

Key Points

Most chest injuries in children require non operative treatment

Unstable patients with significant haemothorax will require thoracotomy

Thoracotomy should be performed in operating theatre whenever possible

Penetrating injuries resulting in cardiac arrest in ED, within 5 minutes prior to arrival or peri-arrest may require thoracotomy in ED

All penetrating or high energy / significant chest injuries should by-pass directly to MTC. Any such injury presenting to a TU should be transferred ED to ED without delay.

A patient who presents to a TU ED *in extremis* should be managed as outlined below by the most senior surgeon/clinician available.

Penetrating chest trauma

JCUH

Call vascular surgeon on-call and thoracic surgeon on-call.

RVI

Call Paediatric Surgery on-call team, on-call consultant thoracic surgeon and PINC anaesthetist. Alert cardiac on-call surgeon.

TU

A patient who presents to a TU ED *in extremis* should have resuscitative surgery performed by the most senior surgeon/clinician available.

- 1. If patient arrests in ED, is peri-arrest or has arrested prior to hospital arrival but has electrical cardiac activity or CPR <20mins AND there is penetrating chest injury then a thoracotomy in ED is indicated.**

ED consultants, Paediatric Surgery consultants, General surgery consultants most orthopaedic consultants and certain trainees are trained in emergency thoracotomy

Consultant Paediatric surgeon and thoracic surgeon must be called

Ensure appropriate equipment is in ED and staff know where to access it

- 2. Unstable patients with significant haemothorax will require a thoracotomy. Thoracotomy should be performed in operating theatre if patient's condition allows transfer.**
- 3. A decision on surgery in the more stable patient with on-going blood loss to be taken between paediatric surgery consultant and thoracic surgeon**
- 4. In patients in whom there is a suspicion of cardiac injury but who have not arrested, trauma team leader to confer with paediatric surgery and cardiac surgery consultants to determine best course of action.**
- 5. Activate major haemorrhage protocol if signs of on-going blood loss**

Thoracostomy

Indications:

- patient in peri-arrest or deteriorating vital signs following chest trauma following chest trauma where tension pneumothorax or haemothorax has not been excluded

Blunt chest trauma:

Evidence shows there is no advantage to emergency thoracotomy in ED for a patient without vital signs

Final decision lies with ED Consultant and paediatric surgery / thoracic surgery consultant if present

Unstable patient with blunt chest trauma and with vital signs can be considered for thoracotomy to be performed in operating theatre if possible.

With thanks to Dr Dave Bramley for input

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VERSION NUMBER/DATE	1.0 / March 2018
REVIEW DATE	01/03/2020
RELATED INFORMATION	