Two samples- is it workable?
King’s Lynn experience

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ABO

• ABO grouping is the single most important serological test performed on pre-transfusion samples

• “Cross matching” patient serum against donor cells historically provided a check of ABO compatibility

• In 1990s NHSBT calculated risk of red cells being mislabelled / misgrouped for ABO: <1 in a million
The Ronseal effect!
Beware of WBITs

• BUT......~1 in 2000 pre-transfusion samples are from the wrong patient
  – 469 cases of “wrong blood in tube” (WBIT) were reported to SHOT as near misses in 2011
  – 37.5% sampled by doctors,
  – 35.5% by nurses/midwives.
Why this matters

• 1 in 2000 WBITs
• 1 in 10 from previously untested patient
• 50% not group O
• Risk of ABO incompatible blood being issued=1 in 80,000 samples

Jonathan Wallis 2013
## Incidence of WBITs

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of samples</th>
<th>No. of WBIT</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>40317</td>
<td>2</td>
<td>0.005</td>
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<tr>
<td>2011</td>
<td>39936</td>
<td>4</td>
<td>0.01</td>
</tr>
<tr>
<td>2010</td>
<td>29939</td>
<td>10</td>
<td>0.03</td>
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Sticks and carrots

• TWO SAMPLES from patient unknown to laboratory
• “Unlimited” supply of compatible blood available with a phone call

January 2000
What we do

• Automation of analysers allowed introduction of “fast issue” in 2003
• First sample-automated forward and reverse ABO group
• Second sample-automated forward (x1) ABO group
  Allows “fast issue” –not electronic issue…yet
Why it works

• Relatively static patient population
• Automated ABO grouping
• No exceptions to 2 sample rule
• Senior support-scientific and/or medical
• Education Education Education
PROBLEMS
1. When are two samples not two samples?

- Concerns have been expressed that the two samples may be taken at the same time, but one “saved” to send to the transfusion laboratory at a later time.
- It is important to have a policy and process in place to assure that the two samples have been taken independently of one another.
- Those taking samples for transfusion, need to understand the reasons for requesting a second sample and the risk of WBIT.

BCSH guidelines 2012
Solution

- Electronic sampling using PDAs-time on sample!!!
2. New doctors from St Elsewhere
Solution – The Rules

**ALL** Clinical Staff ......

- **must** attend induction training and annual updates in Blood Transfusion.
- **must** have read and understood the parts of the Trust Transfusion Policy pertinent to them.
- **must** follow the policy **at all times**
- **must** be assessed with documented competency within their scope of practice

BUT WBIT as likely to come from trained as untrained staff (Murphy et al 2004)
3. New laboratory staff from St Elsewhere
The Lab Team

Denise  Adrian  Donna  Linda
Solution

- Rules and competency assessment and monitoring
- Consistency
- Senior support
The next steps

• Secure electronic patient identification systems – VEIN TO VEIN

• Laboratory computer upgrade to allow electronic transmission of results from analyser to laboratory IT system (LIS)

ELECTRONIC ISSUE FROM ONE SAMPLE
Will this make one sample “safe”?

- Wrong wristband
- Right blood in tube, wrong label from PDA

Maybe we’ll stick to two samples!!!