)**
- Initiate hypothermia <6 hrs from onset of arrest
- Consider transfer to resuscitation receiving center if unconscious and hemodynamically stable

9/3/2014
Point Of Entry Protocol: GOAL

- **Less than 90 Minutes**

**GOALS**:
- **Onset of symptoms of STEMI**
- **9-1-1 EMS dispatch**
- **EMS on-scene**
  - Encourage 12-Lead ECGs
  - Consider prehospital fibrinolytic if capable and EMS-to-needle within 30 min
- **EMS transport**
  - Prehospital fibrinolysis: EMS-to-needle within 30 min
- **EMS transport**
  - EMS-to-balance within 90 min
- **Hospital fibrinolysis**
  - Door-to-needle within 30 min

**STEMI-referral hospital**
- Non PCI-capable

**STEMI-receiving hospital**
- PCI-capable

**Less than 90 Minutes**

*Golden Hour = First 60 minutes*
Why Mission: Lifeline?

• 47yo father of 3 collapsed at work. No prior medical history.

• **79 MINUTES after collapse**, Balloon Inflation opens a 100% occluded artery

• 2 Days later, awake alert, oriented and stated that he “felt cold”

• Francisco has no neurological deficits and is back to work
Where Delays Occur

**THE PATIENT**
- Unfamiliar with signs and symptoms of a heart attack
- Denial
- Slow to activate 911 EMS System
- Arrives by POV (Personal Owned Vehicle)

**REFERRAL CENTER**
- Identification of STEMI patient
  - Triage Protocols
  - Access to 12 Lead ECG Machines
  - Diagnostic Dilemma
  - Transport Notification
  - Transfer Acceptance
  - Patient Condition
    - Arrest/Shock

**TRANSPORT**
- Unavailability
- Weather
- Delay in arrival to Referral Center
- Pumps and Drips
- Patient Records from Referral Center
- Transport Distance

**RECEIVING CENTER**
- Acceptance Delay
- Cath Lab Team Delay
- Patient Condition
  - Arrest/Shock

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## Why Delays Occur

<table>
<thead>
<tr>
<th>NON-MODIFIABLE</th>
<th>MODIFIABLE WITH DIFFICULTY</th>
<th>MODIFIABLE</th>
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<tbody>
<tr>
<td>• Distance to STEMI Receiving Center</td>
<td>• Patient/Public Awareness</td>
<td>• Lack of Triage Protocols</td>
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<tr>
<td>• Geography</td>
<td>• Corporate Loyalty</td>
<td>• No Pre-Planned Reperfusion Strategy</td>
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<tr>
<td>• Weather</td>
<td>• Market Share</td>
<td>• Lack of Transfer/Back Up Plan</td>
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<tr>
<td>• Traffic</td>
<td>• Preferred Provider Transport Agreements</td>
<td>• Fear of Lytic Administration</td>
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- Lack of Data Collection  
- Protocol Awareness  
- Cardiology On-Call
A System of Care – The Roles

The Patient and Family:
• Recognizing the signs and symptoms of a cardiac emergency
• Participate in community based cardiac education
• Need to use 911 and EMS

Community EMS:
• Timely response, assessment, care and deployment of 12-lead ECG technology during a cardiac emergency
• Initiate prehospital care and prepare for transport to a receiving facility
• Acquisition and transmit of 12 lead ECG

STEMI Referring Hospital:
• Receive 12 lead ECG
• Provider notification and interpretation
• Local STEMI Treatment Team activation
• Implement early STEMI treatment
• Forwarding prehospital 12-lead ECG
• Timely arrangements for transfer to interventional care
• Feedback

STEMI Receiving Hospital (PCI):
• Support referral facilities
• Receive 12 lead ECG from referral facility or EMS
• Provide consultation
• Interventional care
• Capturing STEMI data and reporting
• Feedback
Mission: Lifeline Ideals

- The Ideal Patient
- The Ideal EMS
- The Ideal STEMI Referral Center
- The Ideal STEMI Receiving Center
- The Ideal System
Mission: Lifeline will:

- Promote the ideal STEMI systems of care
- Help STEMI patients get the life-saving care they need in time
- Bring together healthcare resources into an efficient, synergistic system
- Improve overall quality of care

The initiative is unique in that it:

- Addresses the continuum of care for STEMI patients
- Preserves a role for the local STEMI-referral hospital
- Understands the issues specific to rural communities
- Promotes different solutions/protocols for rural vs. urban/suburban areas
- Recognizes there is no “one-size-fits-all” solution
- Knows the issues of implementing national recommendations on a community level
Summary of Objectives for Mission: Lifeline

• Improve relationships between EMS, Receiving Centers and Referring Centers

• Improved process for STEMI and Out of Hospital Cardiac Arrest Care

• Move care forward – Concurrent actions aimed at timely reperfusion
  – Early suspicion of the STEMI patient
  – Early 12 lead ECG Acquisition
  – Early STEMI Identification
  – Early Notification of the STEMI patient to the destination center
  – Early activation of the STEMI response team
  – Early reperfusion

• Regionalize STEMI and Out of Hospital Cardiac Arrest Care

• Continuous QI

• Improve outcomes and save lives
Mission: Lifeline Involvement

**PARTICIPATION**

- ML Hospital Registration
- ML System Registration
- Mission: Lifeline Social Community
- Quality Improvement/Data Analysis
- Mission: Lifeline Reports

**RECOGNITION**

**ACCREDITATION**

- American Heart Association ACCREDITATION
  - Meets standards for STEMI Receiving Center
- American Heart Association ACCREDITATION
  - Meets standards for STEMI Referral Center

Familiarize yourself with all the warning signs of a heart attack.

Dial 9-1-1 immediately at the first sign of a heart attack.

Don’t waste precious minutes driving yourself to the hospital.

Symptoms are not always severe—or limited to the typical chest pains you might expect.

- Chest discomfort
- Shortness of breath
- Upper body pain or discomfort
- Arm, back, neck, jaw, or stomach

Not all of these signs occur in every heart attack. Sometimes they go away and return. Women are more likely than men to experience other symptoms besides chest pain.

- A heart attack is a life or death emergency.
- Many heart attack victims die within an hour of the first symptoms.
- Your heart can suffer permanent damage the longer you wait.
- 9-1-1 operators can provide instructions that can help save your life.
- Your chance of survival is much greater when you dial 9-1-1.
- If you drive, you could injure yourself or others if your symptoms worsen while driving.

Your life is on the line. Dial 9-1-1.

www.heart.org/MN
THANK YOU!

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