



MISSISSIPPI STATE DEPARTMENT OF HEALTH

ST Elevation Myocardial Infarction (STEMI)

System of Care Plan

June 20, 2011



Mississippi **Healthcare Alliance**



AMERICAN
COLLEGE *of*
CARDIOLOGY
FOUNDATION

ACTION Registry®-GWTG™



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Introduction

ST-elevation myocardial infarction (STEMI) is a significant public health problem and carries a high risk of death and disability. The American Heart Association (AHA) estimates that as many as 400,000 people will suffer from a STEMI heart attack each year in the United States. Mississippi currently leads the nation in mortality and morbidity from cardiovascular disease.

Over the last 20 years, advances in the treatment of STEMI have resulted in dramatic reductions in death attributed to STEMI. Rapid reperfusion of the STEMI patient, utilizing either fibrinolytic therapy, or primary Percutaneous Coronary Interventions (PCI), is the most important therapy in reduction of death from STEMI heart attacks.

Numerous studies have shown a mortality and morbidity advantage with primary PCI when this therapy can be delivered in a timely manner. The American College of Cardiology (ACC)/AHA guidelines and the European Society of Cardiology guidelines for STEMI are in agreement that early and complete reperfusion is optimal, with the door-to-balloon time of 90 minutes and the door-to-needle time of 30 minutes.

Unfortunately, over 30 percent of STEMI patients fail to receive any form of reperfusion therapy. Of those that receive thrombolytic therapy, fewer than half are treated with a door-to-needle time of less than 30 minutes. Of those that receive primary PCI, only 40 percent are treated with a door-to-balloon time of less than 90 minutes. In those patients who either receive no reperfusion therapy or delayed reperfusion therapy, the short and long term outcomes are significantly worse, as compared to patients treated according to the ACC/AHA guidelines.

Objectives

STEMI patients should be recognized as quickly as possible to identify those eligible for thrombolytic or primary PCI therapy. Research has shown that both morbidity and mortality can be reduced by the approach of rapid interventional reperfusion within ninety (90) minutes of hospital arrival. Additional research has demonstrated that in-the-field recognition by pre-hospital providers utilizing 12-lead ECG, coupled with pre-hospital notification of the receiving facilities, can further reduce time to reperfusion, resulting in improved outcomes.

The Mississippi public must be educated in the recognition of the symptoms of STEMI, and the benefits of utilizing the 9-1-1 system. Unfortunately, fewer than 50% of myocardial infarction patients are transported to the hospital by ambulance. It is recognized that major delays from patient symptom onset to presentation for medical care also exist.

- Physicians should pursue a leadership role in community education, promoting early recognition of heart attack symptoms and the need to call 9-1-1 as quickly as possible after the onset of symptoms.
- A statewide public awareness campaign about the importance of early recognition of heart attack signs and symptoms, and the importance of the early activation of the EMS system, should be an integral part of the STEMI System of Care.

EMS personnel must be trained to recognize, treat, and transport STEMI patients in a timely manner. The goal should be to:

- Recognize the symptoms of a potential STEMI in the field and rapidly conduct a 12-lead ECG;
- Identify the presence of a STEMI on the initial ECG and if feasible, transmit these findings wirelessly to the nearest PCI Center Emergency Department for verification; and
- Transport the patient to the closest available facility capable of Primary PCI, even if that means bypassing the closest Emergency Department.

Hospitals providing care to cardiac patients must have a recognized STEMI plan that defines the optimal treatment pathways.

- Response systems, including optimal time frames, must be maintained and monitored from EMS recognition to ED arrival to reperfusion therapy.
- Patients who have chest pain should be evaluated with an initial ECG within ten (10) minutes of hospital arrival.
- Patients who meet thrombolytic criteria should receive therapy within 30 minutes of hospital arrival and those referred for invasive cardiac care should receive this within 90 minutes of hospital arrival.
- Non-PCI hospitals should establish a system to rapidly transfer STEMI patients to a qualified PCI hospital.

Health professional training programs for physicians, nurses, and EMTs should be enhanced to include standards of STEMI recognition and management.

