12-LEAD ELECTROCARDIOGRAPHY

INDICATION:

- A patient suspected of having a cardiac event. This includes patients with atypical presentations. Symptoms and historical data that clearly raise suspicions of a cardiac event include:
  - Chest pain or discomfort <u>without</u> a clear non-cardiac explanation
  - History of known heart disease <u>or</u> cigarette use <u>or</u> hypertension <u>or</u> diabetes with:
    - Non-traumatic chest pain/chest discomfort or
    - Shortness of breath or
    - Nausea or vomiting (without other clear explanation)
  - Chest pain that radiates to or pain that originates in the arm, shoulder, neck, jaw or back (without other clear explanation)
  - Diaphoresis (without other clear explanation)
  - Age > 45 years with
    - Acute anxiety. Anxiety is common with acute cardiac conditions even in the absence of pain and should be considered a symptom rather than a chief complaint
    - Generalized weakness
  - Tachycardia (without other clear explanation)
    - Consider EKG for rates between 100-130 and required for rates of 130 or more
  - Significant bradycardia (50 or less)
  - Syncope or near-syncope

PROCEDURE:

- Complete initial assessment and stabilizing treatment. DO NOT DELAY TREATMENT TO OBTAIN 12-LEAD ECG.
  - In situations in which delaying treatment to obtain an ECG would compromise patient care in the field, such as those with cardiopulmonary arrest, acute respiratory failure, blood pressure < 90 systolic, altered level of consciousness, or other severe conditions, acquire the 12-Lead ECG at incident location or in vehicle <u>just prior</u> to beginning transport.
- Place precordial lead electrodes and acquire tracing as per manufacturer's directions.
- Relay ECG interpretation to base hospital if indicated.
- Transmit ECG tracings that are positive or suspected for acute MI <u>before arrival</u> to receiving Cardiovascular Receiving Center.
- If defibrillation or synchronized cardioversion is necessary, place paddles or defibrillation pads, removing 12-lead patches if necessary.

DOCUMENTATION:

- Document obtaining 12-Lead and interpretation on prehospital care report (PCR).
- Transmit 12-Lead to CVRC from the field.
- Attach or upload a copy of 12-lead to PCR.

CAUTION: AN ECG THAT IS "NORMAL" OR NEGATIVE FOR STEMI DOES NOT RULE OUT AN ACUTE MI OR SERIOUS ANGINA.

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NOTES:

— Presentation of heartburn, pleuritic or musculoskeletal chest pain does not rule out heart disease or acute MI.

— Do not need to repeat positive for acute MI 12-lead performed at clinic or other similar medical setting.

— Machine interpretation of suspected MI may not be accurate in presence of paced rhythms, bundle branch blocks, and certain tachycardia rhythms (*e.g.,* SVT, atrial flutter). When communicating machine interpretation to base hospital, paramedics should advise base of paced / BBB / tachycardia rhythms.

— Base Hospital contact required for patients who refuse BLS or ALS transport after having a 12-lead performed in the field.

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