

## TRAUMA ALGORITHM

### Airway

Open, maintainable

Obtain spinal axis control

Assess LOC (AVPU)

### Breathing

Rate, depth, adequacy

Neck: tracheal deviation, JVD

Chest: palpate for tenderness, instability, crepitation; auscultate in axillae

### Circulation

Pulse at carotid and radial, skin clammy?

Look for active bleeding sites

Abd: palpate, distension, ecchymoses, FAST

Pelvis: palpate for stability

Extremities: palpate, pulses, motor, sensory

### Disability

GCS, pupils

Brief neuro exam motor / sensory levels

### Exposure

Remove all clothes, examine thoroughly

Roll (in line stabilization) and examine back

### Secondary survey

SAMPLE history (symptoms, allergies, meds, PMH, last meal, events)

Repeat above primary survey with closer exam of HEENT, GU, neuro

### Pediatric Formulas

Est weight: 1 3 5 7 9 years old  
10 15 20 25 30 kg

ETT: age in years/4 + 3.5 cuffed

Blade: 1 in infant, 2 at 2yo, 3 at 3<sup>rd</sup> grade (8)

Foley/NGT 2 x (cuffed ETT size + 0.5)

Tape ETT at lip 3 x (cuffed ETT size + 0.5)

Chest tube 4 x (cuffed ETT size + 0.5)

[Remember as tube, tape, tap per Tim H.]

Min SBP: neonate 60, 1mo-1yo 70,

1yo-9yo 70 + 2(age), 10yo 90

### Interventions as needed

Jaw thrust, OP or NP airway, suction

Manual spinal axis control or c-collar

Hyperventilate mildly if decreased LOC

O<sub>2</sub>, BVM, ETI

Open PTX: Vaseline gauze, tape on 3 sides

Tension PTX: needle thoracostomy

Follow both above with chest tube

Hemothorax: chest tube, autoinfuser

Flail chest: manual stabilization, analgesia

Vascular access (IO prn), serial hemocue

20 cc/kg NS or LR x 2

Hemostasis, direct pressure

PRBC 10cc/kg if still hypotensive or Hgb<7

Pelvic binder if unstable

Splint fractures

Intubate if GCS  $\leq$  8; hyperventilate if blown pupil, mannitol or 3% saline

Neurogenic shock: fluids, Norepi

Warm blanket and warm IV fluids

Remove board as soon as possible

### Laboratory studies

CBC, Chem, LFTs, amylase, lipase, lactate

Type and cross, coags

Urinalysis for microscopic hematuria in kids

ETOH, urine tox screen, urine pregnancy prn

### Burn Center Criteria

Partial thickness  $\geq$  10% BSA (palmar hand = 1%)

Face, hands, feet, perineum, major joints

Any full thickness burn

Electrical, chemical, inhalational

Significant PMH condition

Significant concomitant trauma

Parkland formula: 4cc/kg x %BSA burned,

half over 1<sup>st</sup> 8 hrs, half next 16 hrs +

maintenance 100cc/kg/day 1<sup>st</sup> 10 kg; 50

cc/kg/day next 10kg, 20cc/kg thereafter