

Single unit transfusion audit

PE Smith
B Ferguson

Brief introduction

- **Method:** A retrospective audit performed in November 2015
- **Standards:** All stable, normovolaemic adult inpatients who require transfusion should initially be transfused a single unit of RBC, further transfusion should only be prescribed after assessment
- **Exclusion criteria:** Patients with acute blood loss, haematology, oncology and renal patients and patients <18 year olds

Method

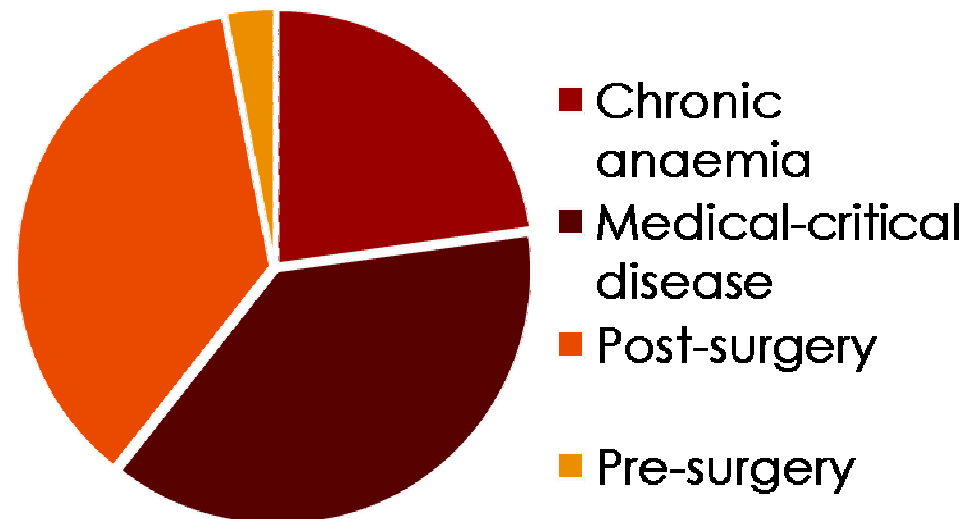
- The auditors collected the names of transfused patients on a daily basis
- They then looked through the notes of these patients
- They recorded:
 - Reason for Transfusion
 - Number of units transfused
 - Whether any record of clinical or laboratory assessment made between units
 - Whether any record of symptoms of anaemia
 - Pre and post Transfusion Haemoglobin levels

Demographics

- 66 transfusion episodes
- 60 patients: 37 patients were female, and 23 were male
- Age range: 25-95 with over 50% of patients within the 66-85 category

- Indication for transfusion

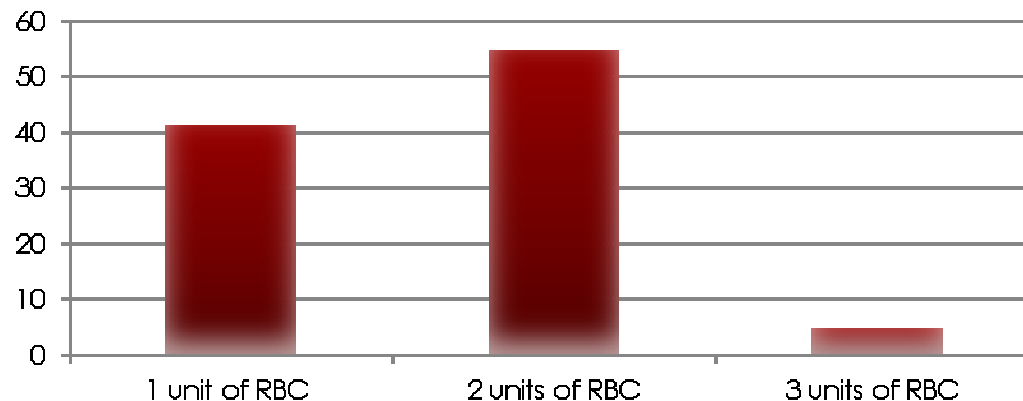
- Chronic anaemia: 23%
- Medical-critical disease: 38%
- Pre surgery: 3%
- Post surgery: 36%



Number of units given between clinical reassessment

- 41% of transfusions followed the single unit transfusion guidelines and 59% did not follow the guidelines.
- Of the 27 single unit transfusions, 9 (33%) required a second unit
- 36% of patients were documented as being symptomatic at time of transfusion, 64% were asymptomatic or symptoms not documented

