

# HOW TO PREVENT ERRORS IN THE TRANSFUSION LABORATORY

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# How to Prevent Errors in the Transfusion Laboratory

- Elements of good transfusion laboratory practice.
- Where in the process do errors occur?
- Who is making the errors?
- Why are the errors occurring - which elements of good transfusion practice are failing?

# Elements of Transfusion Laboratory Practice

## WHO?

- Staff
  - Numbers
  - Training

## WHAT?

- Guidelines
- Standard Operating Procedures

# Elements of Transfusion Laboratory Practice

## HOW?

- Robust Reagents/Methods
- Equipment/Automation
- Information Technology (IT)

# Elements of Transfusion Laboratory Practice

## **MONITORING**

- National External Quality Assessment Scheme (NEQAS)
- Audit
- Error Logging
  - Local
  - SHOT
- Error Analysis

# Where do Errors Occur? (1)

	No. of errors
<b>Transcription error</b>	<b>3</b>
<b>Failure to consult/heed historical record</b>	<b>23</b>
<b>Grouping error</b>	<b>30</b>
<b>Missed antibody(ies): Screen error</b>	<b>5</b>
<b>Missed antibody(ies): ID error</b>	<b>2</b>
<b>Missed incompatibility</b>	<b>2</b>
<b>Selection/issue of inappropriate component</b>	<b>24</b>
<b>Labelling error</b>	<b>8</b>
<b>Failure to irradiate</b>	<b>9</b>
<b>Crossmatch error</b>	<b>2</b>

# Where do Errors Occur? (2)

	No. of errors
Crossmatch wrong sample	5
Failure to follow protocol	11
Incorrect serological reasoning	3
Clerical error	7
Technical error	7
Failure to clear satellite refrigerator	5
Failure to detect error by Blood Centre	1
Other	10
<u>Total</u>	<u>157</u>

# Grouping Errors

- 16 D groups, 14 ABO groups
- 17/30 rapid methods
- 12/17 out of hours
- 14/17 emergencies
- 16/17 detected through routine methods

# Grouping Errors – WHY?

- **Error analysis**
- Selection of reagents and methods
- Staff training/experience

# Failure to Consult/Heed Historical Record - WHY?

BCSH Guideline for pre-transfusion  
compatibility procedures in Blood  
Transfusion Laboratories states that one of the  
elements in pre-transfusion testing is:

**A computer or manual check of records.**

# Failure to Consult/Heed Historical Record - WHY?

- **Error analysis**
- Should guideline be more prescriptive?
- Interpretation of guideline into local SOP?
- Inadequate IT system?
- Inadequate staff training?
- Staff shortages?
  - Are errors not being addressed?
  - Responsibility passed to another staff group?

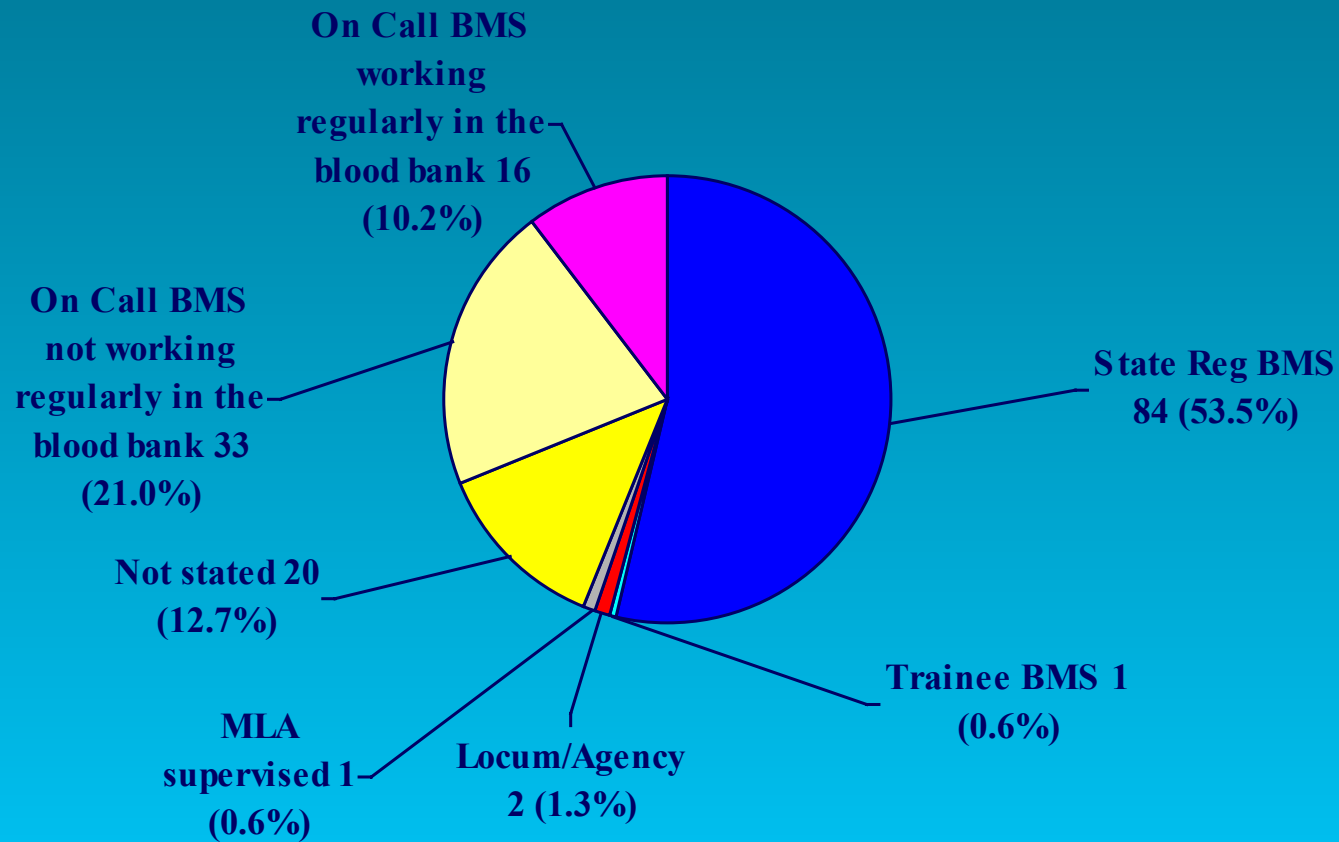
# Selection/Issue of Inappropriate Component - WHY?

- SOPs
  - no perfect SOP
  - must cover all components
  - clear and unambiguous
- Staff Training
  - practise makes perfect
- IT
  - inadequate

# Failure to Follow Protocol - WHY?

- SOP
- **Staff Training**
  - Initial training
  - Ongoing training
    - theoretical knowledge
    - competency based training
    - frequency of re-training
    - time to read/digest/question SOPs

# When are Errors Made and Who Makes Them?



# Conclusion

- **Information Technology**
- **Error Analysis**
- **Staffing**
  - **Sufficient Numbers/Appropriate Grades**
  - **Required Education/Training/Competencies**
  - **‘In hours’ and ‘Out of hours’**