Blood Response to Major Incidents in England

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• NHSBT is regarded as “The Blood Service”, but also provides tissues in emergencies (esp. Skin)
• Blood and blood components are provided from stock (we do not normally need emergency donors)
• NHSBT will move stock to ensure that a centre is reprovided
• Assumption that most emergency stock is required within the first 8 hours of an incident.
• NHSBT does recognise some ongoing requirements for returns to theatre
Challenges

- Hospitals over-order
- The public response to give blood
- The tendency to use O Negative blood (even when there is time to provide group compatible) – not just a numbers issue
- Logistics – crowds, lock-downs and cordons disrupt travel routes and access into hospitals (assistance required for blood services please)
Incidents

- Westminster Bridge - 22 March 2017
- *WannaCry ransomware* - 12 May 2017
- Manchester Arena - 22 May 2017
- London Bridge - 3 June 2017
- Grenfell Tower - 14 June 2017
- Finsbury Park Mosque - 19 June 2017
- Parson’s Green Underground - 15 September 2017
<table>
<thead>
<tr>
<th></th>
<th>Westminster</th>
<th>Manchester</th>
<th>London Bridge</th>
<th>Grenfell Tower</th>
<th>Finsbury Park</th>
<th>Parson’s Green</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Casualties</strong></td>
<td>29</td>
<td>116</td>
<td>48</td>
<td>70</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td><strong>Transfused</strong></td>
<td>?</td>
<td>23</td>
<td>?</td>
<td>?</td>
<td>0</td>
<td>?</td>
</tr>
<tr>
<td><strong>Ordered</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>Used</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O Neg RBC</td>
<td>20</td>
<td>?</td>
<td>163</td>
<td>31</td>
<td>90</td>
<td>?</td>
</tr>
<tr>
<td>O Pos RBC</td>
<td>50</td>
<td>?</td>
<td>80</td>
<td>21</td>
<td>46</td>
<td>?</td>
</tr>
<tr>
<td>Total RBC</td>
<td>70</td>
<td>?</td>
<td>334</td>
<td>89</td>
<td>136</td>
<td>?</td>
</tr>
<tr>
<td>Total Plt</td>
<td>16</td>
<td>?</td>
<td>18</td>
<td>?</td>
<td>17</td>
<td>?</td>
</tr>
<tr>
<td>Total Frozen</td>
<td>12</td>
<td>?</td>
<td>70</td>
<td>?</td>
<td>60</td>
<td>?</td>
</tr>
</tbody>
</table>
Israeli Experience

• A past Israeli survey of 1645 attacks involving 7497 casualties (Shinar et al, 2006) suggested:
  • 13% death at scene
  • 8% severe (p1) and
  • 12% (p2) moderate casualties
• A total of 20% who may need blood.

Our Assumptions

• For casualty numbers we use Government Planning assumptions
• We assume P1:P2:P3 ratio of 10:20:70
• 10 units RBC for P1 – haemostatic support in accordance with transfusion guidelines
• 4 units RBC for P2 – no haemostatic support
• Nothing for P3
• 3-fold over-ordering of red cells
Specific Issues

- Cordon going into St. Thomas’ (Westminster Bridge) and cordon in Manchester
- Platelet stock points
- Not routine for hospitals to report usage
- Hospital over-ordering (especially O Neg red cells and A Neg platelets)
- Transport boxes
Thank You

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