



University Hospitals Bristol
NHS Foundation Trust



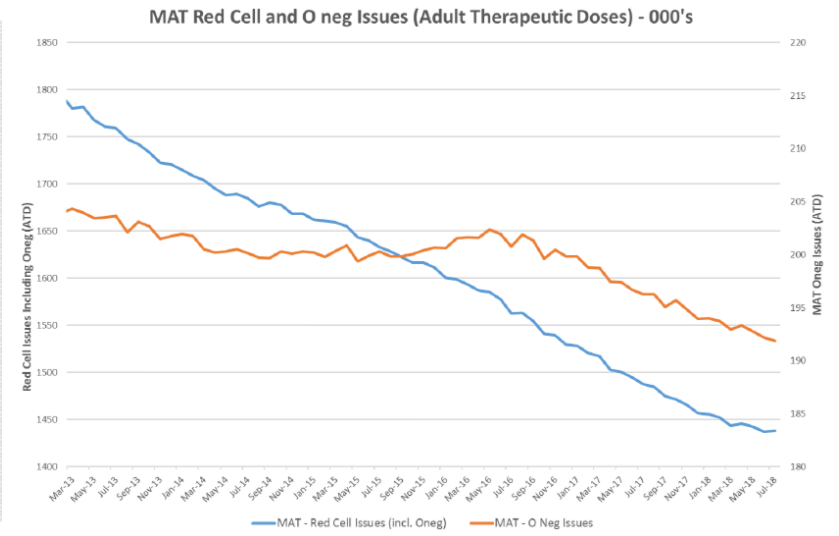
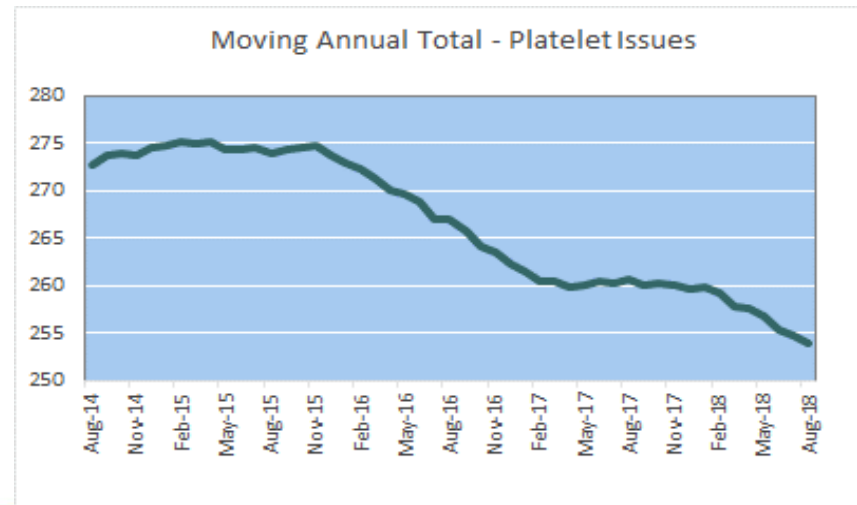
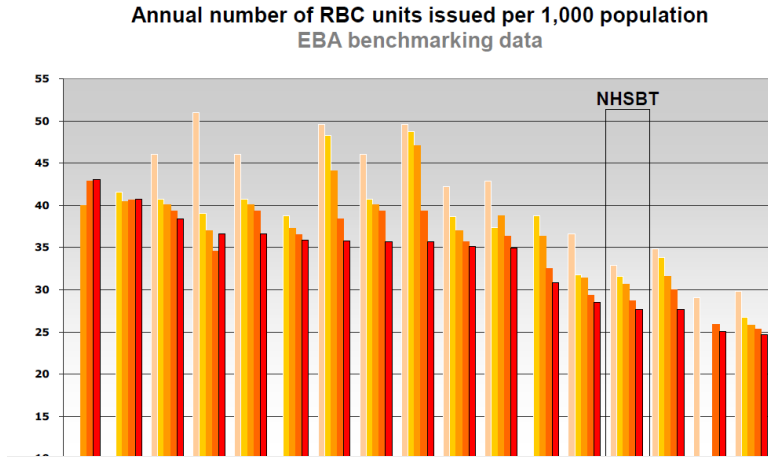
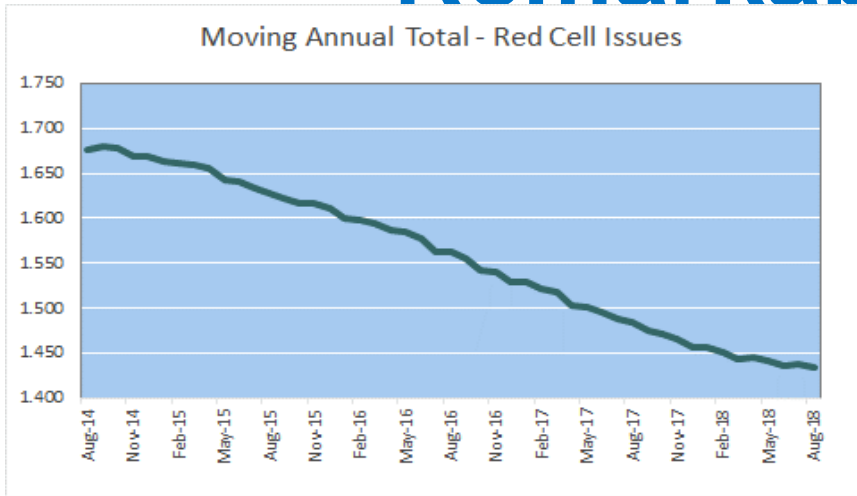
Blood and Transplant

