Advisory 16-12 STEMI Best Practices

To: All Providers

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An ST Elevation Myocardial Infarction (STEMI) indicates an acute occlusion of a coronary artery. Revascularization, utilizing Tissue Plasminogen Activator (tPA) or percutaneous coronary intervention (PCI), is the standard of care and patient outcomes are improved by more timely administration of either therapy with preference to PCI. Regional EMS protocols reflect this standard of care and destination determination for patients with a STEMI.

The following outlines best practices for Prehospital STEMI Management as identified by the American Heart Association and area experts:

- First Medical Contact to 12 lead EKG less than 10 minutes.
- Total scene time less than 10 minutes for patients with confirmed STEMI.
- Administration of Aspirin (324 or 325 mg) at any time during the prehospital encounter.
- Identification of STEMI to receiving hospital notification within 5 minutes. Regardless of time of day or day of week, prenotification is essential for the receiving facility to mobilize the necessary resources to provide prompt PCI care upon your arrival.
- Transport to a facility capable of providing PCI with a goal of First Medical Contact to device (inflation of the angioplasty balloon) within 90 minutes. For agencies with extended transport time to PCI facilities, local discussions with EMS Medical Directors should explore transporting to a local facility for tPA and subsequent transfer to a PCI facility, or the use of air medical services for confirmed STEMI patients. The most important measure is the patient's ability to get definitive treatment (PCI or tPA) within 90 minutes of First Medical Contact.

These are aggressive targets and are only achieved through training, preparation, communication, and utilizing all aspects of the prehospital care team to facilitate patient care. Time is of the essence and the above targets take preference over other, non-life saving interventions, including vascular access. The only intervention that makes a meaningful

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difference in prehospital STEMI care is rapid detection and subsequent notification and transport of a patient with a STEMI.

Accurate detection of a STEMI is just as important as rapid detection. Common pearls and pitfalls of STEMI interpretation include:

- The EKG baseline must be without artifact (patient movement, shaking, ambulance movement, etc). A good baseline is essential for accurate interpretation.

- Presence of a bundle branch block (either left or right) can often lead to monitor misinterpretation. Look closely and when in doubt, contact the receiving facility and speak to a physician about what you are seeing on the EKG and the patients clinical presentation.

- Be sure to communicate to the receiving facility that you are inbound with a "STEMI Patient" and describe the EKG findings (eg ST segment elevation in leads II, III, aVF and depression in I, aVL).

- When possible, provide the receiving facility the patient's name and date of birth when making the STEMI notify. This helps the facility look up old EKG's and obtain information on the patient prior to your arrival to improve the timeliness of care.

These best practices are offered to providers and agencies to reinforce quality measures and provide for performance improvement benchmarks. With any questions, do not hesitate to contact your Agency Medical Director or this office.

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