American Heart Association. | MISSION: LIFELINE®

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Nothing to Disclose

Welcome to Mission: Lifeline

TODAY'S OBJECTIVES

- Introduction of AHA's Mission: Lifeline Initiatives
- Understand the concepts of Mission: Lifeline
- Understand the objectives of Mission: Lifeline
- Relay the importance of Emergency Medical Services within Mission: Lifeline
- Convey the opportunity for recognition through AHA's EMS awards program

What is Mission: Lifeline?

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**.

Mission: Lifeline Activity

American Heart Association Learn and Live. | MISSION: LIFELINE

MAY 2004 – JUNE 2007

- AHA recruited Advisory Working Group
- Price Waterhouse Coopers presents its market research to AWG
- AWG Consensus Statement appears in *Circulation*
- Eleven manuscripts are published in *Circulation*
- Mission: Lifeline was formally launched
- AWG develops a set of guiding principles

2008 - 2009

- Affiliate Staff Kick-Off was held
- Completion of a national EMS Assessment for STEMI Systems represents 91% of US population

2010 - 2011

- Hospital recognition program and reports are released
- AHA collaborates with SCPC and hospital accreditation program released

2012 AND BEYOND

- Mission: Lifeline Cardiac resuscitation Program was launched
- Adding Mission: Lifeline EMS Recognition Program

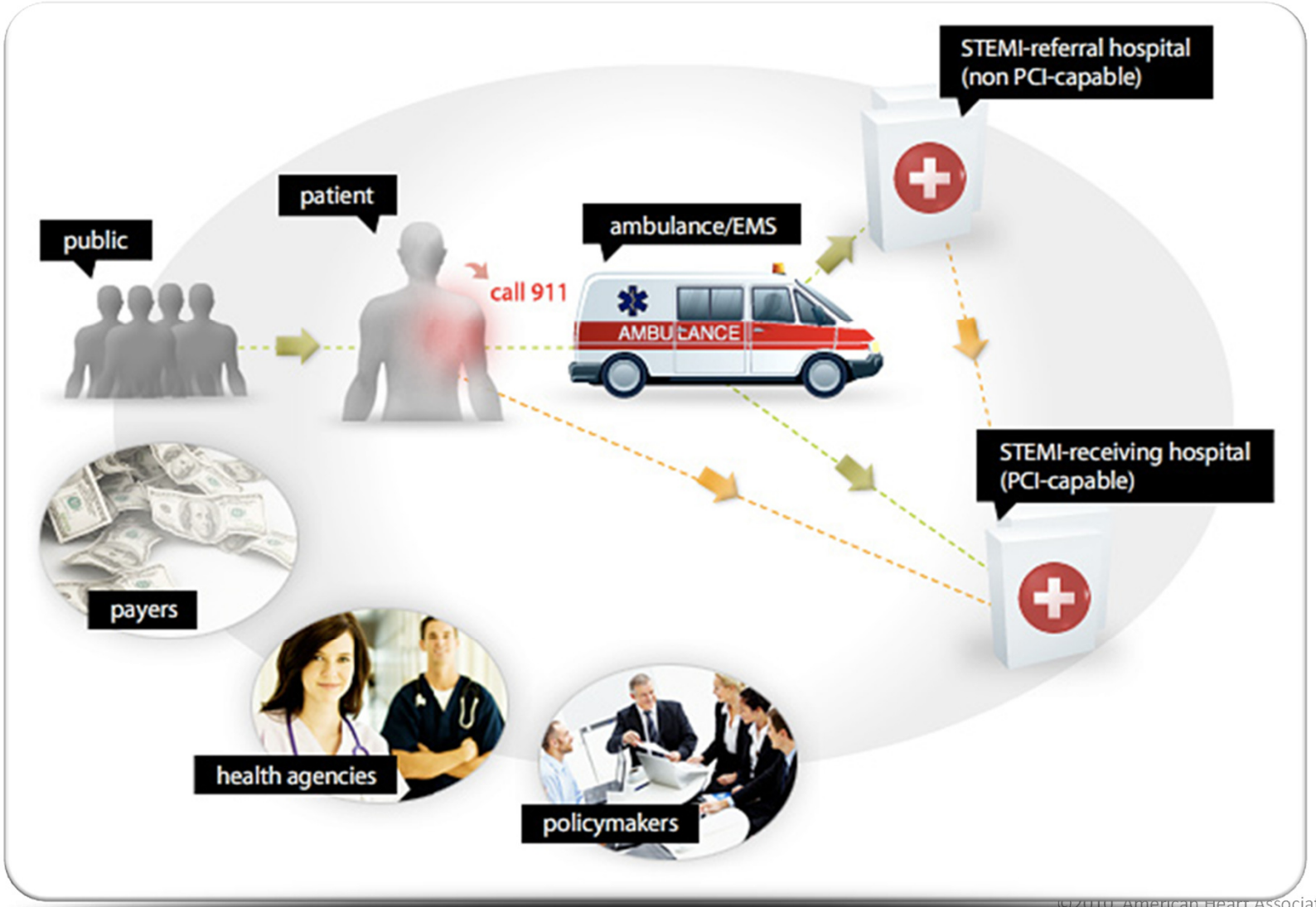
SOCIETY OF CARDIOVASCULAR PATIENT CARE

American Heart Association ACCREDITATION
Meets standards for
Heart Attack Receiving Center

