Kittitas County Prehospital EMS Protocols

SUBJECT: CARDIAC ARREST

A. Verify cardiopulmonary arrest.

B. Initiate CPR & ventilate per pocket mask or BVM, with supplemental O_2 @ 10-15 lpm. For witnessed arrest, defibrillate as soon as possible. For unwitnessed arrest, provide 5 cycles/2 min. CPR.

C. CPR should be interrupted as little as possible.

D. Establish cardiac monitor/defibrillator. One shock attempt every 5 cycles/2 min. of CPR.

E. Place an endotracheal tube and continue ventilations with bag-valve device (or demand valve) with supplemental O_2 @ 10-15 lpm.

1. If unsuccessful after three attempts at tracheal intubation, place an Supraglottic Airway Device
2. If unable to place ETC, continue ventilations with BVM.

E. Establish peripheral IV access with **Isotonic Crystaloid** @ TKO.

1. If unsuccessful at peripheral venipuncture, including external jugular, establish Intraosseous , or establish central venous access route.

F. Medications administered via peripheral IV, should be followed by a 20 ml bolus of IV fluid.

Ventricular Fibrillation (Pulseless Ventricular Tachycardia or Torsades de Point)

A. If witnessed arrest—

1. Check carotid pulse.
2. If no pulse, attempt defibrillation 1x followed by 5 cycles/2 min. of CPR

B. If unwitnessed arrest – Perform 5 cycles/2 min. of CPR before one attempt to defibrillate (IV and ETI may be completed before defibrillation).

1. Check carotid pulse after 2 sets of 5 cycles/2 min. of CPR (during rhythm check).
2. If no pulse, attempt debribrillation 1x followed by 5 cycles/2 min. of CPR.

C. Administer **Epinephrine 1:10,000** 1mg IV push q 3-5 minutes. If ET tube is established before IV is established, administer **Epinephrine 1:1000** 2 mg via ET tube with 8 ml NaCl. If unable to

establish IV/IO, administervia ET tube.

D. Defibrillate 1x. If delay in medication administration, continue 5 cycles/2 min. CPR.

E. Administer **Amiodarone,** 300 mg IV push.

F. Defibrillate 1x.

G. Maintain continuous CPR with a pattern of CPR-Shock-CPR-Vassopressor.

H. **Amiodarone** second dose 150 mg IV push

I. If VF recurs after transiently converting, provide 5 cycles/2 min. CPR then defibrillate 1x.

J. Consider reversible causes: Hypovolemia, Hypoxia, Hydrogen ion (acidosis) Hypo/Hyperkalemia, Hypothermia, Tension Pneumothorax, Tamponade, Toxins, Thrombosis, Pulmonary Thrombosis, Coronary

K. If Torsades de Point, consider administration of **Magnesium Sulfate** (optional to carry), 2-4 g IV/IO.

Asystole (or Pulseless Idioventricular)

A. Administer **Epinephrin 1:10,000** 1mg IV push q 3-5 minutes. If ET Tube is established before IV is established***,*** administer **Epinephrine 1:1000** 2 mg via ET tube with 8 ml NaCl. If unable to establish IV/IO, administer via ET tube.

B. Consider reversible causes: Hypovolemia, Hypoxia, Hydrogen ion (acidosis) Hypo/Hyperkalemia, Hypothermia, Tension Pneumothorax, Tamponade, Toxins, Thrombosis, Pulmonary Thrombosis, Coronary

C. If unresponsive to medications and other ALS treatment modalities, consider discontinuing resuscitation efforts after discussion with on-line medical control.

Pulseless Electrical Activity (PEA) – SAME AS ASYSTOLE

General Considerations

A. If an automated external defibrillator (AED) has been established by BLS or ILS providers prior to arrival of ALS, allow them to complete defibrillation attempt, as indicated, prior to disconnecting their device.

B. If an ETC has been placed in the *tracheal position* prior to arrival of ALS, consider leaving in place unless there will be an extended transport.

C. If an ETC has been placed in the *esophageal position*, consider replacing with an endotracheal tube.

D. Defibrillation

1. Manual biphasic: device specific (typically 120 J to 200 J)
2. AED: device specific
3. Monophasic: 360 J