Pre-hospital Stay and Play versus Scoop and Run

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Figure 2b: Trends in the odds of in-hospital death of major trauma patients with ISS greater than 15, adjusted for injury severity, age and head injury.
Figure 9: Trends in the risk-adjusted odds of a functional recovery at six months
Trauma – a quaternary speciality

Injury evolution, timing of presentation, timeliness of intervention, time management and coordination of resource
Victorian State Trauma System

- Prevention
- Preprogrammed response
- Reduce secondary insults ‘pre’ and ‘in’ hospital
- Rapid transfer to a Major Trauma Service
- The ‘right patient to the right people in the right time’

Large Urban population
40% penetrating trauma

Potentially Preventable Deaths

- Airway & Ventilation compromise
- Uncontrolled Haemorrhage
- MOF & Sepsis
- REBOA
Large Urban population
40% penetrating trauma

Time from Event

Airway & Ventilation compromise
Uncontrolled Haemorrhage
MOF & Sepsis
REBOA

Potentially Preventable Deaths
Large Urban population
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Potentially Preventable Deaths

- Airway & Ventilation compromise
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Trauma Centre arrival

Time from Event

30'
# Principal Cause of Death:
Includes deaths in other units

<table>
<thead>
<tr>
<th>Ranked</th>
<th>Cause</th>
<th>Major</th>
<th>Non-major</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Fatal TBI</td>
<td>48</td>
<td>0</td>
<td>48</td>
</tr>
<tr>
<td>2</td>
<td>Complications of Injury</td>
<td>28</td>
<td>0</td>
<td>28</td>
</tr>
<tr>
<td>3</td>
<td>Succumbed to co-morbidities</td>
<td>21</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>4</td>
<td>Uncontrolled haemorrhage</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Multiple Injuries</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Hypoxia</td>
<td>3</td>
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<td>3</td>
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<tr>
<td>7</td>
<td>DVT/PE/Fat embolism</td>
<td>0</td>
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<tr>
<td>8</td>
<td>Not coded yet</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>111</strong></td>
<td><strong>2</strong></td>
<td><strong>113</strong></td>
</tr>
</tbody>
</table>
Mixed Urban/Rural population
10% penetrating trauma

Trauma Centre arrival

Potentially Preventable Deaths

Airway & Ventilation compromise
Uncontrolled Haemorrhage
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Mixed Urban/Rural population
10% penetrating trauma

Potentially Preventable Deaths

- Airway & Ventilation compromise
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Trauma Centre arrival

N

Time from Event

45'

ECCN Feb 2015
Pericardial tamponade and blunt trauma

Survival depends on the presence of tamponade and the time to operative intervention of U/S with prompt diagnosis and surgery can now lead to a survival rate of 70-80%.

REBOA patients should be transferred immediately for definitive haemorrhage control in the OR or IR suite. They should not undergo further imaging at this stage e.g. CT scanning.

No REBOA

Yes?

CXR: possible proximal aortic injury?

Yes?

No?

Zone I REBOA Immediate T/F OR for laparotomy

No REBOA

Abdominal

Yes?

FAST positive?

Pericardial

Yes?

Pelvic fracture or penetrating pelvic injury?

No?

No REBOA

Immediate T/F OR + thoracotomy or ED resuscitative thoracotomy

Zone III REBOA Immediate T/F IR angioembolisation if available ≤ 30 mins or OR for laparotomy + extra-peritoneal packing

Yes?

Zone I REBOA Retroperitoneal haemorrhage. Consider other causes
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