- One (1) hour of CME training on acute STEMI recognition and care for all physicians each license renewal cycle.
- One (1) hour of CEU training on acute STEMI recognition and care for all nurses each license renewal cycle.
- One (1) hour of training for all EMTs on acute STEMI recognition and care each license renewal cycle.

System Components and Organization

The STEMI System of Care is comprised of a number of separate components, which are organized and work together, as a system. The individual components and elements are described below:

- Pre-Hospital Component – EMS units are an integral part of the STEMI System. All EMTs and Paramedics need to have a basic knowledge and awareness of the STEMI System elements and system function. Specifically, this knowledge refers to entry criteria (identification of a STEMI), triage and destination guidelines, and communication procedures. On-line and Off-line medical control physicians will also need to be involved with the STEMI System elements and system function.
- Hospital Component – Hospitals may participate in the STEMI System on a voluntary basis, but must comply with and maintain nationally accepted criteria by December 30, 2012.

Criteria for a PCI Center (Level 1 Heart Attack Center)
<ul style="list-style-type: none">• 24-h cardiac catheterization laboratory availability• 24-h cardiovascular surgery availability• Comprehensive interventional cardiology and cardiovascular surgery services• Standardized protocols at referral and receiving hospitals• Never on diversion for STEMI patients• Transfer agreements in place• Education and training programs for transport, referral, and receiving hospital personnel• Quality assurance program

- Not all STEMI patients require admission into critical care and some may be safely monitored in an intermediate care setting. Hospitals on diversion for Critical Care will NOT be relieved of their obligation to accept the STEMI patient. However, if the cath team/lab is overwhelmed, it is acceptable to divert a STEMI patient to another PCI Center.

MHCA Volume Criteria for a PCI Center (Level 1 Heart Attack Center)
<ul style="list-style-type: none">• >200 PCI patients/yr (>36 STEMI) per hospital as per ACC/AHA guidelines• >75 PCI patients/yr per interventional cardiologist as per ACC/AHA guidelines OR <ul style="list-style-type: none">• Severity adjusted complication and mortality rates must be less than national average benchmarks as defined by specific site comparison of ACTION registry data to national data*.

** If outcome criteria are not met, the practitioner and/or hospital will be placed under probation for six (6) months. During probation, all interventional cases will be proctored by a compliant practitioner and outcome data should reflect national performance benchmarks.*

If the interventional outcomes at end of the six (6) month period are still sub-standard, then interventional privileges would be suspended until 25 sequential proctored interventional cases were performed, and national benchmarks for performance met.

- Additional standards are listed in Appendix A.
- Annually, each hospital will be able to determine if they have the resources available to be a STEMI center.
 - The decision to participate must be made jointly by both the hospital administration and medical staff. A written commitment in the form of a resolution passed by the appropriate quorum of the governing authority of the hospital and co-signed by the director of the medical staff signifies the hospital's desire to participate in the system.
 - Each STEMI hospital must have an emergency physician and cardiologist (co-directors) responsible for oversight of the STEMI program.
 - STEMI program co-directors are responsible for developing and maintaining basic STEMI care protocols for the hospital.
 - STEMI program co-directors also have oversight responsibility for the STEMI component of the hospital PI program.
- Communication Component – Communications are critical to the function of the STEMI System. Communications provide: 1) essential knowledge of the overall status of pre-hospital STEMI activities and hospital resource

availability on a continual basis; 2) access to system organization and function protocols whenever such information is requested by pre-hospital or hospital-based personnel; 3) ideally a link between the field and participating hospitals for the rapid exchange of information including 12 lead ECG telemetry, resulting in efficient pre-hospital care and hospital preparation for STEMI patient arrival; and 4) collection of uniform system-wide data for PI activities and development of a statewide STEMI database. Providing all of these functions to an entire system on a continuous basis ideally requires a centralized communications infrastructure, capable of directly linking pre-hospital providers with participating STEMI hospitals.

