PEDIATRIC MAJOR TRAUMA

Call PTN **1-866-233-2337** to connect to BC Children's Hospital
Trauma Lead, Pediatric Transport Advisor for transfers and advice

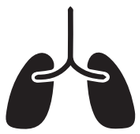
Pre-determine Age and Estimated Weight
Calculate AND Prepare
Medications and Equipment

Provincial Health Services Authority

BC Children's Hospital

CHILD HEALTH BC
LEAD BENEFACTOR save on foods

primary survey

		ASSESS	TREAT
	C	**ADDRESS CATASTROPHIC BLEEDING FIRST**	• **Apply Tourniquet or direct pressure as needed, document time. Consider giving PRBC**
	A	• **Increased risk for ETT dislodgement and endobronchial intubation** • **Cuffed ETT size = (age in years/4) + 3.5** • **Intubate for unstable airway OR declining GCS** • **Consider Spinal Motion Restriction**	**RSI medications:** • **Ketamine 1-2 mg/kg IV direct** (lower end of dose range if hypotension/ hypovolemia is a concern) • **Rocuronium 1 mg/kg IV direct** **Post Intubation Medications:** • **Morphine IV direct 0.1mg/kg for pt greater than 5kg (max 5mg) and Midazolam IV direct (Suggest dose range: Midazolam IV direct 0.05-0.1mg/kg max 8mg)** • **Ketamine IV direct (0.5-1mg/kg)**
	B	• **Keep O_2 saturations greater than 95%** • **Check work of breathing, grunting, distress** • **If breathing inadequate, first exclude tension pneumothorax**	• **100% O_2 by non-rebreather mask** • **Consider immediate needle decompression or finger thoracostomy** • **Consider chest tube**
	C	• **Assess signs of perfusion: HR, BP, pulse quality, cap refill time, skin temperature** • **Consider abnormal resp rate or declining GCS a marker of inadequate circulation**	• **Fluid Resuscitation (consider warming):** ◦ **Normal Saline 20ml/kg x 1** ◦ **PRBC 10-20ml/kg for active bleeding, or ongoing signs of poor perfusion** ◦ **consider Tranexamic Acid within 3 hours of event and consider Massive Transfusion Protocol** • **Pelvic binder should be centered over the greater trochanter** • **Splint long bone fractures** Note: isolated femur fracture unlikely cause of shock in young children
	D	• **Neuroprotection: HOB up 30°, ensure spinal collar is not causing blood flow restriction** • **Assess signs of impending herniation (HR↓, BP↑, irregular resps, asymmetric pupils), target $EtCO_2$ 35-40 mmHg** • **Obtain blood glucose** • **Ensure moving all four limbs**	**IV osmotics:** • **3% Saline: 5 mL/kg/dose (max 250 mL) IV intermittent. Start therapy early with sluggish pupils** Note: will take 15 - 20 min before effects begin • **Give D10W 5ml/kg/dose for glucose less than 2.6mmol/L, IV intermittent**
	E	• **Maintain normothermia with protective warming measures** • **Assess pain using age appropriate pain scale** • **Log Roll**	• **Consider active re-warming (i.e. Bair Hugger, warm blankets, IV warming device)** • **Treat pain: Fentanyl 1mcg/kg/dose IV direct (max 50mcg) OR Ketamine 0.15-0.3mg/kg/dose IV direct** **Post-intubation Infusions:** • **Midazolam IV 20-270 mcg/kg/hr IV continuous infusion AND Morphine greater than 3 months old 5-40mcg/kg/hr IV continuous** Note: both infusions must be used in conjunction for adequate sedation and pain management

View the
PedMed Online Formulary

Visit PHSA
shop.healthcarebc.ca/phsa
For Clinical Guidelines

Refer to BC Provincial Pediatric Trauma Team Activation Criteria

More resources at TREKK: Translating Emergency Knowledge for Kids (trekk.ca)

TAKE NOTE

- → **2 large IV's or Intraosseous if unable to obtain IV within 2 attempts**
- → **Obtain labs with Group and Screen**
- → **Do not delay transfer for CT & "Push" imaging to PACS with report**
- → **Phone receiving facility ED with report**
- → **Send copy of nursing, physician notes, labs, med record, EHS report**
- → **Concerns for Child Maltreatment; follow Duty to Report Legislation - call MCFD 1-800-663-9122**

CONCERNING PEDIATRIC VITAL SIGNS

AGE	HR	RR	SBP
1-12 months	<90 or >180	<30 or >53	≤70
1-2 years	<80 or >140	<22 or >37	≤70
3-5 years	<65 or >120	<20 or >28	≤80
6-12 years	<58 or >118	<18 or >25	≤85
12+ years	<50 or >100	<12 or >20	≤90

Effective: 30/August/2024