Michigan General Procedures 12 LEAD ECG PROCEDURE

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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.

Pre-Medical Control

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 ≥ 1 mm in 2 contiguous leads
 - B. Chest pain patient with left bundle branch block



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- 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.

