PURPOSE

12-lead electrocardiograms (EKGs) are used with a variety of patients. Our goal is to incorporate the 12-lead EKG into our management of patients and assist receiving hospitals’ decision making about the ST-elevation MI (STEMI) patient. The transmission or reporting of the ST-elevation MI should decrease “door-to-intervention” times in our communities’ hospitals.

MISSION / VALUES RATIONALE

This policy is aligned with the Mission and Values for Amita Health. Our mission calls us to provide compassionate, holistic care with a spirit of healing and hope for all persons in the communities we serve. Our ministry is an enduring sign of our Core Values of HOPE, to instill us with integrity, inspire us to interconnect with each other, encourage us to honor diversity and dignity of each individual and empower us to always strive for exceptional performance to our patients/residents and to best serve those in need.

SPECIAL INSTRUCTIONS/EQUIPMENT

N/A

PROCEDURE

I. Indications

A. A Pre-Hospital 12 lead shall be acquired if a patient has any of the following conditions:
   1. Any patient with known or suspected Acute Coronary Syndrome (ACS)
   2. Chest pain (dull, sharp, pressure, tightness, etc.)
   3. Discomfort or tightness radiating to jaw, shoulder, arm or back
   4. Stroke/CVA
   5. Dysrhythmias
   6. Diaphoresis
   7. Nausea/Vomiting
   8. Syncope/Dizziness
   9. General weakness
   10. Diabetic with general illness
   11. Any patient that the paramedic feels will benefit from this modality.
II. Contraindications
   A. Trauma (must be no delay in transport)
   B. Respiratory Arrest
   C. Cardiac Arrest (unless ROSC and manpower permits)

III. Timing
   A. Attempt to obtain during initial patient evaluation. Oxygen should be administered first to all patients that warrant it.
   B. If the patient is in severe distress, do not delay medications for the 12 lead ECG. Obtain the ECG as soon as time allows (between nitro’s).
   C. If you are not sure it is cardiac in origin, perform ECG prior to medication administration (other than oxygen)
   D. In most cases the ECG should be done before moving the patient. If not done on initial assessment, obtain ECG in the ambulance before leaving the scene.

IV. Patient Preparation
   A. Place patient in seated or semi-Fowler’s position.
   B. Bare the chest and prepare the patient’s skin for electrode placement.
      1. Dry skin if it excessively moist
      2. If there is chest hair, use a razor and shave where necessary.
      3. Clean area of electrode placement with alcohol.
   C. Please be professional when exposing or touching the breast when obtaining 12 lead ECG on female patients.
   D. Place the electrodes on the limbs.
      1. Upper limb leads on deltoids (shoulder) off of torso
      2. Lower electrodes below naval
   E. Place the electrodes on the chest. The six precordial (chest) lead electrodes must be placed in specific locations. Locating the V1 position is the first step and is the reference point for placement of the remaining V leads.
      1. To locate V1 position
         a. Place finger at the notch of the sternum
         b. Move fingers down feeling the second, third, and fourth intercostal space
         c. Position the electrode for V1 just to the right of the sternum, in the fourth intercostal space.
      2. To place the remaining precordial leads
         a. V2 is the fourth intercostal space to the left of the sternum
         b. V4 is the fifth intercostal space at the midclavicular line
         c. V3 is midway between V2 and V4
         d. V6 is horizontally level with V4 mid-axillary line
         e. V5 is horizontally level between V4 and V6.
V. 12 Lead Acquisition
A. Turn Central to “Monitor” and make sure Lead II not PADS is displayed.
B. Assure to prep patients skin as appropriate and attached 4 lead cable to torso. Connect 6 leads to chest. Plug 6 lead cable into 4 lead cable block. Press and hold the RECORDER button to obtain a quick look 12-lead.
D. Press Acquire button to record 12 lead ECG.
E. Make sure patient is still for a full 10 seconds when acquiring.
F. When transmitting, plug grey cord from phone box into phone jack on the adapter in the right side pouch of the monitor.
G. Select the appropriate hospital to send to using (Next Phone #). Press Dial Phone #.

VI. Base Hospital Communication
A. Contact the receiving hospital and notify them that a 12 lead of the patient has been faxed or sent through the radio to their facility. (Confirm hospital received 12 lead)
B. Provide interpretation of 12 lead by EMS personnel (if trained). If not trained in interpretation, use computer interpretation.
C. Provide a patient report as per SMO.

VII. Documentation
A. A patient care report will be completed per policy
B. A 12 lead ECG will be turned to the receiving hospital with the patient care report. A copy will also be kept with the department copy of the patient care report.
NOTE: Policies with original signatures are on file in Administration.