- Performance Improvement (PI) Component – This component is essential to the STEMI System to document continuing function and allows the implementation of improvements in a system where patients may not have the ability to make their own personal care choices and depend on the system for adequacy and appropriateness of care. The efficacy of the initial care in STEMI patients plays a pivotal role in determining their outcome. Therefore, there is a requirement to evaluate the system on a continual basis to determine the effectiveness of STEMI care and system performance.
 - This component uses the ACC/AHA ACTION-GWTG Registry, which provides an overall look at STEMI emergencies, care and outcomes, provides information for use in determining and developing STEMI teaching programs, and provides information for potential research studies.
 - The PI process involves specific steps at each level of care within the system. System-wide evaluation will be the responsibility of the STEMI Sub-committee of the State PI Committee. In hospitals, a multi-disciplinary peer review process must occur and must review both medical care and STEMI Center function. Pre-hospital evaluation will normally be conducted by the EMS provider and off-line medical director. A more detailed outline of the PI Program is contained in Appendix B.
 - Case-by-case feedback will be provided to EMS, the referring ED/ED physician, cardiac catheterization lab, treating hospital, and attending cardiologist.
- STEMI Regions – This component facilitates system organization, coordination, and education requirements for both practitioners and the public. Each STEMI Region (North, Central, South) will have a regional STEMI Coordinator, who will schedule and facilitate quarterly regional meetings. Information of the organization of the regions can be found in Appendix C.

- STEMI System Advisory Committee (SSAC) – The MS Healthcare Alliance Board will serve as the SSAC. This committee will have the responsibility for system guidance and technical advice, which will occur through regulatory development. Detailed information on the SSAC is contained in Appendix D.
- Community Education – It is recognized that major delays exist from patient symptom onset to presentation for medical care. It is also recognized that the 9-1-1 system to access the EMS system is significantly under-utilized. Physicians, particularly primary care physicians, should pursue a leadership role in community education, promoting early recognition of heart attack symptoms and the need to call 9-1-1 as quickly as possible after the onset of symptoms. A statewide public awareness campaign about the importance of early recognition of heart attack signs and symptoms and the importance of the early activation of the EMS system should be an integral part of the STEMI System of Care.

System Function

General function of the system will follow the scenario of:

- STEMI event occurs or warning signs/symptoms are present; 9-1-1 is called.
- Field triage is conducted by EMS personnel, who determine if the patient meets system entry criteria as defined by 12-lead ECG. When a patient meets system entry criteria, on-line medical control will be contacted (off-line medical control protocol may be used if communications are degraded/unavailable). The emergency physician (who can refer to a cardiologist) of the nearest STEMI center will be contacted. If more than one STEMI center is available, then patient choice prevails.
- Communication is established with a STEMI network center and basic information, including 12-lead ECG interpretation, is provided on all STEMI patients to be transported to a hospital.
- In an ideal situation, if assistance with patient designation is needed, EMS will contact the regional medical communications center, where a STEMI Center resource tracking tool (SMARTT or similar program) will be used to determine the appropriate destination for the patient.
- Destination hospital activates “Code STEMI or Cardiac Alert” while patient is in transport.
- Patient is transported to the destination STEMI Center.

System Operations

System operations refer to the activities that occur after it is determined that a patient meets system entry criteria and communications have been established within the system.

- Pre-hospital activities
 - Pre-hospital care will be carried out in compliance with the Mississippi Model Protocols and the EMS provider's medical control plan. Refer to Appendix E for a sample EMS Triage and Destination Plan.
 - STEMI patients are best served by rapid transport to the most appropriate facility. Field time should be kept to a minimum; however, pre-hospital care should not be sacrificed for less time on scene. In-transit treatment of STEMI patients should be considered.
 - In situations where EMS-to-PCI time (utilizing ground or air transport) will likely exceed 120 minutes due to delays such as lengthy transport times, EMS will screen STEMI patients for thrombolytic eligibility using the Mississippi Model Protocols. If cardiogenic shock or an absolute contraindication to thrombolytic therapy is present, the patient will be routed to the nearest available PCI center with a goal of EMS-to-balloon time of 120 minutes or less. When any uncertainty exists about the most appropriate routing for a particular STEMI patient, EMS will seek on-line medical direction with assistance of regional medical communications.
- Hospital operations
 - Hospital STEMI management is an essential part of any STEMI system. This phase of STEMI care requires adequate resources (equipment and facilities) and personnel with training and commitment to carry out rapid initial assessment, stabilization, and definitive care, including invasive treatment, critical care, and recuperative care. In addition, cardiac rehabilitation services should be initiated as appropriate.
 - In the event a patient or family member requests transport to a specific facility that does not meet system destination guidelines, EMS, regional medical communications (if available), and/or on-line medical control will make a reasonable effort to convince the patient/family member to avail themselves of the STEMI System Plan. However, the patient's wishes will ultimately determine the receiving destination.