Number of units transfused between checks



Single Transfusion per speciality

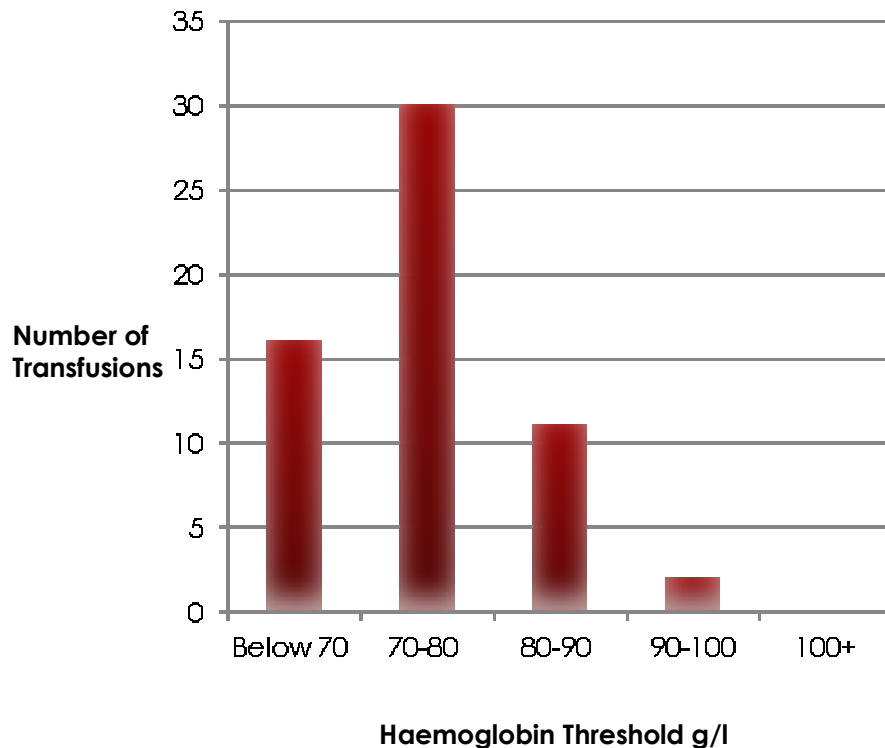
Speciality	Number of transfusions	Percentage of single units
Trauma and orthopaedics	18	42%
General Surgery	10	60%
Healthcare for Older People	7	0%
Endocrinology	6	50%
Thoracic Surgery	5	60%
General Medicine	4	25%
Cardiology	4	75%
Gastroenterology	4	0%
Plastic Surgery	3	0%
Gynaecology	2	50%
Intensive Care Unit	2	50%
Neurology	1	0%

Transfusion Thresholds

- **NICE Guidelines:** Less than 70g/L for most, patients with ACS less than 80 g/L (3 patients)
- Chronic anaemia: Individual thresholds

RD&E Transfusion Thresholds

Less than 70g/l	27%
70g to 80g/l (includes 3 patients with ACS)	50%
80g to 90g/l	20%
Over 90g/l	3%
Compliance with NICE	32%

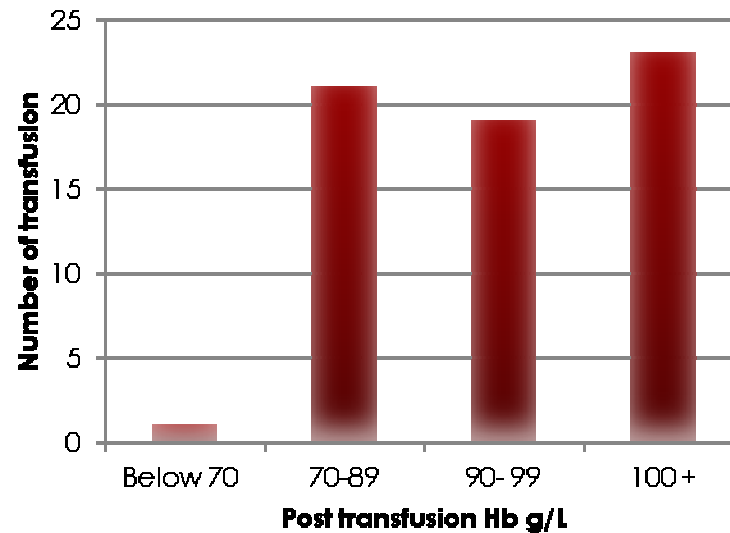


Post Transfusion Targets

- **NICE guidance:** 70-90 g/L, ACS: 80 -100 g/L
- Chronic anaemia : Individual thresholds

RD&E Post Transfusion Hb levels:

Below 70g/l	1.5%
70 to 89g/l	39%
90 to 99g/l	30%
100+ g/l	29.5%
(4.5% pre surgery)	
<i>NICE compliance</i>	38%



Summary of Results

- 41% Single unit transfusions
- 32% compliant with NICE transfusion thresholds
- 38% compliance with NICE post transfusion targets

Actions after audit

■ Short Term:

- Strengthen medical e- learning module around single unit transfusion and NICE transfusion thresholds and targets
- Speak at medical/surgical audit meetings
- Create a poster to display in clinical areas around single unit transfusion and thresholds
- Empower laboratory staff to query telephone requests for stable adult in patients by talking with them and creating a new template

RE AUDIT

■ Longer term

- Use of a doctor advisor module as part of our new electronic BloodTrack system to include thresholds, single unit advice and consent

Laboratory RBC telephone request form

RED CELL TELEPHONE REQUEST FORM		
Hospital Number	Surname	Forename
Date of Birth	Ward	Date/time required
Date/Time request	Name/bleep of requestor	Call received by
Prev XM date / G&S date	Blood group/antibody result	Circle below; Irradiated- Y N CMV- Y N Washed- Y N HEV - Y N
Previous Lab Number	New lab number	
Complete appropriate question boxes		
Patient actively bleeding Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes accept request	Number of units: Group compatible/full crossmatch
Day case/ haematology/ oncology/ renal Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes accept request	Number of units:
Stable in-patient Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes Most recent Hb:	If <70g/l allow more than 1 unit if requested Number of units:
		If >70g/l and symptomatic suggest 1 unit and reassess Hb If single unit not acceptable state reason and No units:
		If Hb>100g/l suggest no transfusion or contact Consultant Haematologist
NICE guidance 2015 recommends consideration of single unit transfusion in adults who are not bleeding		

RD&E Transfusion Guidelines for stable adult

In- patients: Every **ONE** matters

- RBC transfusion should not be dictated by Haemoglobin alone but based on assessment of the patient's clinical status.
- In patients with iron deficiency or depleted iron stores, replacement iron therapy is indicated.

