

# PROVINCIAL TRAUMA COURSE

## KEY TAKEAWAYS



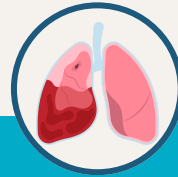
### AIRWAY & BREATHING

- **Resuscitate before you intubate!**
- **RULE of 2's: 2** sources of O<sub>2</sub>, **2** adjuncts (PEEP valve & OPA), **2** handed technique, **2** people.
- RSI/Airway plan needs to be communicated with your team.
- C-collars opened with manual inline stabilization when managing the airway (including when doing a jaw thrust)
- "What dose" is as important as "what drug".



### AIRWAY & BREATHING

- Sedation & Analgesia post intubation.
- **Waveform capnography** is the gold standard to confirm tube placement, and to confirm good ventilations during rescue oxygenation.
- Emergent chest decompression in the ED should be done by **finger thoracostomy**, followed by a 28F chest tube (at some point).
- All chest tubes can be placed on -20mmHg suction.



### AIRWAY & BREATHING

- The suction setting for chest tubes is controlled on the drainage system, NOT the wall.
- 14F Pigtail Catheters can be used in *stable* patients with isolated pneumothorax or small hemothorax IF the provider is comfortable with the procedures, and there is a clear place for the needle to "land" (need fluid/blood or air pocket where you enter with your needle).



### HEMORRHAGIC SHOCK

Sources of bleeding - On the floor and 4 places more: **chest, abdomen, long bones, pelvis.**

**Think 3ABC:**  
If the patient is unstable after 3 units of pRBC  
**A** - activate MHP  
**B** - balance your resuscitation (1:1:1)  
**C** - consider calcium and concentrates (fibrinogen)

During MHP: q1h CBC, INR, PTT, Fibrinogen, VBG, Lytes including calcium.



### HEMORRHAGIC SHOCK

The **lethal diamond:** hypotension, coagulopathy, acidosis, hypocalcemia.

Give:

- 1g CaCl IV or 3g CaGluc IV
- If ionized calcium is <1.14 and/or for every 4 units of pRBC.

When available, give **fibrinogen concentrate 4g IV** if fibrinogen level is <1.5g/L.

Early TXA, bind the pelvis, straighten long bones, decompress the chest.

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## KEY TAKEAWAYS



### BLOOD PRESSURE TARGETS

Most trauma patients  
**MAP goal: >65 (SBP 80-100)**

**Severe Head Injury** (GCS <8): **MAP >80** (SBP >100 age 50-70, SBP >110 under 50 or over 70 y.o)

**Spinal Cord Injury:**  
**MAP >85**

**Permissive Hypotension:**  
MAP >50 (SBP >70).  
Consider in young pts with penetrating trauma, without head injury, who are close to definitive mgmt.



### MASS CASUALTY INCIDENT CODE ORANGE

- Early notification to site leadership & Zone IMT activation.
- Prepare your team and assign roles.
- Consider MCI Triage - **START & JumpSTART**
- Resource Management  
**Staffing** - Call backs  
**Space** - Create ED & hospital capacity  
**Supplies** - Equipment, blood, medications etc.  
**Support** - Communication pathways with site programs and IMT
- Consider Survival at Victim Endpoint (**SAVE**)
- Consult with **LifeFlight & Trauma Team**



### HEAD INJURED PATIENTS

- Document a GCS *before* intubation.
- **AVOID hypotension and hypoxia** in pts. with severe TBI (MAP>80).
- Ketamine is safe to use. Ketamine & Roc for RSI.

Assess for signs of increased ICP: headache, amnesia, altered LOC, pupil asymmetry, seizure, Cushing's Triad.

Increased ICP:

- elevate HOB, remove c-collar, target low-normal paCO<sub>2</sub>, consider hypertonic 3% saline.

**Seizure prophylaxis:** Keppra 60mg/kg IV for all severe TBI pts.



### PEDIATRIC TRAUMA

- Peds airway: sniffing position/neutral alignment. Use towel under shoulders prn.
- Broselow tape, TREKK, IWK Drug Monograph.
- Pediatric pts. can compensate for significant volume loss before a decrease in SBP - assess for subtle changes, often.
- Use appropriate GCS tool for their age.
- Facilitate parents being present.
- Pain control, TXA, glucose.



### REMEMBER...

- Use the TNS Pre-Arrival Checklist and Departure Checklist with **every** trauma.
- Penetrating traumas: expose patients right away, look everywhere as pt. is being moved over.
- When blood is available, use it. Limit the amount of crystalloid.
- Consider norepinephrine.

**Activate Trauma and Lifelight early for all trauma patients!**