- If the patient is unstable (inadequate spontaneous ventilations without a secured airway or in cardiac arrest), the patient should be transported to the nearest hospital with emergency physician coverage. A secured airway includes any airway device that allows adequate ventilation and oxygenation.
- Inter-facility transfers – In the event a STEMI patient is received by a non-PCI hospital, the patient should be transferred as high priority to a PCI hospital. Ideally, regional medical communications will assist with arranging an inter-facility transfer to a hospital with STEMI capabilities. Any PCI hospital participating in the STEMI System agrees to accept STEMI inter-facility transfers upon request.

Appendix A: STEMI Center Standards

PCI Centers:

- Hospital Organization
 - STEMI service line or equivalent
 - STEMI Care Coordinator or Service Line Director
 - Departments/Sections
 - Interventional/Non-Interventional Cardiology
 - Cardiac Catheterization Laboratory
 - Emergency Department
 - Coronary Care Unit
 - Cardiovascular Surgery
 - STEMI treatment protocols
 - Protocols for triage, diagnosis (ECG \leq 10 minutes), and Cardiac Catheterization Laboratory activation
 - A single activation telephone call should alert the STEMI team
- Clinical Capabilities
 - Specialty availability (contact made with patient and care plan determined):
 - Emergency Medicine – 10 minutes (ECG \leq 10 minutes)
 - Interventional Cardiology – 30 minutes after notification by Emergency Department, or in accordance with hospital STEMI plan
 - Cardiac Catheterization Lab – 30 minutes after activation
 - Consultant availability (on-call in accordance with hospital STEMI Plan):
 - Cardiovascular Surgery
 - Pulmonary/Critical Care

- Radiology
- Internal Medicine/Hospital Care Services
- Facilities and Resources
 - Emergency Department
 - Personnel
 - Designated Physician Director
 - Emergency Medicine Specialists
 - Nursing personnel with expertise (ACLS/ECG interpretation/cardiac arrhythmia monitoring/cardiac drugs) to monitor patient until admission to a hospital unit or transfer
 - Equipment
 - Airway control and ventilation equipment
 - Oxygen/Pulse oximetry
 - End-tidal CO2 determination
 - Suction devices
 - 12-lead ECG capability
 - Ability to obtain/interpret cardiac bio-markers
 - Intravenous fluid administration equipment
 - Sterile vascular (venous and arterial) access sets
 - Gastric decompression equipment
 - ACLS drugs
 - Cardiac rhythm monitoring capability
 - Bi-phasic cardiac defibrillator equipment
 - Emergency temporary pacemaker capabilities (transthoracic/transvenous)
 - Intubation/emergency airway management equipment

- Two-way communication capability with EMS
- Coronary/Intensive Care Unit
 - Personnel
 - Designated Medical Director
 - Critical Care/Pulmonary Medicine/Intensivist (in-house or immediately [≤ 30 minutes] available)
 - Equipment: Appropriate cardiac monitoring and respiratory support equipment
- Cardiac Catheterization Laboratory
 - Personnel
 - Radiologic staff with experience in cath lab operations and all aspects of diagnostic and interventional PCI
 - Nursing staff experienced in cath lab operations, conscious sedation, cardiac monitoring, and cardiac emergencies
 - Equipment
 - Guiding catheters, a variety of coronary guidewires, a variety of coronary stents
 - Advanced hemodynamic and ECG monitoring
 - Bi-phasic cardiac defibrillator equipment
 - Intravenous anti-thrombin and anti-platelet drugs
 - Intravenous vasoactive / vasopressor medications
 - Intravenous anti-arrhythmic medications
 - Distal protection devices
 - Aspiration thrombectomy catheters
 - Devices for acute hemodynamic support (i.e., IABP, Impella)
 - Temporary transvenous pacemaker

