

# National Survey Red Cell Use

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# Methodology

- Data collected on every red cell unit transfused
- 2 'cycles':  
24/02/14 – 02/03/14  
12/05/14 – 18/05/14

- Data collection form:

No of units: <input type="text"/>		<b>Red Cell Issue Trace Survey Cycle 1, 2014</b>		Link no. (for your ref) <input type="text"/>	
Patient's Year of birth <input type="text"/>		Male <input type="checkbox"/> Female <input type="checkbox"/>			

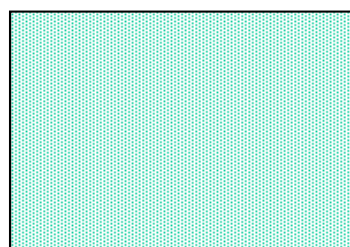
<b>Cardiothoracic Surgery</b> 1 CABG (first) <input type="checkbox"/> 2 CABG (redo) <input type="checkbox"/> 3 Valve replacement (+/- CABG) <input type="checkbox"/> 4 ECMO <input type="checkbox"/> 5 Congenital Heart Disease <input type="checkbox"/> 6 Other (please state) <input type="text"/> 7 ENT <input type="checkbox"/>  <b>Gastrointestinal Surgery</b> 8 Oesophageal <input type="checkbox"/> 9 Gastric <input type="checkbox"/> 10 Pancreatic <input type="checkbox"/> 11 Colorectal <input type="checkbox"/> 12 Liver <input type="checkbox"/> 13 Other (please state) <input type="text"/>  14 Neurosurgery (including head injury) <input type="checkbox"/>  <b>Trauma</b> 15 Blunt <input type="checkbox"/> 16 Penetrating <input type="checkbox"/> 17 Fractured femur <input type="checkbox"/> 18 Fractured pelvis <input type="checkbox"/> 19 Other fracture <input type="checkbox"/> 20 Other (please state) <input type="text"/>  21 Urology <input type="checkbox"/> 22 Solid Organ Transplant (State organ) <input type="text"/>	<b>Vascular Surgery</b> 23 Emergency AAA repair <input type="checkbox"/> 24 Elective open AAA repair <input type="checkbox"/> 25 Other (please state) <input type="text"/>  <b>Orthopaedics</b> 26 THR (first) <input type="checkbox"/> 27 THR (redo) <input type="checkbox"/> 28 TKR (first) <input type="checkbox"/> 29 TKR (redo) <input type="checkbox"/> 30 Other (please state) <input type="text"/>  <b>Plastic surgery</b> 31 Maxillo-Facial <input type="checkbox"/> 32 Other, including burns <input type="checkbox"/>  <b>Other surgery</b> 33 not specified elsewhere (please state) <input type="text"/>  <b>Obs &amp; Gyn</b> 34 Gynae (non malignant) <input type="checkbox"/> 35 Gynae oncology <input type="checkbox"/> 36 Obstetric anaemia <input type="checkbox"/> 37 Obstetric haemorrhage <input type="checkbox"/>  <b>Neonatal/fetal</b> 38 Neonatal top up <input type="checkbox"/> 39 Neonatal exchange <input type="checkbox"/> 40 Neonatal large volume transfusion <input type="checkbox"/> 41 Intrauterine transfusion <input type="checkbox"/> 42 Other (please state) <input type="text"/>	<b>GI bleed</b> 43 Upper acute <input type="checkbox"/> 44 Lower acute <input type="checkbox"/> 45 Upper chronic <input type="checkbox"/> 46 Lower chronic <input type="checkbox"/> 47 Site of bleeding not known <input type="checkbox"/>  <b>Anaemia due to:</b> 48 Renal failure <input type="checkbox"/> 49 Cancer (non haem) <input type="checkbox"/> 50 Iron deficiency <input type="checkbox"/> 51 B12/folate def <input type="checkbox"/> 52 Chronic disorders eg. rheumatoid arthritis <input type="checkbox"/> 53 Critical care not related to surgery, trauma or GI blood loss <input type="checkbox"/> 54 Other (please state) <input type="text"/>  <b>Haematological</b> 55 MDS <input type="checkbox"/> 56 AML (including APML) <input type="checkbox"/> 57 ALL <input type="checkbox"/> 58 Myeloma <input type="checkbox"/> 59 Hodgkins/NHL/CLL <input type="checkbox"/> 60 Acquired Haemolytic Anaemia <input type="checkbox"/> 61 Thalassemia <input type="checkbox"/> 62 Sickle cell disease <input type="checkbox"/> 63 Other inherited anaemia <input type="checkbox"/> 64 Myeloproliferative disease <input type="checkbox"/> 65 CML <input type="checkbox"/> 66 Aplastic anaemia <input type="checkbox"/> 67 Other (please state) <input type="text"/>
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## RESULTS

This survey collected data on 73% and 75% of all red cells issued by NHSBT during the respective weeks of study, (based on NHSBT issue figures and Blood Stocks Management Scheme (BSMS) wastage rates). Some sites only provided data for one cycle.

