

**Salt Lake EMS District – Interim Protocol  
Pre-Hospital 12-Lead EKG Procedure**

**1. Purpose:**

- a. The purpose of this procedure is to direct use of the 12-lead ECG to identify ST elevation myocardial infarction (STEMI) in the field, with the ultimate goal to reduce the time to open the occluded artery in an appropriate cardiac catheterization lab.

**2. Indications:**

- a. Patients should have medical history and/or present with complaints consistent with acute coronary syndrome. Patients will have one or more of the following:
  - i. Chest or upper abdominal discomfort suggestive of an acute coronary syndrome.
  - ii. New onset of cardiac dysrhythmia.
  - iii. Unexplained syncope or near syncope.
  - iv. Unexplained acute generalized weakness with or without diaphoresis.
  - v. Acute onset of dyspnea suggestive of congestive heart failure.
  - vi. Other signs and symptoms suggestive of acute coronary syndrome.

**3. Contraindications:**

- a. Do NOT perform ECG on these patients:
  - i. Trauma
  - ii. Cardiac Arrest
  - iii. Respiratory arrest
  - iv. Life threatening conditions including the presence of:
    1. Ventricular Tachycardia
    2. 3<sup>rd</sup> degree AV block
  - v. Any situation in which a delay would compromise patient care
  - vi. Uncooperative patient.

**PATIENT ASSESSMENT AND CARE SHOULD CONTINUE THROUGH THE PREPARATION AND SET-UP OF THE EKG. FOLLOW SALT LAKE EMS DISTRICT STANDING ORDERS – CARDIAC EMERGENCIES AND CHEST PAIN.**

**4. Timing:**

- a. Attempt to obtain ECG during initial patient evaluation.
  - i. If ECG can be completed without delay, <3 minutes, and the patient is not in severe distress, perform ECG as soon as possible.
  - ii. In most cases, ECG should be done prior to moving the patient.
  - iii. ECG may be repeated by EMS if interpretation is NOT a STEMI and patient's condition worsens so paramedic believes the ECG may now show an acute MI.
  - iv. If interpretation is a STEMI, do not delay report or transport to obtain better quality ECG.

**5. Hospital Communication:**

- a. Identify yourself and EMS unit.
- b. If ECG interpretation is a STEMI, report that to the nurse at the beginning of the report. Insure this information is given to the ED physician.
- c. Additional patient information may not be available during this first contact with the hospital. If full report is not able to be given, re-contact the hospital after additional patient information is obtained.
- d. If interpretation is a STEMI, the patient should be transported directly to the closest appropriate facility depending on cath lab availability. ED staff may direct ambulance to another location if the cath lab is not available.

**6. Documentation:**

- a. EMS incident reports (PCRs) will be completed as per policy.