CRUSH INJURY SYNDROME

I. BLS Treatment Protocol:

- A. Treat life threats. (See Policy 4000 *Life Threats*).
- B. Spinal Precautions as indicated.
- C. Prepare for transport / transfer of care.
- D. Consider consult with ALS level care prior to removing compression.

II. ALS Treatment Protocol:

- A. Treat life threats. (See Policy 4000 *Life Threats*)
- B. For pain control refer to pain management policy (Policy 5600 *Pain Management*)
- C. Contact Base Hospital
- D. Prior to Release of Compression
  1. IV NS 1000 ml bolus prior to release of compression.
  2. Albuterol up to 5mg via nebulizer.
- E. After Release of Compression
  1. If hyperkalemia is suspected (compression >4 hours with abnormal EKG-peaked "T" wave, absent "P" wave, or widened "QRS" complexes, discuss with Base Hospital physician prior to administering any of the following:
     a) Calcium Chloride 1gm slow IVP followed by 20ml saline flush.
     b) Sodium Bicarbonate 1mEq/kg in 1000ml NS set to wide open.

Notes:

Crush Injury Syndrome is the name given to the systemic manifestations of muscle crush injury and cell death. Crush injury syndrome should be suspected in patients with an extensive area of involvement such as a lower extremity and/or pelvis. It requires more involvement than just one hand or foot. Also, the crushing force must be present for some time before crush injury syndrome can occur. The syndrome may develop after one hour in a severe crush situation, but usually takes 4 – 6 hours of compression for the processes that cause crush injury syndrome to take place. The end goal of treatment outlined in E, F, G, and H above is to prevent the life-threatening hyperkalemia which can result when crush injuries occur.

Hold Morphine Sulfate and/or Fentanyl if patient has or develops respiratory depression, bradycardia or hypotension. Narcan should be immediately available to reverse adverse effects.