

# STEMI System Assessment Checklist

**Note:** The following set of questions is designed to help you assess the current status of your local ESS (Essential STEMI Subsystem) and highlight areas where you may be able to make rapid improvement. This list is structured around the five Essential Elements of Reperfusion (The 5R's). If the answer to a particular question is “no” (or if you do not currently know the answer) it may indicate an opportunity for improvement within your system. Please take time to thoroughly complete this assessment as it will provide efficient guidance as you attempt to optimize your local STEMI care processes.

## **(R1) Relationships: the most important “R!” Building and sustaining relationships is the key to progress!**

**Yes/No** Is your hospital a part of a local or regional STEMI system or network?

**Yes/No** Does your local STEMI system have regularly scheduled meetings that involve representatives from all participating facilities & local EMS organizations ?

**Yes/No** Can you name each PCI and non-PCI facilities within your ESS (Essential STEMI Subsystem)?

**Yes/No** Does your institution/organization have a reliable contact person at each facility within your ESS?

**Yes/No** Do you routinely contact other facilities within your ESS to discuss general STEMI systems issues and/or individual cases?

**Yes/No** Do you know the names of the majority of the EMS provider organizations within your ESS?

**Yes/No** Does your facility sponsor or participate in training and networking events for STEMI care providers (i.e. EMS personnel) in your area?

**Yes/No** Do you routinely invite EMS representatives to your institutional AMI quality improvement meetings?

**Yes/No** Does your Elemental STEMI Subsystem (ESS) have clearly established lines of communication between involved facilities and EMS providers?

**Yes/No** Do you have mechanism (such as an “EMS STEMI Story Board”) to constantly let EMS know about STEMI “cases gone right?”

**Yes/No** Do you involve local STEMI survivors) as advocates within your local system?

**Yes/No** Do you provide feedback to EMS providers regarding the pre-hospital ECG process?

**Yes/No** Does your system have a formalized method of providing case specific feedback to providers of the entire STEMI care continuum –including EMS/ED/Cardiology/ Cath lab, etc?

**Yes/No** Does your institution and/or system utilize scheduled, structured STEMI-specific education for t “First Contact Providers” within your facility and/or system?

**(R2) Recognition: The first step towards reperfusion! Each “STEMI portal” in your system (both fixed and mobile) must have a clear ECG screening process in place at all times.**

**Pre-hospital recognition (EMS)**

**Yes/No** Do your EMS providers utilize pre-hospital ECG to diagnose STEMI?

\* What percent of your EMS providers are trained to do ECG’s? \_\_\_\_\_

\*What percent of your EMS vehicles are ECG-capable? \_\_\_\_\_

\*What percentage of EMS organizations in your “EMS catchment area” have implemented protocols that clearly direct “the exact next step” once a STEMI is recognized on ECG? \_\_\_\_\_

**Yes/No** Do your EMS STEMI protocols direct EMS providers to immediately contact an ED physician once they obtain any ECG suspicious for STEMI?

\*When a pre-hospital ECG is done in your system how is the diagnosis of “STEMI” most frequently determined? (Circle all those that apply)

**Yes/No** ECG read is done by EMS personnel in the field?

**Yes/No** Determination of STEMI primarily based on the machine algorithm?

**Yes/No** ECG transmitted to be over-read by a physician?

\*What percent of pre-hospital ECG’s (suspicious for STEMI) within your system are transmitted for physician evaluation? \_\_\_\_\_

**In-hospital recognition**

**Yes/No** Do you have a standardized screening ECG protocol at your institution that clearly delineates those patients requiring a screening ECG upon presentation?

**Yes/No** Is this protocol posted in your ED and triage areas for instant access?

**Yes/No** Do you regularly educate your ED and triage staff regarding the importance of 24/7 absolute compliance with this protocol?

**Yes/No** Do you expect (and monitor) 24/7 staff compliance with this protocol?

**Yes/No** Are all screening ECG’s brought immediately to a physician for evaluation?

**Yes/No** Are all ED nursing and clinical staff in your ED and triage areas trained to do ECG’s?

\*If not, what groups cannot (or do not) routinely perform ECG’s in your ED and triage? \_\_\_\_\_

**Yes/No** Are your ED and triage staff provided sufficient staff, resources and “backup “options to ensure that your ED can consistently obtain timely screening ECG’s in all situations -24/7?

**(R3) Reperfusion: A STEMI Alert process “at every portal!” Each STEMI portal (including EMS) must have a STEMI ALERT Plan instantly accessible when STEMI is recognized.**

**General questions:**

**Yes/No** Does your facility utilize a formal STEMI ALERT process that is activated each time a STEMI is detected?

**Yes/No** Does your STEMI ALERT process contain precise *institution-specific* protocols that clearly delegate staff responsibilities, lines of communication, etc during each STEMI ALERT?

**Yes/No** Are these protocols in a clearly written form and instantly accessible at all times?

\*What is the precise mechanism to access these protocols (where exactly are they located)? \_\_\_\_\_

**Yes/No** Are all ED staff expected to know how to access these protocols?

**Yes/No** Does your ED staff receive regularly scheduled education and training regarding your system-specific STEMI treatment process?