American Heart Association ACCREDITATION
Meets standards for
Heart Attack Referring Center

MISSION: LIFELINE

The Ideal System of Care



System of Care

An integrated group of separate entities focused on reperfusion therapy for STEMI within a region that typically includes **emergency medical services (EMS) providers, at least one community (non-PCI or STEMI-referral) hospital and at least one tertiary (PCI-capable or STEMI-receiving) hospital.** The system may include one or more of the following components: leadership teams of EMS, emergency medicine, cardiology, nursing and administration; standardized communication (i.e., STEMI alert system); standardized transportation; and data collection and feedback. Please note: In some systems, there may be a single hospital with PCI capabilities that has established protocols with EMS providers and contains at least one of the components stated above.

What is a M:L STEMI System

- A System should include
  - At least one EMS Agency **AND**
  - At least one PCI or STEMI Receiving facility **AND**
  - At least one Non-PCI or STEMI Referral facility
- Conduct ongoing (monthly) multidisciplinary system meetings
  - Include each member of the System listed above
  - Discuss each key element of time from the patient's onset of S/S to time of PCI intervention
  - IDENTIFY gaps in care and set pathways for improvement

What is a M:L STEMI System

- Process for pre-hospital identification and activation, as well as destination protocols
  - ID STEMI, Call the Alert and transport the patient to the ***closest appropriate facility***
- Process for Inter-facility Transport from a STEMI referral facility to the STEMI receiving facility
- Recognized System Champion, Coordinator and EMS Medical Director

Uniqueness of Mission: Lifeline

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

Mission: Lifeline Definitions

STEMI-Referral Hospital

A type of hospital that does not have the means to deliver percutaneous coronary intervention (PCI), the preferred means of treating a STEMI heart attack patient if done within the critical 90-minute window. Non-PCI hospitals can: administer clot-busting medicines that meet the health care needs of non-STEMI patients; refer STEMI patients to PCI hospitals, thus the name PCI-referral hospital; and treat STEMI patients with medications when it is not feasible for them to get to a PCI-capable hospital for treatment in a timely manner.

Mission: Lifeline Definitions

STEMI-Receiving Hospital

A hospital that has the equipment, expertise and facilities to administer percutaneous coronary intervention (PCI), a mechanical means of treating heart attack patients. Although PCI is the preferred means of treating STEMI patients, only 25% of hospitals in the United States are equipped to do so. These PCI-capable hospitals are called STEMI-receiving hospitals because they are well equipped to receive and treat STEMI patients

Systems of Care

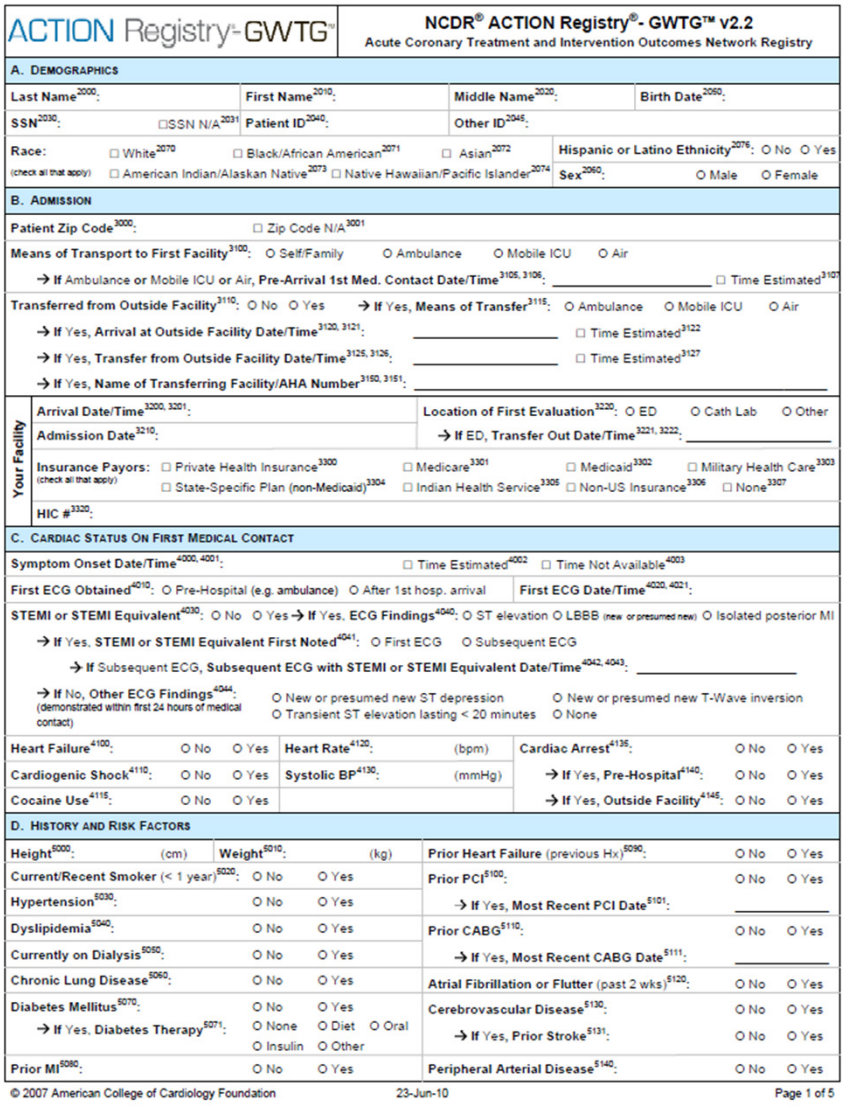
The initiative's values:

