

## STEMI SYSTEM OF CARE QUESTIONNAIRE

Are you already a part of a STEMI System of Care? Or, are you involved in an effort considering implementing a STEMI System of Care? If so, please take the time to fill out the STEMI System assessment questionnaire and let the AHA know about your initiative. This questionnaire should be filled out on behalf of your overall STEMI system, not just your individual institution. Search the Mission: Lifeline STEMI Systems Directory to see if your system is already registered with Mission: Lifeline.

Should you need assistance filling out the questionnaire, please feel free to contact the Mission: Lifeline representative for more information.

### Part A: Contact Information

1. Describe the current status of your STEMI System.

- System in place
- System being planned (The system oversight group is in place and planning has begun)
- System being considered (The development of the system is currently being debated)

2. Are you willing to have your STEMI System listed in the Mission: Lifeline STEMI Systems Directory?

- Yes
- No

3. Name of STEMI System (*Please indicate how you would want it to be listed in the Mission: Lifeline STEMI Systems Directory*):

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4. Name and contact information (Name, Address, City, State, Zip, Phone, e-mail)

of individual completing the questionnaire:

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5. Name and contact info for STEMI System Champion. Click here if this person is the same as person completing the questionnaire.

Name, Address, City, State, Zip, Phone, e-mail

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6. Is the System Champion willing to be the contact person listed in the Mission: Lifeline STEMI Systems Directory?

- Yes
- No

7. Occupation of System Champion(s): (Check all that apply)

- Cardiologist



- ED physician
- Other physician
- Nurse
- EMT/paramedic
- Hospital/health care administrator
- Other: \_\_\_\_\_

8. What organization is the System Champion(s) affiliated with? (Check all that apply):

- PCI hospital
- Non-PCI hospital
- EMS
- Other: \_\_\_\_\_

9. Enter the zip codes that are covered in your STEMI system of care.

\_\_\_\_\_

10. Is there a website for your system that you want listed in the Mission: Lifeline STEMI Systems Directory? If so, please provide the website url.

- Yes, the website is: \_\_\_\_\_
- No

### Part B: STEMI Initiative General Information

*(The next three questions are formatted as a grid in the survey)*

Indicate how the following organizations are involved, if at all, in the STEMI initiative:

11. Partnered in the STEMI initiative. (Check all that apply)

(Involved in the initial development and implementation of the system)

- Local or state government
- Local American Heart Association
- American College of Cardiology Chapter
- Hospital// cardiology QI personnel
- Hospital administration
- Cath lab administration
- Emergency medicine
- Emergency Medical Services
- Nursing
- Air transport system
- Third party payers
- Other: \_\_\_\_\_

11. Work with, sponsor or endorse the lead and/or governing organizations. (Check all that apply)

( Organizations / agencies that endorse or support the system development but may or may not have been directly involved in the “hands on” system development)

- Local or state government
- Local American Heart Association
- American College of Cardiology Chapter
- Hospital/ cardiology QI personnel
- Hospital administration
- Cath lab administration
- Emergency medicine
- Emergency Medical Services
- Nursing
- Air transport system
- Third party payers
- Other: \_\_\_\_\_

11. Represented on the governing body that provides oversight. (Check all that apply)

( Those who regularly attend meetings and who oversee compliance with protocols, data collection and management – enforcing on-going compliance with system protocols)

- Local or state government
- Local American Heart Association
- American College of Cardiology Chapter
- Hospital/ ED/ cardiology QI personnel
- Hospital administration
- Cath lab administration
- Emergency medicine
- Emergency Medical Services
- Nursing
- Air transport system
- Third party payers
- Other: \_\_\_\_\_

12. Describe the system coverage, specifically EMS transport range. (Check all that apply)

- Rural
- Suburban
- Urban

13. Which of the following would best describe your STEMI System? (Check all that apply)

- Multiple hospital system
- Cardiology practice (academic or private)
- City-wide



- County
- State
- Cross-state regional

14. What are the specific funding sources for the STEMI System operations, including but not limited to: administration, performance feedback, training, equipment and supplies? (Select all that apply)

- PCI hospital
- Cardiology practice
- Foundation
- State QI organization
- Professional society
- Pharmaceutical industry
- Third party payers
- Medical device industry
- State government agency
- Federal government agency
- Other (specify) \_\_\_\_\_