**Table 1 Number of red cell units transfused, by cycle**

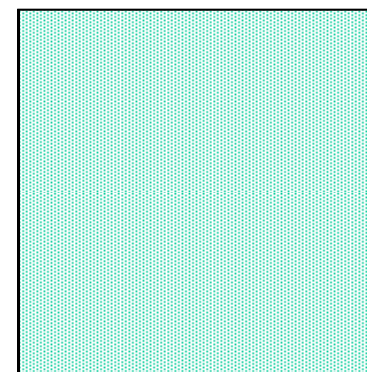
	<b>National</b>
Cycle 1	21683
Cycle 2	24428
<b>Total Units</b>	<b>46111</b>



**Table 3 Demographic summary**

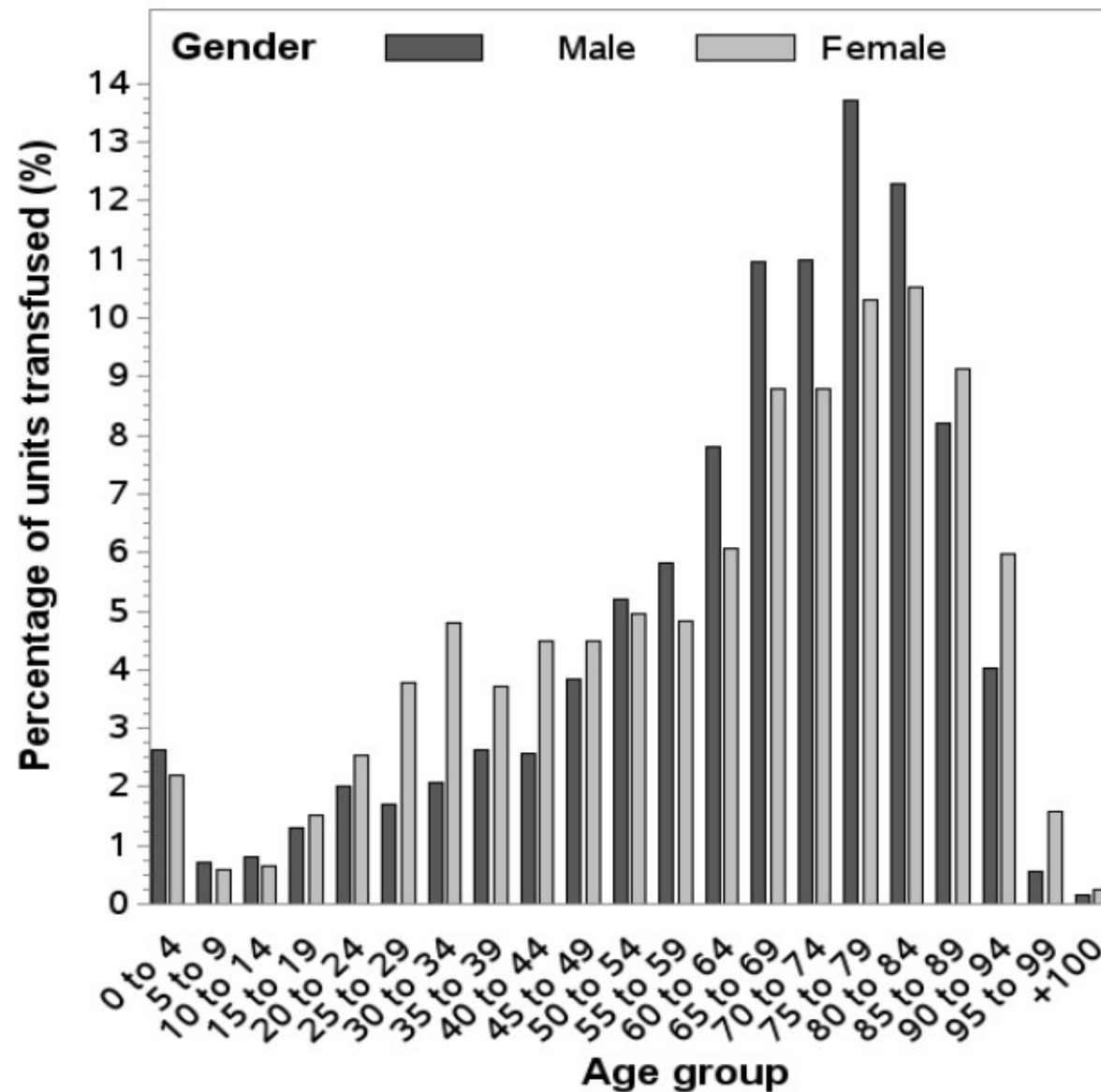
	<b>National</b>
Median age*, in years (IQR)	69 (51-80)
Number (%) of units transfused to:	
Males	23938 (51.9%)
Females	21972 (47.7%)
Gender not specified	201 (0.4%)
<b>Total</b>	<b>46111 (100.0%)</b>

