Clinical Practice Management Guidelines

Initial Fluid Resuscitation

I. Purpose

To describe the principles in the management of fluid resuscitation of the injured patient both for pre-hospital and hospital trauma care.

Warnings:

- **Burn patients** should be resuscitated based on established burn management guidelines and the use of restricted fluid management in the burn patient is **contraindicated.**

- **Multisystem blunt trauma,** concerns for cerebral perfusion outweigh the benefits of hypotensive resuscitation and the goal for therapy shall be a MAP >80 or SBP >100.

II. Guideline

Lower mortality and improved outcomes are associated with evidence-based restricted fluid resuscitation protocols and compliance with guidelines for fluid resuscitation in the trauma patient beginning in the pre-hospital setting.

III. Vascular Access

A. Pre-hospital vascular access, if attempted, should be attempted during transport so care is not delayed. Data suggests equal success rates of peripheral IV placement on scene vs. during transport.

B. When adequate peripheral access is not obtainable (after two failed attempts) intraosseous access should be considered and attempted if it will not delay transportation.

C. Resuscitation in patients who have a documented systolic blood pressure of less than 90 mmHg or no palpable radial pulse should be accomplished with small volume boluses (250ml) until there is restitution of a radial pulse. Patients who have a radial pulse and/or a confirmed systolic blood pressure greater than 90 mmHg should have their IV fluids run at a minimum rate to keep the vein open (TKO).

D. Either normal saline or lactated ringer's solution is acceptable for the small volume resuscitation of a trauma patient. There is no recommendation at this time for the use of 3% saline, artificial colloid, or blood products in the pre-hospital setting.

IV. Fluids

A. Lactated ringers vs. 0.9% Normal saline are appropriate for the initial resuscitation of the injured patient.

B. In stable patients with palpable radial pulses, a saline lock is adequate and may avoid over-resuscitation given that KVO fluids may be mistakenly given as a bolus. Fluids should not be given with a rapid infuser or with a pressurized system in the pre-hospital arena. Patients weighing less than 20 kg should not have fluids given via pressurized system and should be bolused according to PALS and ENPC guidelines of 20 ml/kg.

Reference: Practice Management Guideline/Eastern Association for the Surgery of Trauma