- Intubation/emergency airway management equipment
- Rehabilitation
 - Protocol for cardiac patients
 - Full in-house service or transfer agreement with cardiac rehabilitation facility
- Laboratory Services
 - Standard analyses of blood, urine, etc.
 - Blood typing and cross-matching
 - Comprehensive blood bank or access to equivalent facility
 - Blood gases and pH determinations
 - Comprehensive coagulation testing
 - Cardiac bio-marker testing
- Continuing Education: Formal programs on Acute Coronary Syndrome-STEMI for:
 - Staff physicians (Cardiology/Emergency Medicine/Primary Care)
 - Nursing (Cardiac Cath Lab/ED/CCU)
 - Allied health personnel (Respiratory Therapy/ED technicians)
 - Community physicians
 - EMS

Non-PCI Centers:

- Hospital Organization
 - Departments/Sections
 - Emergency Department
 - STEMI treatment protocols
 - Each ED should maintain a standardized reperfusion STEMI care pathway that designates primary PCI as the preferred strategy if transfer to a primary PCI Center can be achieved within ACC/AHA guidelines.

- Each ED should maintain a standardized STEMI care pathway that designates fibrinolysis in the ED (for eligible patients) when transfer to a primary PCI Center within ACC/AHA guidelines cannot be achieved.
- If reperfusion strategy is for transfer to a primary PCI Center, patients should be transported to the most appropriate PCI Center where the first door-to-balloon time is \leq 120 minutes.
- Clinical Capabilities
 - Specialty availability (contact made with patient and care plan determined):
 - Emergency Medicine – 10 minutes (ECG \leq 10 minutes)
- Facilities and Resources
 - Emergency Department
 - Personnel
 - Designated Physician Director
 - Emergency Medicine Specialists (including mid-level practitioners)
 - Nursing personnel with expertise (ACLS/ECG interpretation/cardiac arrhythmia monitoring/cardiac drugs) to monitor patient until admission to a hospital unit or transfer
 - Equipment
 - Airway control and ventilation equipment
 - Oxygen/Pulse oximetry
 - End-tidal CO₂ determination
 - Suction devices
 - 12-lead ECG capability
 - Intravenous fluid administration equipment
 - Gastric decompression equipment
 - ACLS drugs

- Cardiac rhythm monitoring capability
 - Bi-phasic cardiac defibrillator equipment
 - Intubation/emergency airway management equipment
 - Two-way communication capability with EMS
- Continuing Education: Formal programs on Acute Coronary Syndrome-STEMI for:
 - ED physicians/mid-level practitioners
 - Nurses
 - Allied health personnel
 - Community physicians
 - EMS

Appendix B: Performance Improvement (PI)

Performance Improvement is a vital part of the STEMI System. It is used to document continuing proper function of the system and evaluation of that function to implement improvements in system operation and STEMI patient management. In a STEMI system, patients have virtually no time to make specific choices regarding acute and critical medical care. Therefore, the system has a moral obligation to perform evaluation functions to assure that the highest level of care is being provided, and that improvements are implemented whenever possible in a timely manner.

The PI program will be system-wide. Every participating organization or facility is required to participate in the system PI process. The appropriateness, quality, and quantity of all activities of the STEMI system must be continuously evaluated.

- The STEMI PI Sub-committee of the State PI Committee will be responsible for the PI oversight of the STEMI System.
 - The STEMI PI Sub-committee will be chaired by a cardiologist participating in the STEMI System.
 - An Emergency Medicine physician will serve as vice-chair of the sub-committee.
 - Each PCI Center will have a representative on the STEMI PI sub-committee.
 - Non-PCI Centers may participate in the STEMI PI sub-committee. The number of representatives will be determined by the permanent members of the sub-committee.
 - Three EMS representatives will be appointed: one each from a hospital-based EMS provider, a non-hospital based EMS provider, and public/government EMS provider.
- Specific audit filters will be established by the STEMI PI sub-committee.