Does my patient need a blood transfusion

Edwin Massey, Consultant Haematologist

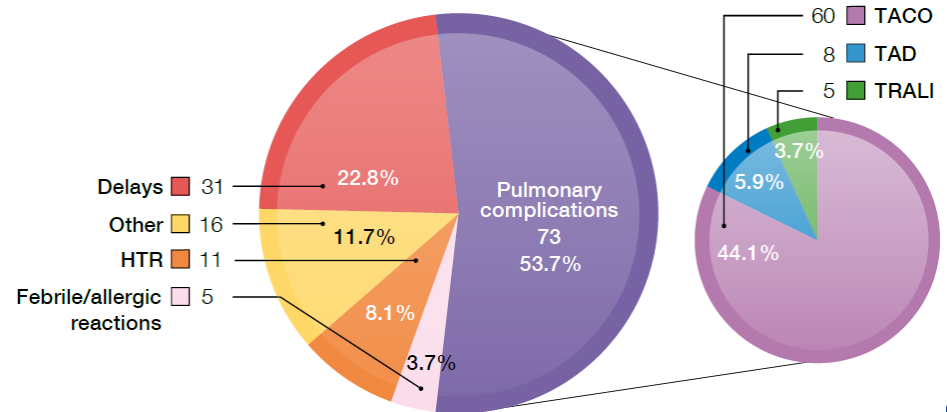
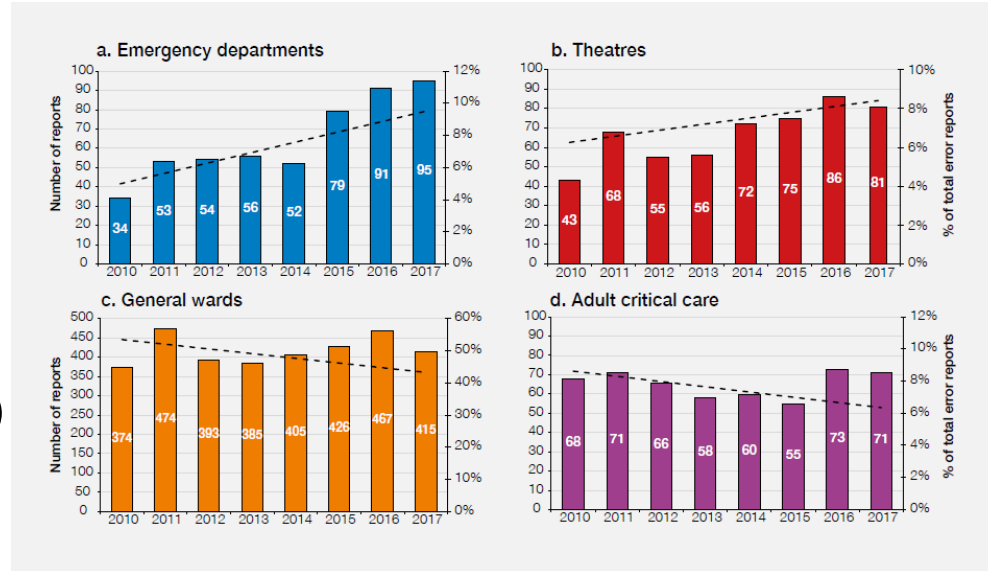
Caring Expert Quality