- Patient-centered care as the #1 priority
- High-quality care that is safe, effective and timely
- Stakeholder consensus
- Increased operational efficiencies
- Appropriate incentives for quality
- Measureable patient outcomes
- An evaluation mechanism
- A role for local community hospitals
- A reduction in disparities of healthcare delivery

Road To Recognition

Submit Data via ACTION Registry®-GWTG™

- Enroll in ACTION Registry-GWTG
- Complete an ACC/AHA Data Release Consent Form and email to ncdr@acc.org
- Data submission = Quarterly
- Submission Deadline = 60 days after end of the quarter
- **Q1- Jan, Feb, March**
- **Q2- April, May, June**
- **Q3- July, Aug, Sept**
- **Q4- Oct, Nov, Dec**



ACTION Registry-GWTG

NCDR® ACTION Registry®- GWTG™ v2.2
Acute Coronary Treatment and Intervention Outcomes Network Registry

A. DEMOGRAPHICS

Last Name[2000]: | First Name[2010]: | Middle Name[2020]: | Birth Date[2050]:

SSN[2030]: ☐SSN N/A[2031] | Patient ID[2040]: | Other ID[2045]:

Race: (check all that apply) ☐ White[2070] ☐ Black/African American[2071] ☐ Asian[2072] ☐ American Indian/Alaskan Native[2073] ☐ Native Hawaiian/Pacific Islander[2074]

Hispanic or Latino Ethnicity[2076]: O No O Yes

Sex[2060]: O Male O Female

B. ADMISSION

Patient Zip Code[3000]: ☐ Zip Code N/A[3001]

Means of Transport to First Facility[3100]: O Self/Family O Ambulance O Mobile ICU O Air

→ If Ambulance or Mobile ICU or Air, Pre-Arrival 1st Med. Contact Date/Time[3105, 3106]: _____ ☐ Time Estimated[3107]

Transferred from Outside Facility[3110]: O No O Yes → If Yes, Means of Transfer[3115]: O Ambulance O Mobile ICU O Air

→ If Yes, Arrival at Outside Facility Date/Time[3120, 3121]: _____ ☐ Time Estimated[3122]

→ If Yes, Transfer from Outside Facility Date/Time[3125, 3126]: _____ ☐ Time Estimated[3127]

→ If Yes, Name of Transferring Facility/AHA Number[3150, 3151]: _____

Your Facility

Arrival Date/Time[3200, 3201]: | Location of First Evaluation[3220]: O ED O Cath Lab O Other

Admission Date[3210]: | → If ED, Transfer Out Date/Time[3221, 3222]: _____

Insurance Payors: (check all that apply) ☐ Private Health Insurance[3300] ☐ Medicare[3301] ☐ Medicaid[3302] ☐ Military Health Care[3303] ☐ State-Specific Plan (non-Medicaid)[3304] ☐ Indian Health Service[3305] ☐ Non-US Insurance[3306] ☐ None[3307]

HIC #[3320]:

C. CARDIAC STATUS ON FIRST MEDICAL CONTACT

Symptom Onset Date/Time[4000, 4001]: ☐ Time Estimated[4002] ☐ Time Not Available[4003]

First ECG Obtained[4010]: O Pre-Hospital (e.g. ambulance) O After 1st hosp. arrival | First ECG Date/Time[4020, 4021]:

STEMI or STEMI Equivalent[4030]: O No O Yes → If Yes, ECG Findings[4040]: O ST elevation O LBBB (new or presumed new) O Isolated posterior MI

→ If Yes, STEMI or STEMI Equivalent First Noted[4041]: O First ECG O Subsequent ECG

