

Central Hospital Network

THORACOTOMY - EMERGENCY DEPARTMENT - DECIDING WHEN TO PERFORM

Cross references (including NSW Health/ SESIAHS policy directives)	How To Perform Emergency Department Thoracotomy (under development)
1. What it is	Evidence based decision making for undertaking resuscitative thoracotomy in the Emergency Department (ED)
2. Who it applies to	Emergency department medical officers Trauma/General surgical registrars Cardiothoracic registrars
3. When to use it	For patients in extremis following major chest trauma
4. How to use it	In consultation with the on call cardiothoracic surgeon and/or trauma surgeon
5. Why the rule is necessary	To facilitate the decision regarding the appropriate patients for resuscitative ED thoracotomy in patients with major chest trauma
6. Who is responsible	All ED medical officers or Surgical registrars managing patients in extremis following major chest trauma
7. Process	
<p>Emergency department thoracotomy (EDT), perhaps more appropriately called resuscitative thoracotomy, is an occasionally life-saving procedure in a very small and select group of patients with severe chest injury.</p> <p>The following algorithm details which patients should undergo EDT. In addition the guidelines specify those patients in whom EDT will be futile who should not be subjected to the procedure. This is not a procedure to be done “for the practice”.</p> <p>Deciding whether to proceed with ED thoracotomy is the responsibility of the most senior ED or surgical medical officer in attendance.</p> <p>7.1 EMERGENCY DEPARTMENT THORACOTOMY (EDT) GUIDELINES</p> <p>Key for EDT Algorithm;</p> <p>Vital signs (VS) – Palpable BP or Palpable Pulse</p> <p>Signs of Life (SOL) – Spontaneous respirations Organised, narrow-complex cardiac activity Reactive pupils Extremity movement</p>	

<p>7.2</p>	<p style="text-align: center;"><u>ALGORITHM FOR DECIDING WHEN TO PERFORM EDT</u></p> <p style="text-align: center;"><u>MECHANISM OF CHEST INJURY</u></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p><u>BLUNT</u></p> <p>SOL on arrival to ED</p> <pre> graph TD A[BLUNT] --> B[SOL on arrival to ED] B --> C[ABSENT] B --> D[YES] C --> E[DEAD] D --> F[SOL LOST IN ED] F --> G[EDT] G --> H[Return of SOL] G --> I[No return of SOL] I --> E H --> J[Urgent OT] </pre> </div> <div style="text-align: center;"> <p><u>PENETRATING</u></p> <p>SOL on arrival to ED</p> <pre> graph TD K[PENETRATING] --> L[SOL on arrival to ED] L --> M[ABSENT within 5mins of arrival] L --> N[YES] M --> G[EDT] N --> O[EMST Principles] G --> H[Return of SOL] G --> I[No return of SOL] I --> E[DEAD] H --> J[Urgent OT] </pre> </div> </div>
<p>8. Compliance evaluation</p>	<p>Q: Should a patient with severe blunt chest trauma and no signs of life on arrival in the ED undergo emergency department thoracotomy? A: No, it is futile in these patients</p> <p>Q: Who should decide whether to proceed to ED thoracotomy? A: The most senior ED or surgical medical officer in attendance.</p> <p>Q: What constitutes “signs of life”? A: Spontaneous respirations; organised, narrow-complex cardiac activity; reactive pupils; extremity movement</p>
<p>9. External references</p>	

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I, *Mary Langcake, Director of Trauma* of *St George Hospital, CHN* attest that this business rule is not in contravention of any legislation, industrial award or policy directive.

Revision and approval history

Date	Revision number	Contact Officer (Position)	Date for revision
Oct 10	0	Taneal Wiseman, CNC Trauma, St George, CHN	Oct 2013