MANAGEMENT OF MAJOR PEDIATRIC TRAUMA

BC CHILDREN'S HOSPITAL
An agency of the Provincial Health Services Authority

CHILD HEALTH BC

Criteria for Identification of Major Pediatric Trauma Patient

Pediatric Trauma Score (PTS) on arrival or report from BC Ambulance Service

COMPONENT	SCORE		
	+2	+1	-1
Weight	> 20 kg	10 – 20 kg	< 10 kg
Airway	Normal	Oral or nasal airway	Intubated or tracheostomy
Systolic BP	> 90 mm Hg	50 – 90 mm Hg	< 50 mm Hg
Level of Consciousness	Awake	Obtunded or any loss of consciousness	Comatose
Open Wounds	None	Minor	Major or penetrating
Fractures	None	Minor	Open or Multiple
TOTAL SCORE =			

PTS ≤ 8 (indicates significant mortality risk) → MEETS MAJOR PEDIATRIC TRAUMA CRITERIA

PTS ≥ 9 ↓

PHYSIOLOGIC CRITERIA:
- ✓ *Pediatric GCS ≤ 12 or focal neurologic deficit*
- ✓ *Airway compromise*
- ✓ *Respiratory distress / Cardiovascular compromise*
- ✓ *Cardiopulmonary arrest following trauma*

YES → MEETS MAJOR PEDIATRIC TRAUMA CRITERIA

NO ↓

ANATOMIC CRITERIA:
- ✓ *Multiple organ system injury*
- ✓ *Uncontrolled hemorrhage*
- ✓ *Open chest wound*
- ✓ *Any penetrating torso, head, neck or proximal extremity injury*
- ✓ *Complete / partial major amputation (exclude digits)*
- ✓ *2 or more long bone fractures*
- ✓ *Combination trauma and burn*

YES → MEETS MAJOR PEDIATRIC TRAUMA CRITERIA

NO ↓

MAJOR MECHANISM:
- ✓ *Hostile environment (heat/fire, cold water, etc.) with trauma*
- ✓ *Any Autolaunch as defined by BC Ambulance Service*

YES → MEETS MAJOR PEDIATRIC TRAUMA CRITERIA

NO ↓

FAILS TO MEET MAJOR PEDIATRIC TRAUMA CRITERIA
[If any concerns, contact Pediatric Emergency Physician on duty – 604-875-2045]

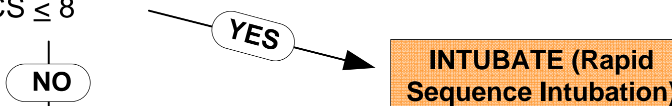
MEETS MAJOR PEDIATRIC TRAUMA CRITERIA

Preparing Major Pediatric Trauma Patient for Transport

Call BC Bedline at **1-866-233-2337** to be connected with **BC CHILDREN'S HOSPITAL INTENSIVIST** as soon as major trauma patient determined (GOAL < 10 min after arrival)

AIRWAY + BREATHING (with C-spine stabilization)

- Compromised
- GCS ≤ 8

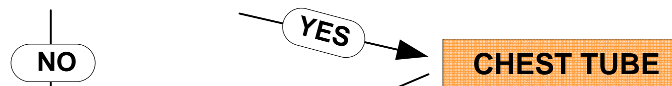


YES → **INTUBATE (Rapid Sequence Intubation)** → CHEST X-RAY

NO ↓

CHEST X-RAY

- Confirm ETT placement if applicable
- ? Pneumothorax / hemothorax



YES → **CHEST TUBE** ↓

NO ↓

2 Large Bore IV's or IO (intraosseous) Normal Saline
Urinary Catheter
Nasal/Oral Gastric Tube *(if intubated)*
Antibiotics For Open Fractures
Tetanus Booster *(if indicated)*
Nursing Report phoned to BCCH ER or ICU

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TRANSPORT decisions in conjunction with BCCH Intensivist and Air Ambulance Coordination Centre; transport may be via ITT/ CMCCT or as advised by BCCH Intensivist

***Do Not Delay Transport for C-spine / Pelvis or Extremity X-rays or CT scan**

Tips:

Optional Diagnostics should not delay transport to definitive care.

AIRWAY

Intubation: essential if concern about oxygenation, ventilation, obstruction, altered level of consciousness or impending airway compromise.

BREATHING

Oxygen: GOAL to keep oxygen saturation > 95%

Chest Tube: essential if any evidence of pneumothorax or hemothorax.

CIRCULATION

IV Access: 2 IV sites, may include IO (intraosseous), largest bore possible.

Fluids: Normal saline is fluid of choice.
If hypotensive, give normal saline or pentaspan bolus (10 – 20 ml / kg body weight).
Inotropes rarely used in trauma resuscitation.

Pelvic Splinting: If hemodynamically unstable with suspected pelvic fracture, wrap pelvis tightly with sheet.

OTHER

Consider: Foley catheter, NG or OG tube pre transport.

X-rays: Chest X-ray MANDATORY.
C-spine + pelvis generally indicated but should not delay transport.
CT should NOT delay transport of unstable patient.

*All major trauma with decreased LOC will remain in or be placed in full C-spine immobilization on a padded clamshell for transport regardless of C-spine X-ray. Final C-spine clearance for patient with decreased LOC will be done at the receiving facility.

Documents: Send X-rays, CD's, photocopies of prehospital record, hospital chart and lab results with patient. Do not send packaged blood with patient unless transfusing enroute.
Have radiology department "electronically push" all imaging to "BC Transfer Grid" (technical questions: **604-875-2132**).

July, 2007