→ If Subsequent ECG, Subsequent ECG with STEMI or STEMI Equivalent Date/Time[4042, 4043]: _____

→ If No, Other ECG Findings[4044]: (demonstrated within first 24 hours of medical contact) O New or presumed new ST depression O New or presumed new T-Wave inversion O Transient ST elevation lasting < 20 minutes O None

Heart Failure[4100]:	O No O Yes	Heart Rate[4120]:	(bpm)	Cardiac Arrest[4135]:	O No O Yes
Cardiogenic Shock[4110]:	O No O Yes	Systolic BP[4130]:	(mmHg)	→ If Yes, Pre-Hospital[4140]:	O No O Yes
Cocaine Use[4115]:	O No O Yes			→ If Yes, Outside Facility[4145]:	O No O Yes

D. HISTORY AND RISK FACTORS

Height[5000]: (cm)	Weight[5010]: (kg)		Prior Heart Failure (previous Hx)[5090]:	O No O Yes
Current/Recent Smoker (< 1 year)[5020]:	O No	O Yes	Prior PCI[5100]:	O No O Yes
Hypertension[5030]:	O No	O Yes	→ If Yes, Most Recent PCI Date[5101]:	
Dyslipidemia[5040]:	O No	O Yes	Prior CABG[5110]:	O No O Yes
Currently on Dialysis[5050]:	O No	O Yes	→ If Yes, Most Recent CABG Date[5111]:	
Chronic Lung Disease[5060]:	O No	O Yes	Atrial Fibrillation or Flutter (past 2 wks)[5120]:	O No O Yes
Diabetes Mellitus[5070]:	O No	O Yes	Cerebrovascular Disease[5130]:	O No O Yes
→ If Yes, Diabetes Therapy[5071]:	O None O Diet O Oral O Insulin O Other		→ If Yes, Prior Stroke[5131]:	O No O Yes
Prior MI[5080]:	O No	O Yes	Peripheral Arterial Disease[5140]:	O No O Yes

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Mission: Lifeline Recognition Measures

Achievement Measures STEMI- Receiving Center	Performance Measure Percentage
Percentage of STEMI patients with a door-to-balloon (first device used) within 90 minutes, non-transfer	100%
Percentage of STEMI patients with first medical contact to balloon inflation (first device used) within 90 minutes, non-transfer	100%
Percentage of reperfusion –eligible patients receiving any reperfusion (PCI or fibrinolysis) therapy)	100%
Percentage of STEMI patients receiving aspirin within 24 hours	100%
Percentage of STEMI patients on aspirin at discharge	100%
Percentage of STEMI patients on Beta Blocker at discharge	100%
Percentage of STEMI patients with LDL>100 who receive statins or lipid lowering drugs	100%
Percentage of STEMI patients with LVSD on ACEI/ARB at discharge	100%
Percentage of STEMI patients that smoke with smoking cessation counseling at discharge	**100%**

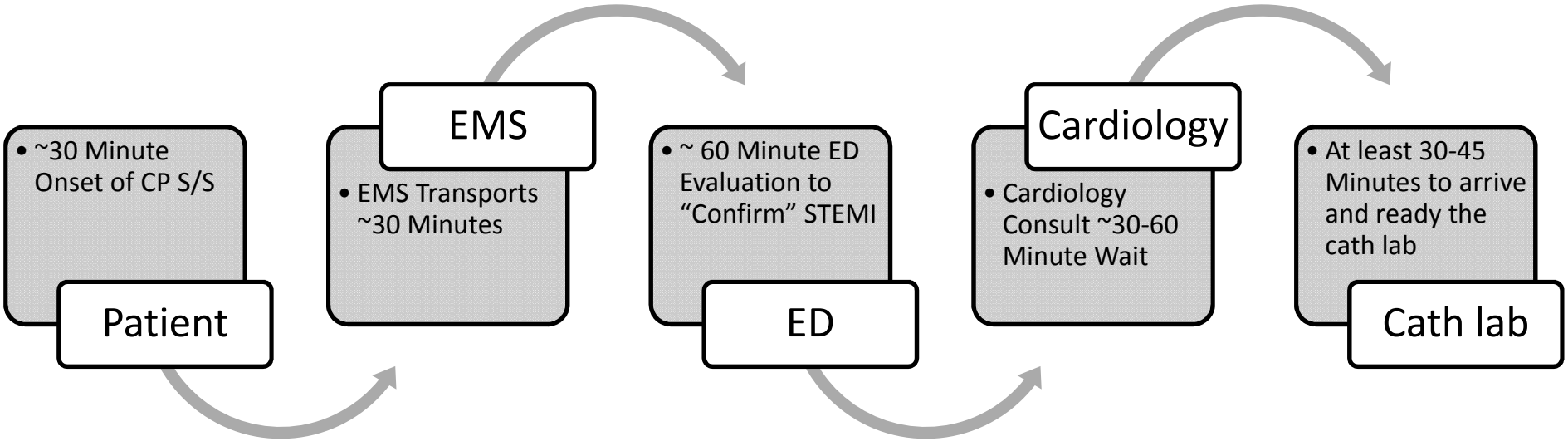
Composite Score (Performance Measure Average):
100%