**Part C: EMS Assessment**

15. Describe the specific EMS/Ambulance transport vehicles involved in your STEMI System. (Check all that apply)

- EMT or BLS only ambulance
- Paramedic or other ALS only ambulance
- EMT/Paramedic combination
- Helicopter transport

16. How many EMS programs work with your STEMI System?

Ground: N= \_\_\_\_\_

Air: N= \_\_\_\_\_

17. Does your STEMI System have pre-hospital 12-lead ECGs available in EMS vehicles?

- Yes
- Yes, but not in all ambulances
- No (skip to Q20)

18. Does your STEMI System transmit pre-hospital 12-lead information to the receiving hospital?

- Yes
- No

- In some ambulances yes and in some no.

19. How is the pre-hospital 12-lead ECG information transmitted and/or interpreted ? (Check all that apply)

- ECG read by paramedic and interpretation called by phone
- ECG read by computer algorithm and called by phone
- ECG transmitted to hospital by wireless or satellite phone
- ECG transmitted to hospital by other device (i.e. fax)

20. Does your EMS system track and review any of the following performance measures? Check all that apply.

- 12-lead ECG interpretation accuracy (including false-positive rate)
- Complications (including death) during transport
- Symptom onset to 911 call time.
- 911 call time to 12-lead ECG
- Pre-hospital positive ECG for STEMI to balloon time
- EMS arrival to on scene time to hospital door arrival
- None

21. Is the EMS data review performed in partnership with: (Check all that apply)

- Non- PCI hospital
- PCI hospital
- ED
- Cardiologists
- EMS
- State Health Department

22. What is your estimate of the false positive (ie, cath lab activated but ECG did not really show ST elevation) of 12-Lead ECG readings in your STEMI System? Check the answer that best applies.

- >50%
- 25-50%
- 10-25%
- <= 10%
- Don't know/not applicable

23. Are there destination protocols (i.e. bypass non-PCI centers to go directly to PCI centers) for patients that have had a pre-hospital identification of a STEMI?

- Yes
- No (skip to Q26)

24. Was legislation/regulation needed to implement the EMS destination protocols?

- Yes.

No (skip to Q26)

25. Please specify if the legislation/regulation was implemented at the (Check all that apply):

- City level
- County level
- State level

26. Is an inclusion/exclusion to thrombolysis criteria checklist completed on suspected AMI patients prior to ED arrival?

- Yes.
- No

27. Is pre-hospital fibrinolysis used in your STEMI System?

- Yes.
- No
- Sometimes

28. What type of inter-facility ambulance service is used to transport STEMI patients between non-PCI and PCI hospitals? (Check all that apply)

- Ground
- Air
- 911 activation is used
- None

29. If ground, is a private ambulance service used?

- Yes
- No
- Not Applicable

30. Is there an expected response time for the private service?

- Yes
- No

31. If 911 is used:

- is 911 used as a primary protocol
- is 911 used as a back up if a private service cannot meet response times
- Not applicable

#### **Part D: Participating Hospital System Assessment**

32. What is the total number of hospitals in your system?

N= \_\_\_\_\_

Hospitals perform primary PCI? N= \_\_\_\_\_



Hospitals are not PCI-capable? N= \_\_\_\_\_

33. Do you have a single call activation number to activate the STEMI Team/Cath Lab in your STEMI System?

- Yes
- No
- Not Sure

34. Please describe the pre-hospital and hospital department interaction when a patient either calls 911 or presents to a hospital. (Check all that apply)

Pre-hospital/EMS Activation:

EMS identifies STEMI and:

- Activates STEMI Team/Cath Lab
- Alerts ED & ED activates STEMI Team/Cath Lab (without consulting cardiologist or determining if patient has cardiologist)
- Alerts ED & Cardiologist activates STEMI Team/Cath Lab
- Other: \_\_\_\_\_

Hospital / ED Activation

Emergency Department staff:

- Activates STEMI Team/Cath Lab (without cardiologist Consultation)
- Calls Cardiologists prior to activation of STEMI team
- Other: \_\_\_\_\_

35. Do the hospitals in the system participate in a data registry program?

- Yes
- No (skip to Q34)

