- For adult patients in traumatic arrest or who require rapid volume replacement, two large bore (16 gauge or larger preferred) IV lines should be established and fluid boluses administered per protocol. Consult with a base hospital physician once the systolic blood pressure of greater than 90 is obtained or 2 liters of fluid is infused.

- If signs of pulmonary edema develop during IV fluid administration, slow IV rate to TKO and contact a base hospital physician for fluid orders.

## ADVANCED AIRWAYS

Oral intubations and/or placement of a King Airway are considered standing orders for adult patients that require advance airway management. Nasal intubations are not permitted in Merced County. Three attempts total, among all providers are allowed for intubation of the patient. A paramedic may decide to go directly to a King Airway at any time. An intubation attempt is defined as "when the laryngoscope has passed the teeth with the intent of intubating the patient." If intubation attempts are unsuccessful the paramedic will place a King Airway or use good BLS airway techniques to maintain proper oxygenation and ventilation. Medications should not be given down the King Airway. King Airway placement is not to be used in patients under 4 feet in height.

All patients that have been intubated must have end-tidal $CO_2$ detectors placed to confirm tube placement. Documentation confirming tube placement shall include color change by the $CO_2$ detector or an attachment of capnography wave form strips with documentation of capnography values. Documentation should also include visualization of the cords, good lung sounds, absent epigastric sounds, and rise and fall of the chest, the size of the tube and the centimeters at which it is secured. The paramedic must re-confirm tube placement after movement and document that assessment on the PCR.

## TRANSPORT:

The majority of the treatment protocols do not specifically list "transport" in their treatment orders. Generally paramedics should take steps to minimize their on-scene times with all patients. In protocols where "transport" is not specifically listed paramedics need to initiate transport based on the patient's clinical condition and scene logistics, such as proximity to a hospital and the availability/appropriateness of air transport.

Paramedics should take steps to transport all critically injured trauma patients and STEMI patients within ten (10) minutes (unless using air evacuation) and most other medical and trauma patients within twenty (20) minutes. When transporting critically injured or ill patients by ground, paramedics should notify the receiving facility of their estimated time of arrival (ETA) as soon as possible to allow the hospital time to activate internal teams and/or other specialized resources.

Paramedics should consider remaining on scene and treating adult cardiac patients with an asystolic rhythm. These patients can be transported after converting to a more stable rhythm or can be declared dead with a base physician order if they fail to respond to specific ALS treatments.

## CARDIAC MONITORING:

It is assumed that personnel will place any patient in which the monitoring of their cardiac rhythm is either integral to their management (e.g. cardiac patients, syncope) or beneficial for the paramedic in providing care (monitoring heart rates). While reference to placing a patient on the cardiac monitor remains on several protocols, we have deleted the constant reference to reassessing the cardiac rhythm after treatments, as it is assumed that the need for this is obvious (e.g. following defibrillation or medication administration, etc.).

A good quality 12 lead ECG should be quickly completed for all patients with suspected cardiac ischemic chest pain, preferably prior to nitrate administration. Every effort should be made to obtain an ECG free of artifact and wandering baselines. It may be necessary to provided skin preparation such as shaving or by having the patient hold their breath. If a STEMI is identified, early transport is imperative. When able the paramedic should begin treatments such as IV's and medications enroute.

## TRANSCUTANEOUS PACING (TCP):

### Indications:

TCP may be utilized for the following patients after 1 mg of Atropine have been administered:

A. Hemodynamically unstable bradycardic adult patients unresponsive to drug therapy.
B. Patients in Asystole following electrocution, with a down time of less than 10 minutes.