Mission: Lifeline Challenge

First Medical contact to Balloon Inflation (first device used) ≤ 90 minutes, Non-Transfers

M:L First Medical Contact to Primary PCI ≤90 Minutes	• All STEMI admissions who received a primary PCI within 90 minutes from first medical contact prior to arrival at the receiving Center	• Inclusion: All STEMI admissions arriving by ambulance where Primary PCI is the primary reperfusion strategy AND first medical contact time and first device activation time are not missing, are not negative and are not >12 hours. • Exclusions: Age <18, transfers in, STEMI diagnosed on subsequent ECG, thrombolytics administered prior to PCI, non-primary PCI, patients who did not receive primary PCI within 90 minutes AND had a documented non-system reason for delay

Remember These Days?

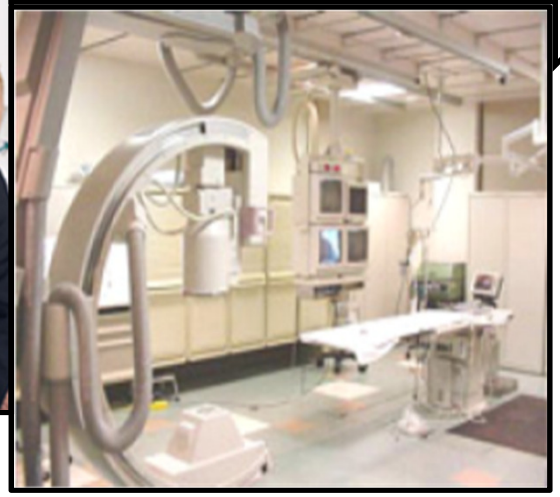


Back In The Day - Time from onset to treatment could exceed 200 Minutes (Non-Transfer Patients)

EMS identifies STEMI patient, early acquisition on 12 Lead, early notification

Cath Lab team is activated and prepares for patient arrival

Patient arrives to hospital,
Direct to Cath Lab when ready



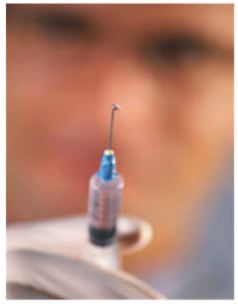
TODAY ~~~
TOMORROW

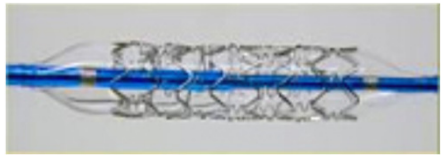
Gaps and Barriers

- EMS protocols do not allow transport outside a certain area/county
- **Lack of 24/7 12 Lead ECG capability in the field**
- ECG interpretation skills
- False positives
- Lack of protocols to allow rapid identification of a STEMI patient
- Lack of pre-hospital STEMI activation from the field
- Lack of Multidisciplinary Meetings
- Lack of data collection
- Terrain
- Inter-facility Transport Team response

Barriers to Timely Reperfusion

- The Patient
  - Failure to promptly recognize symptoms
  - Hesitation to seek medical attention
- Time to Transport
  - Long transport in rural areas
- Decision Process on Arrival
  - Clot-busting drugs vs. PCI
  - Off hours
  - Transfer to PCI facility
- Time to Implement Treatment Strategy
  - Procedural factors
  - Team assembly





The Reality of Today's Patients

- Not all STEMI patients call 9-1-1
  - 50% of STEMI patients present to their local emergency department (ED)
- "Walk-in" patients hinder:
  - Registration
  - Quick triage to electrocardiograms (ECG) for diagnosis
  - ECG privacy
  - Advanced warning to activate hospital staff to prepare for reperfusion

The Ideal EMS

- **In an Ideal System:**
  - Ambulances are equipped with 12-lead ECG machines
  - EMS providers are trained to:
    - Use and transmit 12-lead ECGs
    - Care for STEMI patients
    - Provide feedback on performance and compliance with guidelines
  - Standardized point-of-entry (POE) protocols define patient transport rules
  - When there is STEMI, the cath lab is activated promptly
  - Patients transported to a STEMI-referral hospital remain on the stretcher with EMS present pending a transport decision
  - When “walk-in” patients present to a STEMI-referral hospital and require primary PCI, activation of EMS occurs
  - Hospitals close the communication gap with EMS