36. In which data registry programs do the hospitals utilize? Check all that apply.

- ACTION
- GWTG-CAD
- Local/program specific
- NCDR Cath PCI
- Other: \_\_\_\_\_ add multiple boxes for other
- Other: \_\_\_\_\_

37. Do hospitals in your system track and review any of the following performance measures? (Check all that apply)

Hospital times:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<ul style="list-style-type: none"> <li>• Median arrival time for interventional cardiologist and staff at lab</li> <li>• Time to reperfusion: Door to balloon or door to needle</li> <li>• Time to reperfusion for transfer patients: 1<sup>st</sup> door to balloon</li> </ul>		

• Time from door-in to door-out for transfer		
Time from 1st medical contact (i.e. 1 <sup>st</sup> ECG and/or EMS arrival) to reperfusion	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Time from patient EMS summons to EMS arrival	<input type="checkbox"/> Yes	<input type="checkbox"/> No
% of patients eligible for reperfusion who receive it	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Incidence of vascular complications	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Angiographic Success: % of stented lesions with angiographic success	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Procedure Success: % of procedures with angiographic success and no death, MI or emergent/salvage CBG during admission	<input type="checkbox"/> Yes	<input type="checkbox"/> No
In hospital mortality	<input type="checkbox"/> Yes	<input type="checkbox"/> No
30-day risk adjusted mortality	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Major Adverse Cardiac Events (MACE)	<input type="checkbox"/> Yes	<input type="checkbox"/> No

38. Please categorize data feedback of performance and patient outcomes, including door to balloon times. (Check all that apply)

- None
- To cardiology/cath lab
- To PCI hospital emergency department
- To non-PCI hospital emergency department
- To EMS

39. How frequently is feedback provided to members of the STEMI Team?. Check all that apply.

- Within 24 hours
- 24 hours to one week
- Monthly
- Quarterly or less
- N/A

40. Are there protocols for inter-facility transfer between non-PCI hospitals and PCI hospitals?

- Yes
- No

41. Do your non-PCI centers, (Check all that apply)

- Have a PCI strategy
- Fibrinolytic based strategy
- Have a mixed strategy (PCI and fibrinolytic)

42. When patients are treated with fibrinolysis in a non-PCI capable hospital are they routinely transferred to a PCI capable hospital?

- Yes, not urgently
- Yes, treated as emergency
- No

43. Please check which of the following strategies are used for patient transferred from a non-PCI capable hospital to a PCI-capable hospital for PCI. Check all that apply.

- Non-PCI center directly activates cath lab
- Transportation generally by helicopter
- Transportation generally by local EMS
- Patients brought to non-PCI center by EMS taken to PCI center by same EMS
- Transportation generally by EMS/mobile ICU sent from PCI center
- Reduced dose fibrinolytic part of protocol
- Intravenous infusions generally avoided

44. Does the patient return to the hospital of origin prior to discharge to home?

- Yes
- No (skip to Q43)

45. If “Yes” are they transferred

- between 24 hrs. to 48 hrs.
- >48 hrs
- when the patient is stable

46. Do your PCI capable hospitals accept STEMI transfers regardless of hospital bed availability?

- Yes
- No

47. Do your PCI capable hospitals include a standardized protocol for adjunctive therapy (antiplatelet, antithrombin, etc)?

- Yes
- No

48. Do your non-PCI capable hospitals include a standardized protocol for adjunctive therapy (antiplatelet, antithrombin, etc)?

- Yes
- No

49. Does your system use the following six (6) ACC's D2B Alliance evidence-based strategies?

1. ED physician activates the cath lab	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Partially
2. One call activates the cath lab	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Partially
3. Cath lab team ready in 20 – 30 minutes	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Partially
4. Prompt data feedback	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Partially
5. Senior management commitment	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Partially
6. Team-based approach	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Partially

50. Which of the following barriers has your STEMI system encountered? (Check all that apply)

- Bed availability
- Infrastructure support/funding
- Non-PCI hospital finances
- EMS/transport finances
- Cardiology group competition
- Hospital competition
- Lack of data collection/ feedback to systems
- EMS organization
- EMTALA regulations
- Receiving hospital on diversion
- Lack of leadership/identified champion
- Limited availability of interventional cardiologists
- Other
- Other

51. Any additional comments or suggestions would be greatly appreciated.