Remarkable changes




Safety

- 85% “Human factors” 15% technical / system.
- Emergency departments 5% in 2010, 10% in 2017
- Most potential ABO errors (317/342 near misses), resulted from wrong blood in tube (WBIT) errors
- ‘the bedside check is vital Identification.. of the component against.. the patient.’ (1st SHOT report)
- Most deaths: delays or circulatory overload




- *A woman in her 40s 3 normal deliveries 15, 13 & 7 years ago, Attended the ED with haematemesis. Pulse 130, BP 94/60mm Hg. Hb 56g/L.*
 - *Blood group ORhD+ consistent with 7 years ago*
 - *Endoscopy identifies an arterial gastric bleed which is treated.*
 - Does she need a blood transfusion
 - If so what blood group and “special requirements”?
- 


Case 1

- She was given 2 units of O D negative blood urgently.
 - You are informed her antibody screen is positive with anti-c
 - What is the significance of anti-c?
 - Are the transfused units likely to have been crossmatch compatible in retrospect?
 - What are the risks to her?
 - What action is needed?
- 


Case 2

- *A man in his 60s, previously well but deteriorating in the last 2 months is admitted drowsy and bed bound, Hb 38g/L secondary to autoimmune haemolytic anaemia (AIHA).*
 - *The hospital laboratory scientist informs you he is A RhD+. All blood is incompatible*
 - *the sample is on route to an a reference laboratory (2 hours away).*
 - What are the greatest risks for him?
 - What are the risks of transfusion?
 - What action should you take?
- 


Case 3

- A 78 year old female, weight 63.3kg, was admitted feeling faint & lethargic.
 - Vital signs were normal and apart from pallor, examination is unremarkable.
 - Her Hb was 59g/L with a microcytic blood picture (chronic iron deficiency).
 - Does she need a blood transfusion?
- 


Case 3

- Two units of red blood cells were ordered in the emergency department. The first unit was commenced.
 - She was transferred to the acute medical unit (AMU) where 2 more red cell units were prescribed.
 - She received 3 red cell units and approximately 290mL of the fourth unit when she developed massive pulmonary oedema and left ventricular failure. Her pulse and blood pressure at baseline and at the time of the reaction were 98 and 82bpm and 120/75mmHg and 152/111 respectively. An electrocardiograph showed atrial fibrillation and T wave changes.
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Case 4

- *A male patient post chemotherapy for a brain tumour was admitted via the emergency department with a fever but no obvious focus for infection.*
 - *His platelet count is $12 \times 10^9/L$*
 - *Two samples obtained from the patient were received in the transfusion laboratory, different sampling times written on them, both grouped as A D-negative.*
 - Does he need a platelet transfusion?
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Case 4

- *Platelets were issued.*
 - *Seven weeks later this patient, which grouped as B D-positive. This was confirmed on repeat testing.*
 - *The duplicate samples from the original admission were from a different patient, The patient had no adverse outcome thankfully.*
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Summary

- We are improving in transfusion practice.
 - Blood donations especially “universal” are valuable.
 - Samples for transfusion must be taken and labelled in 1 continuous bedside process
 - Under transfusion and over transfusion (circulatory overload) are amongst the commonest risks
 - Women of child bearing potential (K-) and those with long term transfusion needs (CcDeEK matched) have special requirements
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Thanks

- Mike Wheble and the organising committee
 - Lise Estcourt
 - Shubha Allard
 - Tom Bullock
 - <https://www.shotuk.org/>
 - <http://hospital.blood.co.uk/audits/national-comparative-audit/>
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