12-LEAD ELECTROCARDIOGRAPHY

INDICATION:

- Patient suspected of having a cardiac event, including:
  - Known history of heart disease with chest pain, chest discomfort, shortness of breath, or syncope-weakness.
  - Chest discomfort (unrelated to injury or strain) as chief symptom.
  - Radiation of chest pain to arm, shoulder, neck, jaw or back.
  - Diaphoresis.
  - Age > 45 years, male or female, with non-traumatic chest pain, chest discomfort, unexplained anxiety, or tachycardia/bradycardia.
    - Anxiety is common with acute cardiac conditions and should be considered a symptom rather than a chief complaint.
  - History of cigarette use with non-traumatic chest pain or chest discomfort.
  - History of hypertension with non-traumatic chest pain or chest discomfort.
  - History of diabetes with non-traumatic chest pain of chest discomfort.

CONTRAINDICATIONS (RELATIVE):

- Uncooperative patient or patient refuses 12-lead.
- Situations in which a delay to obtain ECG would compromise care of the patient in the field, such as cardiopulmonary arrest, acute respiratory failure, blood pressure < 90 systolic, altered level of consciousness.

PROCEDURE:

- Complete initial assessment and stabilizing treatment (DO NOT DELAY TREATMENT FOR 12-LEAD). May acquire 12-Lead at incident location or in vehicle just prior to beginning transport.
- Place precordial lead electrodes and acquire tracing as per manufacturer's directions.
- Relay ECG interpretation to base hospital.
- Transmit ECG tracings that are positive or suspected for acute MI before arrival 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.

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.