

HEALTHEAST MEDICAL TRANSPORTATION

MEDICAL OPERATIONS MANUAL

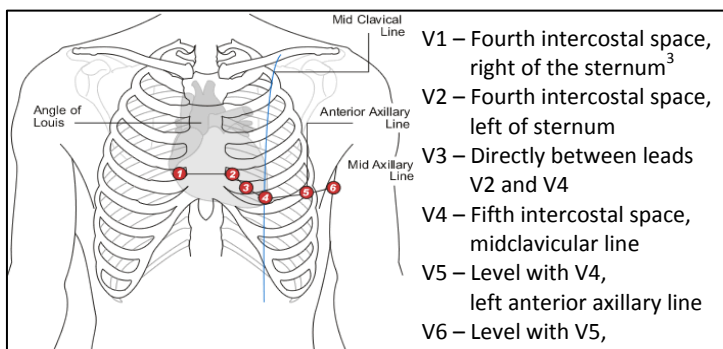
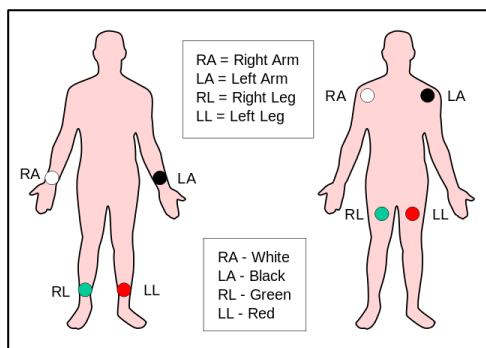
7H 12-LEAD ECG and CATH LAB ACTIVATION

PATIENT CARE GOALS

- Appropriately diagnose and treat patients with the following conditions: signs and symptoms of acute coronary syndrome, shortness of breath of presumed cardiac etiology, cardiac dysrhythmias, pre and post dysrhythmia conversion, and ROSC following cardiac arrest.
- Acquire 12-lead ECG within 10 minutes of patient contact and when indicated activate the Cath Lab within 10 minutes of acquiring diagnostic 12-lead ECG. ¹

EMT

1. Whenever possible, attempt to obtain a 12-lead with patient in supine position. If patient cannot tolerate this position, place in semi-reclining or sitting position.
2. Prep the skin and shave hair as necessary.
3. Attach electrodes to leads.
4. Place electrodes in the appropriate position on the patient's body, as shown by the figures below. ²

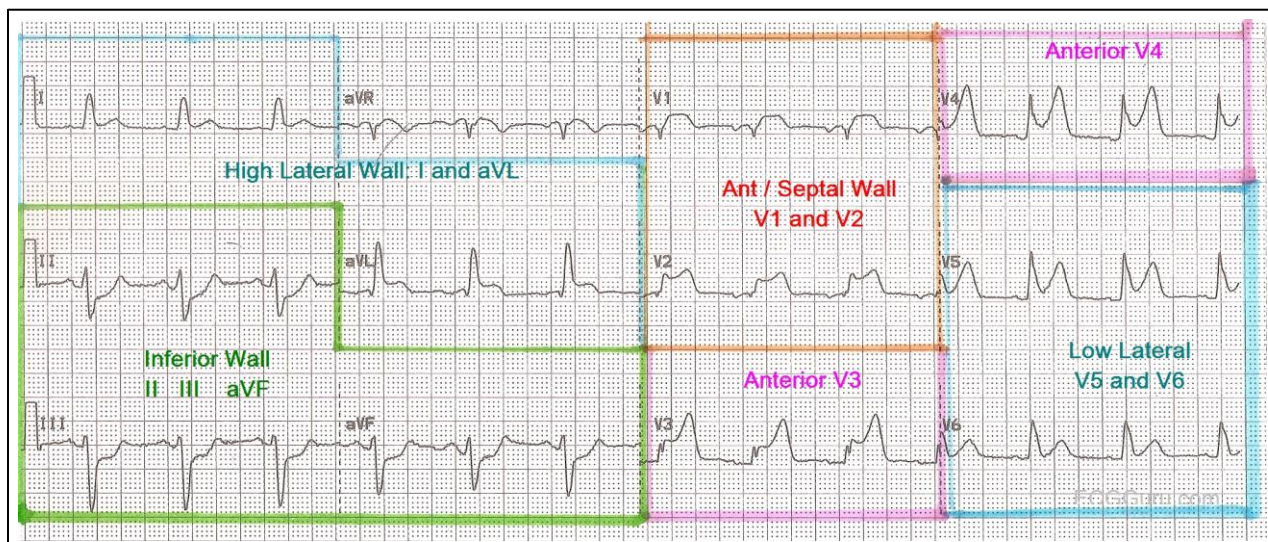


5. Ask the patient to remain motionless for 30 seconds (it is okay to breathe).
6. If the monitor detects signal noise (such as patient motion or a disconnected electrode), 12-lead acquisition will be interrupted until noise is removed. Take appropriate action to remove noise.

PARAMEDIC

7. If **ALL** of the following conditions are met, contact MRCC as soon as possible to initiate a cath lab activation at the receiving facility:
 - a. 1 mm or more of ST elevation in two or more anatomically contiguous limb leads (including aVL and aVF) **OR** 2 mm or more of ST elevation in two or more anatomically contiguous precordial leads. Anatomically contiguous leads are highlighted in the figure below.

HEALTHEAST MEDICAL TRANSPORTATION MEDICAL OPERATIONS MANUAL



- b. Width of the QRS complex is less than 0.12 seconds.
- c. The patient does not meet any of the following exclusion criteria⁴:
 - Do Not Resuscitate or similar “comfort” care status
 - Presence of a bundle branch block or QRS greater than 0.12 seconds
 - Symptomatic bradycardia that is unresponsive to **atropine** or **dopamine (Inotropin)** requiring external pacing
 - Tachycardia greater than 150 beats per minute
 - Significant hypotension (systolic <80) unresponsive to fluids
 - Chest trauma or significant mechanism of injury
 - Altered mental status, including chronic conditions
 - Suspected stroke or other neurological condition that may need immediate stabilization
 - Respiratory distress that may require emergent intubation or other airway stabilization.
8. Leave a copy of all 12-lead ECGs obtained during patient care at the receiving hospital.
9. Upload all ECG tracings to the patient care report.

DOCUMENTATION KEY POINTS

- Patient’s position when 12-lead was obtained.
- Rhythm interpretation, including location of any ST elevation or depression⁵.

NOTES

¹ Do not significantly delay necessary treatments or transport to obtain a 12-lead ECG.

² On female patients, always place leads V3-V6 under, rather than on top of, the left breast.

HEALTHEAST MEDICAL TRANSPORTATION MEDICAL OPERATIONS MANUAL

³ Locating the V1 position (fourth intercostal space) is critically important because it is the reference point for locating the placement of remaining precordial leads. To locate the V1 position:

1. Place your finger at the notch in the top of the sternum.
2. Move your finger slowly downward about 1.5 inches until you feel a slight horizontal ridge or elevation. This is the Angle of Louis where the manubrium joins the body of the sternum.
3. Locate the second intercostal space to the right of the Angle of Louis.
4. Move straight down the lateral part of the sternum to the fourth intercostal space.

⁴ If one or more of these conditions exist, transport the patient to a cath lab capable facility and request immediate evaluation for cath lab suitability.

⁵ In the event the Auto-Interpretation indicated “Acute MI Suspected” despite the width, if the QRS or degree of ST elevation **AND** the patient’s condition is consistent with coronary ischemia, the Cath Lab may be activated in the absence of any of the conditions listed in 7.c. above.