Out of Hours Crossmatching
2006 Audit
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Consultant Haematologist

West Midlands
Regional Transfusion Committee
SHOT 2005

• 42.5% of wrong blood incidents originated in the laboratory
• 22 errors in ABO typing
  – 9 sample selection
  – 10 transcription errors
• 59% of these occurred out of core hours
Standards

• None!
Methods

• Organisational questionnaire
• Data collected on crossmatch episodes
  – 40 episodes/2 weeks-whichever reached first
  – Total numbers also collected for the 2 weeks
  – ‘out of hours’ defined by individual labs
  – Paper forms returned and entered by hand
Participation

• 28 Blood banks agreed to take part
  – NHS and Private
• 19 returned data
  – Organisational and episode
  – 581 episodes audited
Results-Activity Levels

• Out of hours requests
  – Median 124 (1 to 782)
  – 27% were crossmatches

• Of all crossmatch requests
  – 29% received out of hours
Crossmatch requests during Audit Period occurring out of hours as percentage of total

West Midlands Regional Transfusion Committee
Who requests blood?

Who is requesting blood?

- SHO
- SpR
- HO
- Consultant
- Nurse
- Staff Grade
- Associate Specialist

West Midlands
Regional Transfusion Committee
What’s it for & is it appropriate?

• 47% could be considered as urgent or emergency
  – Acute blood loss/GI bleed/emergency surgery/acute trauma/emergency obs
• ‘Chronic anaemia’ most common indication
• >10% were for ‘elective surgery’
• 18% of requests > 12hrs after Hb result
• 10% of requests > 24hrs after Hb result
Was it used?

- Overall 72% of crossmatches resulted in transfusion

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Regional Transfusion Committee
When was it used?

![Bar chart showing time from request to blood usage]

- 52% transfused during same ooh period
Who is doing the work?

Grade of BMS

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number of requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>300</td>
</tr>
<tr>
<td>Senior</td>
<td>150</td>
</tr>
<tr>
<td>Chief</td>
<td>50</td>
</tr>
<tr>
<td>Head</td>
<td>10</td>
</tr>
</tbody>
</table>
Where are they from?

Normal Discipline of Staff on call in Blood Bank

- Haematology
- Blood Bank
- Unknown
- Multidisciplinary
- Coagulation
- Manager
- Biochemistry
- IT
- Immunology
- Transfusion Practitioner

Requests
How much recent experience have they had?

<table>
<thead>
<tr>
<th>Grade</th>
<th>Total</th>
<th>Permanent bb staff (%)</th>
<th>Rotating through blood bank in the last year (%)</th>
<th>No routine BB work, doing on call only (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>304</td>
<td>24 (7.9%)</td>
<td>276 (91%)</td>
<td>4 (1.3%)</td>
</tr>
<tr>
<td>Senior</td>
<td>181</td>
<td>37 (20%)</td>
<td>88 (48.6%)</td>
<td>57 (31.5%)</td>
</tr>
<tr>
<td>Chief</td>
<td>77</td>
<td>32 (41.5%)</td>
<td>17 (22.1%)</td>
<td>28 (36.3%)</td>
</tr>
<tr>
<td>Head</td>
<td>14</td>
<td>0.0</td>
<td>1 (7.1%)</td>
<td>13 (92.8%)</td>
</tr>
</tbody>
</table>

- Overall 17.5% of requests dealt with by BMS with no routine BB experience in last year
Conclusions

• Junior doctors responsible for majority of requests
  – 52% could be considered non-urgent
  – 52% result in transfusion during same period
• There is a significant amount of ‘routine’ work being done
• Majority of work done by lone working basic grade BMS
  – with variable support/back-up
  – 17.5% have no recent experience in BB besides on call
  – In 18/19 the BMS covered other disciplines as well as BB
• Only 1/19 used manual methods ooh
Recommendations

- Work load should be limited to clinically urgent and justified situations
- Lone working BMS must have clear arrangements for support/backup
- The same methods should be used as during the day
- All on call staff should spend a minimum period of time in the BB during normal hours
- There is a need for regional or national guidelines for out of hours working in blood bank
Thank You

Report available on West Midlands RTC Website
www.transfusionguidelines.org.uk