12 Lead ECG

Prehospital 12-lead ECG acquisition (with relay of results to the receiving hospital) improves time to treatment for acute myocardial infarction. The purpose of this policy is to insure that prehospital 12-lead recordings are performed in a responsible manner, coordinated with prehospital ALS providers and medical control, and monitored by quality improvement and evaluation procedures.

Indications:

1. A 12 ECG, if available, must be performed on patients exhibiting any of the following signs/symptoms:
    A. Chest pain or pressure
    B. Upper abdominal pain
    C. Syncope
    D. Shortness of breath (not including asthma or COPD)
    E. Pain/discomfort often associated with cardiac ischemia
        a. Jaw, neck, shoulder, left arm or other presentation; unless no other symptoms exist and the cause of the specific pain can be identified with a traumatic or musculoskeletal injury.
        b. If there is any doubt about the origin of the pain/discomfort, or the presentation seems atypical for the mechanism, a 12 lead should be performed.

    F. Patients exhibiting the following signs/symptoms should have a 12 lead ECG performed if the etiology of the illness is indicative of an Acute Coronary Syndrome or the etiology of the illness is indeterminate:
        a. Nausea
        b. Vomiting
        c. Diaphoresis
        d. Dizziness
        e. Patient expression of “feelings of doom”

    G. A 12 lead ECG may be performed based on the clinical judgment of the paramedic even in the absence of the above signs/symptoms.

<u>Pre-Medical Control</u>
PARAMEDIC

1. Follow **General Pre-hospital Care Protocol.**
2. Perform 12-lead ECG per manufacturer guidelines.
3. Report if acute MI is suspected, as indicated by a 12 lead device.
4. Promptly relay either the 12-lead findings via MCA approved communications system or transmit 12-lead to the receiving facility.
5. Agencies in cooperation with Hospitals with 12-lead ECG pre-hospital receiving capability should have the relay done electronically immediately upon completion of the ECG in the following conditions:
    A. ST” elevation $\geq$ 1mm in 2 contiguous leads
    B. Chest pain patient with left bundle branch block

C. EMS personnel request assistance by hospital for interpretation of ECG
D. Hospital requests ECG be sent.

6. The Acute MI Report relayed to the receiving facility should include the following:
   A. *** Acute MI Suspected *** or equivalent machine indication of Acute MI
   B. Location of MI, "ST elevation, consider _____injury"
   C. Time of onset of the Chest Pain, if present.
   D. Current level of pain.
   E. Cardiac history (previous MI, CHF, CABG, Angioplasty or Stent)
   F. Presence of possible indicators of False Positive ECG (Tachyarrhythmia, left bundle branch block, Pacemaker, wide complex QRS, noisy positive ECG after previous negative ECG)
7. Transport patients per MCA transport protocol.