The Ideal STEMI-Referral Hospital

- **In an Ideal System:**
  - Standardized POE protocols dictate transport of STEMI patients directly to a STEMI-receiving hospital based on:
    - Specific criteria for risk
    - Contraindications to fibrinolysis
    - The proximity of the nearest PCI service
  - Patients presenting to a STEMI-referral hospital are treated according to standardized triage and transfer protocols
  - Incentives are provided to rapidly:
    - Treat STEMI patients in accordance with ACC/AHA guidelines
    - Transfer to a STEMI-receiving hospital for primary PCI using:
      - Reperfusion checklists
      - Standard pharmacological regimens and order sets
      - Clinical pathways
  - There is rapid and efficient data transfer, data collection and feedback
  - Integrated plans for return of the patient to the community for care are provided

The Ideal STEMI-Receiving Hospital

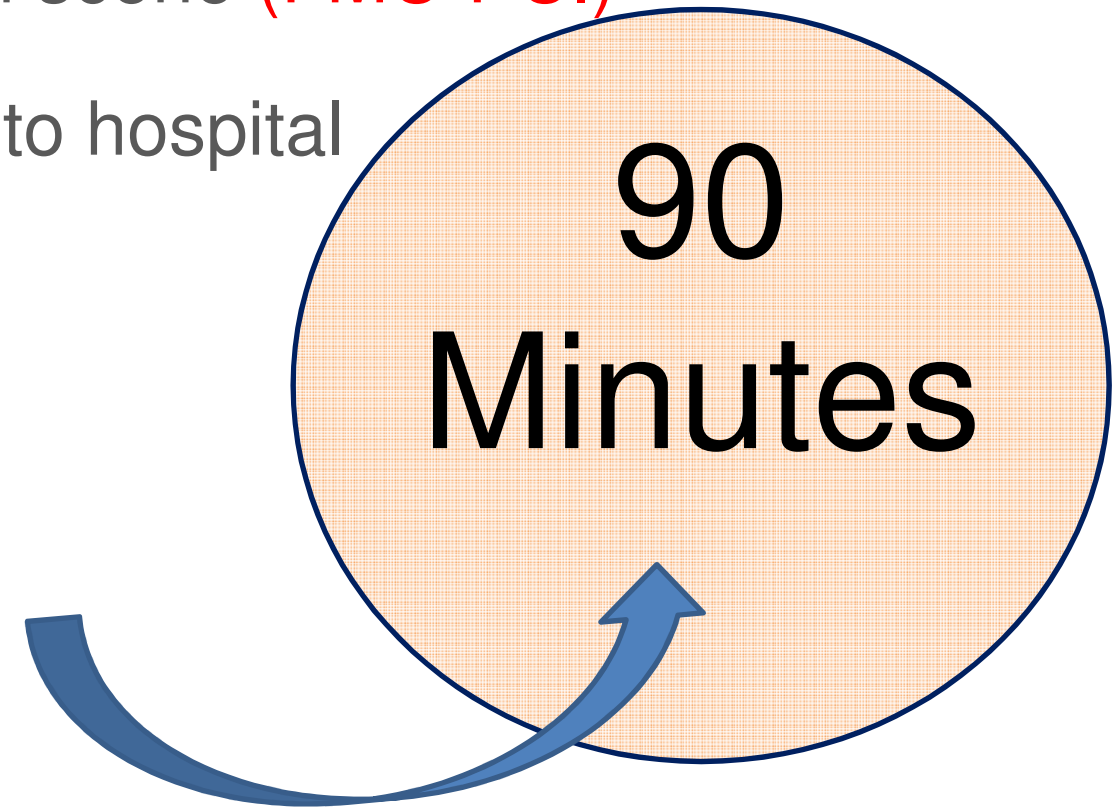
- **In an Ideal System:**
  - Pre-hospital ECG diagnosis of STEMI, ED notification and cath lab activation occurs according to standard algorithms
  - Algorithms facilitate:
    - A short ED stay for the STEMI patient
    - Transport directly from the field to the cath lab
  - Single-call systems from STEMI-referral hospitals immediately activate the cath lab
  - Primary PCI is provided as routine treatment for STEMI 24, 7
  - STEMI-receiving hospital's administration puts their support in writing
  - A multidisciplinary team meets regularly to identify and solve problems
  - A continuing education program is designed and instituted
  - A mechanism for monitoring performance, process measures and patient outcomes is established

