Managing the aftermath of the Manchester Attack

22nd May 2017

Kate Pendry
Consultant Haematologist
1st call 22:32
1st on scene 22:42
Major Incident declared 22:46
Command structure in place 22:52
NHSBT Incident Managers notified 23:45
Scene cleared 02:45
Major Incident Closed 05:25

Operation SOCRATES had occurred end March 2017
22 people killed
160 attended hospital
75 admitted to hospital
What went well

1. All supplies met
   - 334 units red cells (49% O D negative), 58 units FFP (48% AB), 18 packs platelets (67% A), 12 pools MB cryoprecipitate
   - More than 4 days national stock O D neg

2. Off duty staff came in to help in Hospital Services

3. Potential new blood donors were supported on arrival by senior team
What could be improved

1. Improve activation process for NHSBT
2. Improve telephone access to Hospital Services
3. The online donor portal saw a massive increase in traffic from blood donors which affected other IT functionality and there was an increase in donor phone calls. Erroneous third party social media messaging may have exacerbated this.
4. Hospitals overstocked O D negative red cells – NHSBT O Neg Working Group will review option to take back stock.
URGENT BLOOD DONORS NEEDED

Message from Manchester Royal Infirmary

PLEASE SHARE
Anyone in Manchester with the blood group O NEGATIVE please donate we have run out we have none xxx

Go to Upper brook street Manchester facing the MRI xxx
• 1000 walk in donors
• 17000 calls to national donor line
• Online portal overloaded
In response to last night's tragic incident in #Manchester - we have all the blood required for hospital patients at the present time.

We are responding to last night's tragic incident in Manchester.
We do have all the blood required for hospital patients at the present time, however we are always keen to encourage new donors to register and existing donors to book an appointment which can be done at www.blood.co.uk or by calling 0300 123 23 23.

If you have an appointment to give blood in the next few days, please do your best to keep it, particularly if you are blood group O negative.

#Manchester
# Red Cell Issues

<table>
<thead>
<tr>
<th>Manchester Issues</th>
<th>O+</th>
<th>A+</th>
<th>B+</th>
<th>AB+</th>
<th>O-</th>
<th>A-</th>
<th>B-</th>
<th>AB-</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sat 20-May-17</td>
<td>36</td>
<td>24</td>
<td>1</td>
<td>4</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>77</td>
</tr>
<tr>
<td>Sun 21-May-17</td>
<td>23</td>
<td>13</td>
<td>6</td>
<td>6</td>
<td>16</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>71</td>
</tr>
<tr>
<td>Mon 22-May-17</td>
<td>89</td>
<td>113</td>
<td>8</td>
<td>3</td>
<td>40</td>
<td>22</td>
<td>3</td>
<td>0</td>
<td>278</td>
</tr>
<tr>
<td>Tue 23-May-17</td>
<td>199</td>
<td>179</td>
<td>24</td>
<td>10</td>
<td>180</td>
<td>30</td>
<td>8</td>
<td>0</td>
<td>630</td>
</tr>
<tr>
<td>Wed 24-May-17</td>
<td>127</td>
<td>114</td>
<td>33</td>
<td>7</td>
<td>41</td>
<td>32</td>
<td>4</td>
<td>2</td>
<td>360</td>
</tr>
<tr>
<td>Thu 25-May-17</td>
<td>112</td>
<td>116</td>
<td>25</td>
<td>3</td>
<td>28</td>
<td>11</td>
<td>5</td>
<td>2</td>
<td>302</td>
</tr>
<tr>
<td>Fri 26-May-17</td>
<td>103</td>
<td>74</td>
<td>22</td>
<td>2</td>
<td>22</td>
<td>23</td>
<td>6</td>
<td>0</td>
<td>252</td>
</tr>
<tr>
<td>Sat 27-May-17</td>
<td>36</td>
<td>28</td>
<td>8</td>
<td>0</td>
<td>7</td>
<td>31</td>
<td>2</td>
<td>0</td>
<td>112</td>
</tr>
</tbody>
</table>
Our Chief Exec, Ian Trenholm paid a visit to the Plymouth Grove centre in Manchester to thank blood donors and staff.
Patient Details and Blood Use
Patient Demographics

28 (36%) patients \( \leq 20\)yrs

52 females

23 males

2 Unknown
Injury Type

- Multi Trauma: 36%
- Torso: 20%
- Limb: 7%
- Head & Neck: 7%
- Fragmentation: 7%
- Minor: 7%

Blood and Transplant
Blood component use

Survey describes 75 patients treated for injuries

23 patients received red cells
4 received Octaplas
2 patients received platelets;
2 received cryoprecipitate
23 patients (31%) were transfused

A total of 89 units of red cells were used

Mean red cell use = 3.9 units per patient

Min = 1
Max = 15
Mode = 2

3 patients received ≥ 10 units
6 patients received ≥ 5 units
Use of group O D neg

31 O D Neg red cells were used.

At least 1 unit of emergency O D Neg was transfused to 14/23 (61%) patients

<table>
<thead>
<tr>
<th>Blood group</th>
<th>No of patients</th>
<th>Emergency O neg</th>
<th>Group specific</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>O +</td>
<td>7</td>
<td>5</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>O -</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>31</td>
</tr>
<tr>
<td>A +</td>
<td>8</td>
<td>11</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>B +</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>AB -</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Unknown</td>
<td>4</td>
<td>7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>28</td>
<td>61</td>
<td>89</td>
</tr>
</tbody>
</table>
Ratio of red cells ordered: transfused = 3.75

Ratio of 2- 3 previously seen in both UK and Israeli literature

Ratio O D Neg ordered (163): O D Neg transfused (31) = 5.25
Rebuild of Manchester O Neg Blood Stocks
Further Actions

• Improve activation process for NHSBT once Major Incident declared: NHSBT in conversation with NHS England

• Standardise patient ID to allow record of estimated DOB, gender, non-sequential numbers, movement of patients between hospitals (Trust identifier): NHSBT / SHOT in conversation with NHS England

• Recommendations for hospitals for transfusion support in Mass Casualty Events: Update of NBTC Emergency Planning Recommendations

• Clear messaging re ongoing need for O D neg red cell donation
Acknowledgements:
All the staff in NHSBT and hospital transfusion laboratories
Members of the public who came forward to donate