In general, the following processes should be performed by each agency or organization. The results of these reviews will be reported to the STEMI PI sub-committee.

- Each organization assigns a PI person to oversee the process
- Standards established
- Determine audit filters
- Collect data

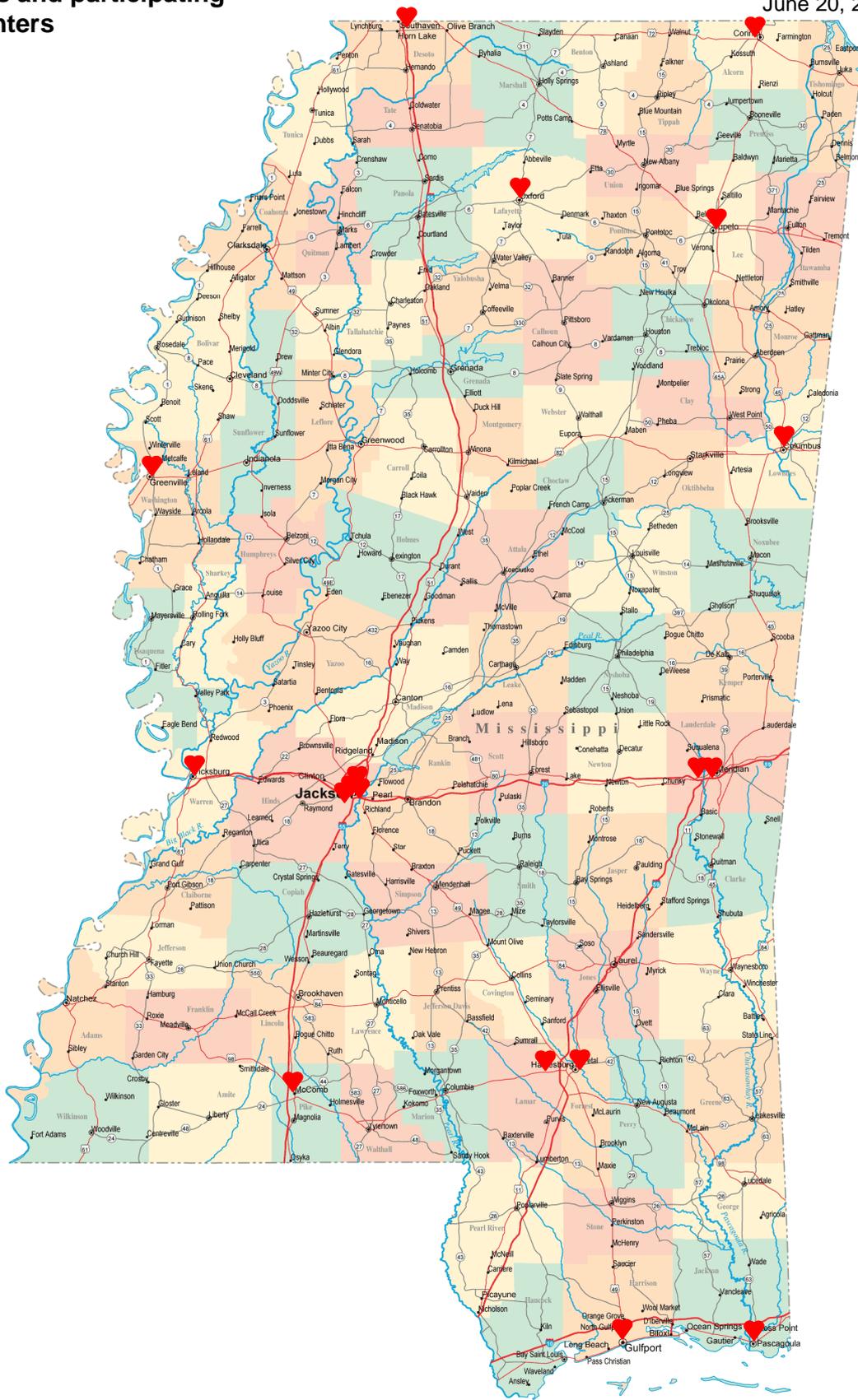
- Evaluate data
- Determine PI issues present
- Develop corrective action plan (CAP)
- Re-evaluate to document results/effectiveness of CAP