THE ULTIMATE GOAL

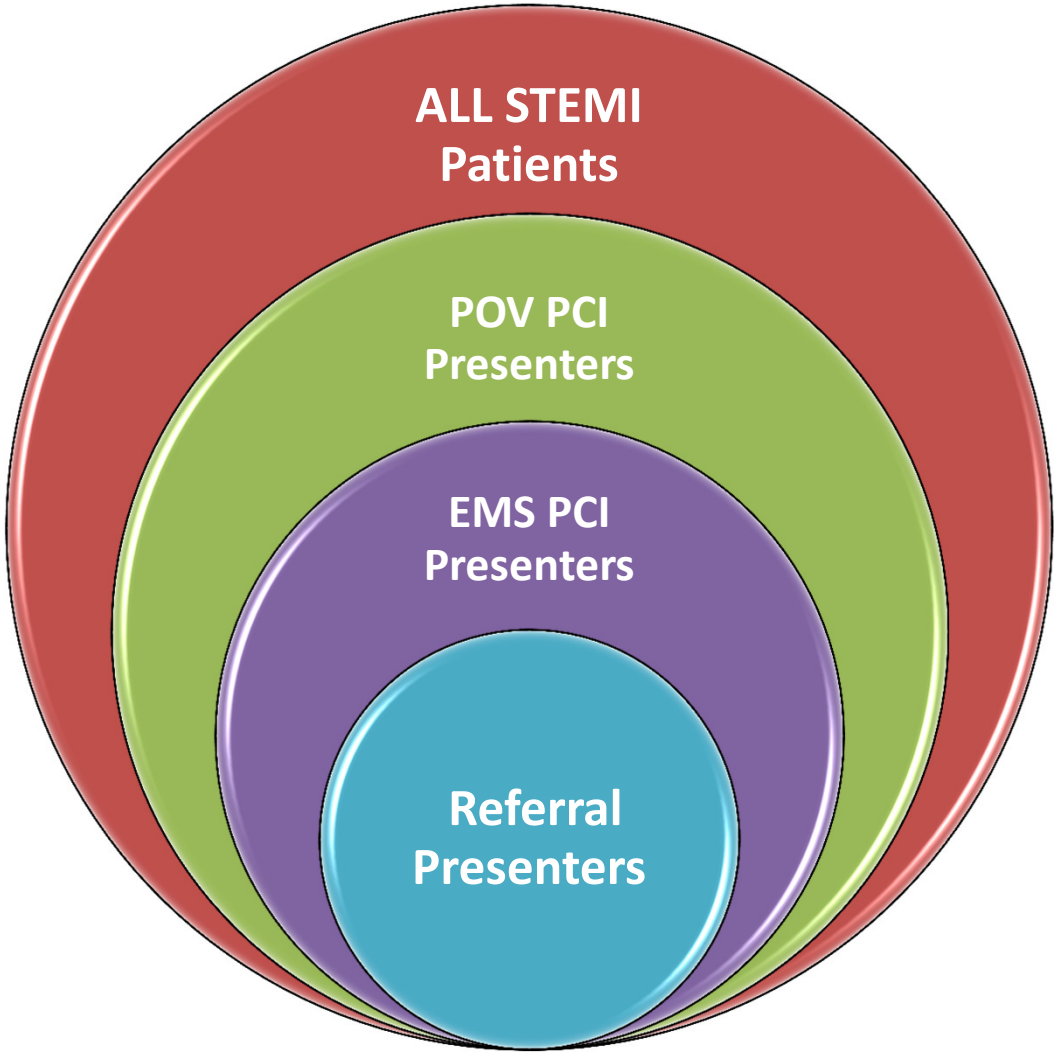
- Time of First Medical Contact
  - – EMS arrival on scene (FMC-PCI)
  - – Patient arrival to hospital
    - (D2B)

      TO

    Balloon Inflation



Every Patient Counts!



January 2014

MISSION: LIFELINE EMS RECOGNITION

Mission Lifeline: EMS Recognition

WORKING WITH EMS ON DATA/QI

- EMS Recognition: Award Applications Due 2/28
- Awards announced in the Spring
- Free for EMS Agencies

Why Work With Our EMS Agencies to Apply?

- Helps facilitate the communication/engagement between EMS and hospitals
- Helps EMS start to understand how QI and data can help enhance the services they provide and how they impact the overall continuum of patient care
- Promotes teamwork and recognition EMS looks for
- Helps break down the barriers of data/communication
  - Improves pre-hospital data accessibility

What are the Achievement Measures?

1. Percentage of patients with non-traumatic chest pain ≥ 35 years treated by EMS who get a pre-hospital 12-lead electrocardiogram
2. Percentage of STEMI patients with first (pre-hospital) medical contact to device time within 90 minutes (non-transfer)
3. Percentage of STEMI patients taken to a referral hospital who administers fibrinolytic therapy with a door to needle time within 30 minutes.

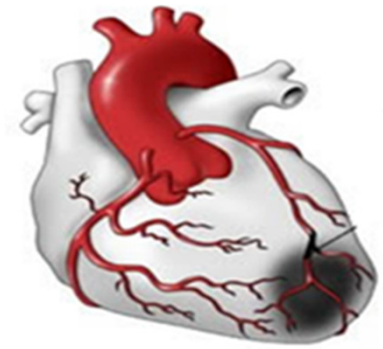
Must all 3 measures be reported?

Transport Destination Protocols determine achievement measures required to complete:

Agencies with STEMI patients transported to STEMI Receiving Centers only	**Reporting Measures #1 and #2 required**
Agencies with STEMI patients transported to STEMI Referring Centers only	**Reporting Measures #1 and #3 required**
Agencies with STEMI patients transported to both STEMI Receiving Centers and STEMI Referring Centers	**Reporting Measures #1, #2, and #3 required**

What is the volume requirement for EMS Recognition?

