PROVINCIAL TRAUMA COURSE

KEY TAKEAWAYS

AIRWAY & BREATHING

- **Resuscitate before you intubate!**
- RULE of 2's: **2** sources of O2, **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.

EHS Emergency Health Services LifeFlight
TRAUMA NOVA SCOTIA
nova scotia health
DALHOUSIE UNIVERSITY
IWK Health

PROVINCIAL TRAUMA COURSE

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 paCO2, 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 Lifeflight early for all trauma patients!

EHS Emergency Health Services LifeFlight

TRAUMA NOVA SCOTIA

nova scotia health

DALHOUSIE UNIVERSITY

IWK Health