Specific items for evaluation:

- Pre-hospital:
 - Accuracy of patient assessment and 12-lead ECG interpretation
 - Protocol adherence
 - Procedures initiated/completed
 - Medical control interaction
 - Transport mode (air/ground)
 - Record/documentation
 - Inter-facility care/transport
- Hospital:
 - Protocol adherence
 - Outcome review
 - Complications
 - Deaths
 - Achievement of time sensitive goals, i.e., door-to-balloon time
 - Adherence to Level 1 Heart Attack Center criteria
- Regional system:
 - Communications/notifications
 - Triage
 - Protocol adherence

**Appendix C: STEMI
Regions and participating
PCI Centers**

Mississippi State Department of Health
STEMI System of Care Plan
June 20, 2011



Regional Design

- There will three regions established in the STEMI System of Care: North (along and north of Highway 82), Central, and South (along and south of Highway 84). Assignment of hospitals to the administrative regions is not intended to direct, change, or influence traditional/corporate referral patterns.
- North Region – The following PCI Centers are assigned to the North STEMI Region:
 - Baptist Memorial Hospital (BMH) – Desoto County, Southaven
 - BMH – North Mississippi, Oxford
 - BMH – Golden Triangle, Columbus
 - Delta Regional Medical Center, Greenville
 - Magnolia Regional Health Center, Corinth
 - North Mississippi Medical Center, Tupelo
- Central STEMI Region – The following PCI Centers are assigned to the Central STEMI Region:
 - Anderson Regional Medical Center, Meridian
 - Central Mississippi Medical Center, Jackson
 - Mississippi Baptist Medical Center, Jackson
 - River Region Medical Center, Vicksburg
 - Rush Foundation Hospital, Meridian
 - St. Dominic Hospital, Jackson
 - University of Mississippi Medical Center, Jackson
- South STEMI Region – The following PCI Centers are assigned to the South STEMI Region:
 - Forrest General Hospital, Hattiesburg
 - Memorial Hospital of Gulfport, Gulfport
 - Singing River Hospital, Pascagoula
 - Southwest Regional Medical Center, McComb
 - Wesley Medical Center, Hattiesburg

Appendix D: STEMI System Advisory Committee (SSAC)

The STEMI System Advisory Committee (SSAC) will be established by the Mississippi State Department of Health to provide guidance and technical advice in the implementation and execution of the state STEMI Plan.

- A STEMI administrator will oversee operations of the SSAC and STEMI PI sub-committee. The administrator will be appointed by the MS Healthcare Alliance.
- The committee will be co-chaired by a cardiologist and emergency medicine physician participating in the STEMI System.
- Committee membership will be comprised of at least one (1) representative from the following groups:
 - Emergency Medicine Physician
 - Emergency Nursing
 - Hospital Administration
 - Cardiologist
 - Cardiac Surgeon
 - STEMI Nursing
 - ACTION-GWTG Registry
 - EMS Provider (Air/Ground ALS)
 - EMS Administration
 - American Heart Association