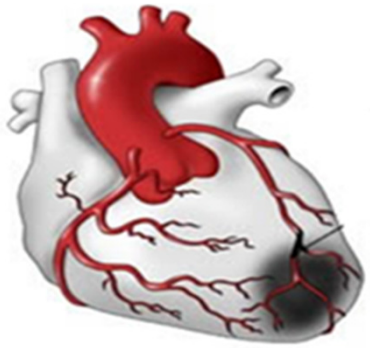
- BRONZE eligibility = At least 2 STEMI patients in the reporting quarter with a minimum of 4 total for the year



2	Q1 = Eligible for Bronze
1	Q2 = Not Eligible for Bronze
1	Q3 = Not Eligible for Bronze
0	Q4 = Not Eligible for Bronze
4	Annual – Q1 Bronze

What is the volume requirement for EMS Recognition?

- SILVER eligibility = At least 2 STEMI patients in EACH reporting quarter with a minimum of 8 total for the year. Each quarter must meet achievement criteria.

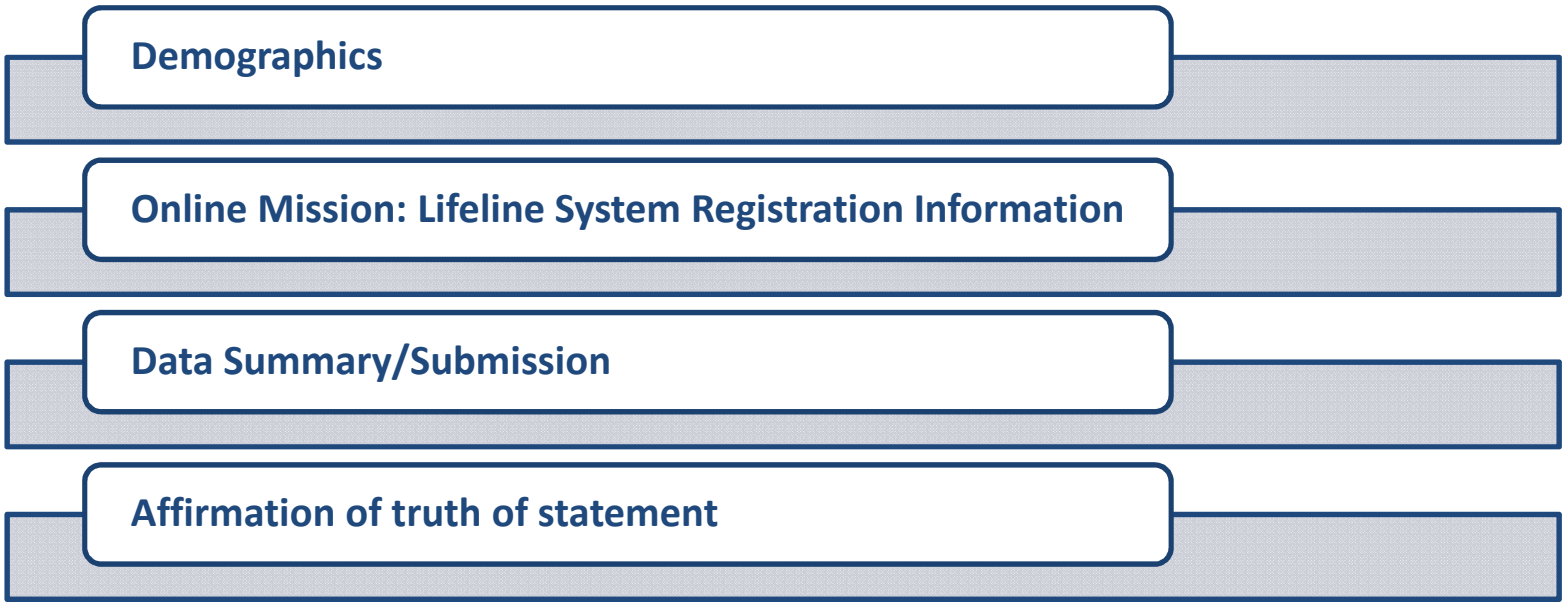


- 2 Q1 = Eligible for Bronze
- 2 Q2 = Eligible for Bronze
- 2 Q3 = Eligible for Bronze
- 2 Q4 = Eligible for Bronze

- 8 Annual – Q1 Eligible for SILVER or BRONZE

How will AHA collect the Pre-Hospital Data?

- Self reported summary
- Web based submission



Will the validity of the data be verified?

- No *(AHA Staff will not validate, but all applications will be subject to audit)*
- Person submitting data is requested to be
  - Qualified and appropriately designated staff person of the EMS Agency
  - Training Officer
  - Administrative Leadership

What is the real reason we need to do this?

Thank You

Questions