**Yes/No** Does your facility/system conduct regular STEMI ALERT drills and exercises?

**Transportation-specific issues:**

Non-PCI centers

**Yes/No** If you are a non-PCI center, do you have a simple, clear and defined *destination-specific* transport plan for inter-facility transport of STEMI patients to a PCI-capable center?

**Yes/No** Does this plan include at least two secondary transportation options in case the primary option or agency is not available?

**Yes/No** Is this plan (including secondary options) available to ED staff in a clearly written STEMI-specific EMS inter-facility transport protocol?

During a STEMI, who is responsible for activation of the STEMI transport protocols in your ED? \_\_\_\_\_

**Yes/No** When a STEMI alert is activated in your facility, do ED staff automatically assess transport options without being told to do so by the attending physician?

**Yes/No** Does the ED wait to determine final treatment strategy (‘lytics v.s. PCI) before activating EMS for inter-facility transport?

**Yes/No** Does your facility measure and evaluate EMS response times for STEMI transfers?

PCI-capable facilities:

**Yes/No** Is your hospital always open to STEMI transfers - including post-thrombolytic patients?

**Yes/No** Is this a formal written policy, endorsed by hospital leadership?

**Yes/No** Does each non-PCI hospital that transfers STEMI patients to you for emergent or rescued PCI have defined STEMI transport protocols -as discussed above?

### **Reperfusion: Strategy Selection**

#### Non-PCI centers

What is the preferred strategy at your institution for the “average” STEMI patients? \_\_\_\_\_

On a case-by-case basis, who usually makes the determination (in most situations) between on-site thrombolytics or transfer for emergent primary PCI? \_\_\_\_\_

**Yes/No** If thrombolytic therapy is initiated, is a cardiologist usually consulted prior to administration?

**Yes/No** Do you have a STEMI ALERT process in place that includes a clear “Thrombolytic Assessment Checklist” to help the ED physician systematically assess each patient prior to giving thrombolytics?

Where are the thrombolytic medications stored in your ED? \_\_\_\_\_

If they are not in your ED, where are they stored and what is the access process? \_\_\_\_\_

#### PCI-capable centers

**Yes/No** Does your facility utilize ED physician activation of the cath lab for uncomplicated STEMI cases?

**Yes/No** Does the ED physician have clear written activation criteria for guidance?

**Yes/No** Do you routinely review the ED cath lab activation process to insure accuracy of process?

If your facility does not routinely utilize ED pre-activation of the cath lab, what is the reason? \_\_\_\_\_

**Yes/No** Does a single call activate the cath lab?

\*If not, how many calls does it take? \_\_\_\_\_

**Yes/No** Is there a backup plan when the initial cardiologist fails to call back?

What is the backup plan if the cardiologist fails to call back to the ED immediately? \_\_\_\_\_

**Yes/No** Do you track mistakes and errors in the STEMI communication sequence?

**Yes/No** Do you receive transmission of pre-hospital ECGs done in the field?

If your facility receives ECG field transmission, where are these received? \_\_\_\_\_

**Yes/No** Do you pre-activate the cath lab based on pre-hospital ECGs?

\*How long after a STEMI activation page does it take for your cath lab to be fully operational \_\_\_\_\_?

**Yes/No** Do you have a policy specifying response time expectations for cath team arrival?

**Yes/No** Do you measure cath lab response time as routine part of your STEMI QI process?

How do you monitor and evaluate cath lab response time? \_\_\_\_\_

**(R4) Real-time Data Collection: Data is the “fuel of improvement!” Accurate real-time data collection regarding key intervals in the STEMI treatment process is mandatory for success and must be collected on every STEMI.**

**Yes/No** Does your facility collect quality improvement data on **each** STEMI ALERT and/or STEMI?

**Yes/No** Does your facility utilize a data collection sheet to collect data on each STEMI ALERT *as it occurs* (real-time data collection)?

**Yes/No** Do you routinely collect data on pre-hospital ECG’s performed on your patients prior to arrival?

**Yes/No** Does your STEMI system track critical time intervals on inter-facility STEMI transfers?

\*How is QI data collected on inter-facility STEMI transfers at your facility? \_\_\_\_\_

**Yes/No** Does your facility routinely share this QI data on inter-facility STEMI transfers with the other involved facility and the inter-facility transport agency?

**(R5) Reassessment & Refinement: Using accurate data measure a standardized process yields valuable quality improvement data. Do you have the structures in place to take advantage of this information ?**

**Yes/No** Does your institution have a scheduled AMI quality meeting?

\*How often does it meet? \_\_\_\_\_

**Yes/No** Does your facility routinely review data on each STEMI ALERT?

**Yes/No** Is this case-specific data presented in an EXCEL spreadsheet or some other easily accessible form to facilitate comparison and discussion?

**Yes/No** Is this case-specific data acted upon in order to continually improve the system?

**Yes/No** Does rapid feedback to individual providers occur as needed?

**Yes/No** -emergency department staff and physician?

**Yes/No** - cath lab?

**Yes/No** –EMS personnel involved in transport of the patient?

**Yes/No** -The involved cardiologist?

**Yes/No PCI centers:** Do you case-specific follow-up (to the transferring facility) on each STEMI transfer patient?

**Yes/No Non-PCI centers:** do you receive scheduled feedback from the receiving PCI center on each STEMI transfer?