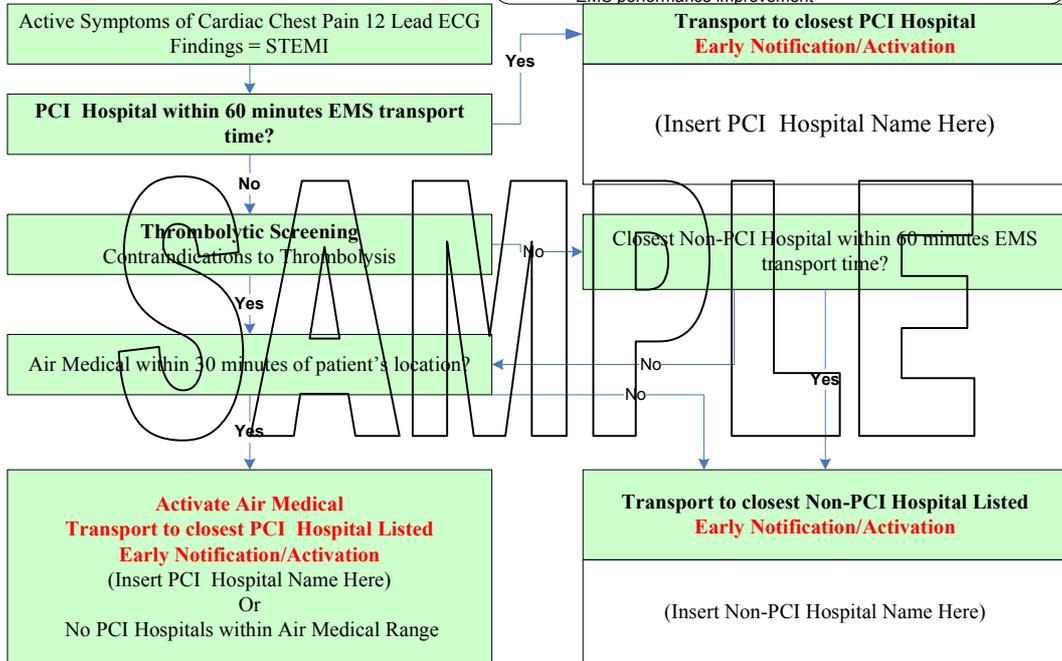
The term of membership is three (3) years with staggered terms for the co-chairmen. Optimally, there will be 18-24 members of the SSAC.

The SSAC will meet quarterly, or as called by the chair. Meetings of the SSAC may be independent or may be combined with other advisory committees such as MTAC and EMSAC.

APPENDIX E: Sample EMS Triage and Destination Plan

**STEMI
 EMS TRIAGE and DESTINATION PLAN**

<p style="text-align: center;">STEMI Patient (ST Elevation Myocardial Infarction)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Cardiac symptoms greater than 15 minutes and less than 12 hours and <input type="checkbox"/> 12 lead ECG criteria of 1 mm ST elevation in 2 or more contiguous leads or <input type="checkbox"/> Left Bundle Branch Block NOT KNOWN to be present in the past 	<p>The Purpose of this plan is to:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Rapidly identify STEMI patients who call 911 or present to EMS <input type="checkbox"/> Minimize the time from onset of STEMI symptoms to coronary reperfusion <input type="checkbox"/> Quickly diagnose a STEMI by 12 lead ECG <input type="checkbox"/> Complete a reperfusion checklist (unless being transported directly to a PCI hospital) to determine thrombolytic eligibility <input type="checkbox"/> Rapidly identify the best hospital destination based on symptom onset time, reperfusion checklist, and predicted transport time <input type="checkbox"/> Early activation/notification to the hospital prior to patient arrival <input type="checkbox"/> Minimize scene time to 15 minutes or less (including a 12 lead ECG) <input type="checkbox"/> Provide quality EMS service and patient care to the EMS Systems citizens <input type="checkbox"/> Continuously evaluate the EMS System based on Mississippi's STEMI EMS performance improvement
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- All STEMI Patients must be triaged and transported using this plan. This plan is in effect 24/7/365
- All Patient Care is based on the EMS Chest Pain and STEMI Protocol
- Consider implementing a prehospital thrombolytic program if a STEMI patient cannot reach a hospital within 120 minutes using air or ground EMS transport.
- PCI (Percutaneous Coronary Intervention) Hospital** = a hospital with an emergency interventional cardiac catheterization laboratory capable of providing the following services to acute STEMI patients. Free standing emergency departments and satellite facilities are not considered part of the PCI Hospital.
 - 24/7 PCI capability within 30 minutes of notification (interventional cardiologist present at the start of the case)
 - Single Call Activation number for use by EMS
 - Accepts all patients regardless of bed availability
 - Provides outcome and performance measure feedback to EMS including case review
- Non-PCI Hospital** = a local hospital within the EMS System's service area which provides emergency care, including thrombolytic administration, to an acute STEMI patient but does NOT provide PCI services.