\* Estimated as 2014 minus year of birth

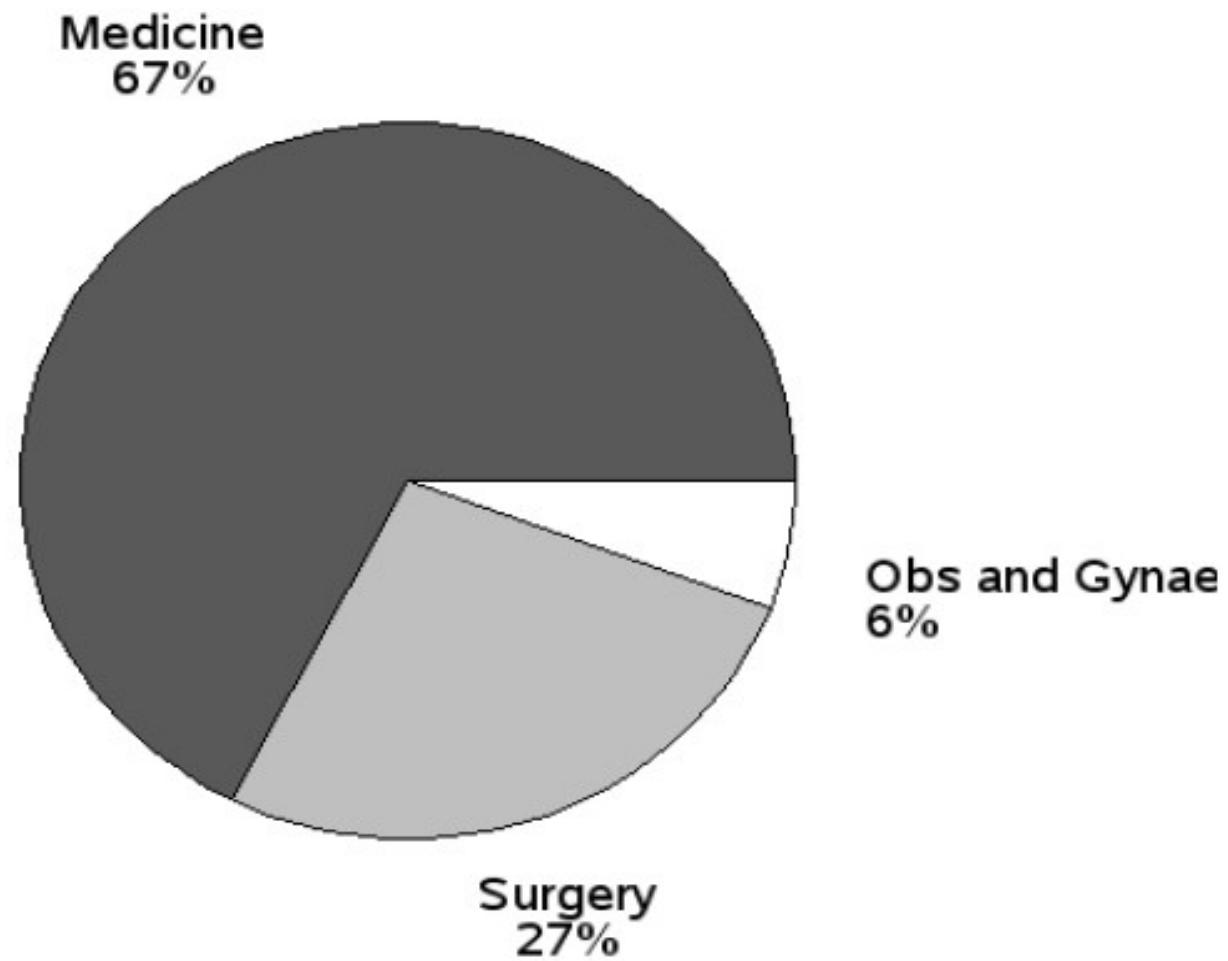


This latest survey indicates that the red cell transfusion rate per head of population has fallen to 31.5 units per 1000 population, compared with 43 per 1000 in 1999-2000.

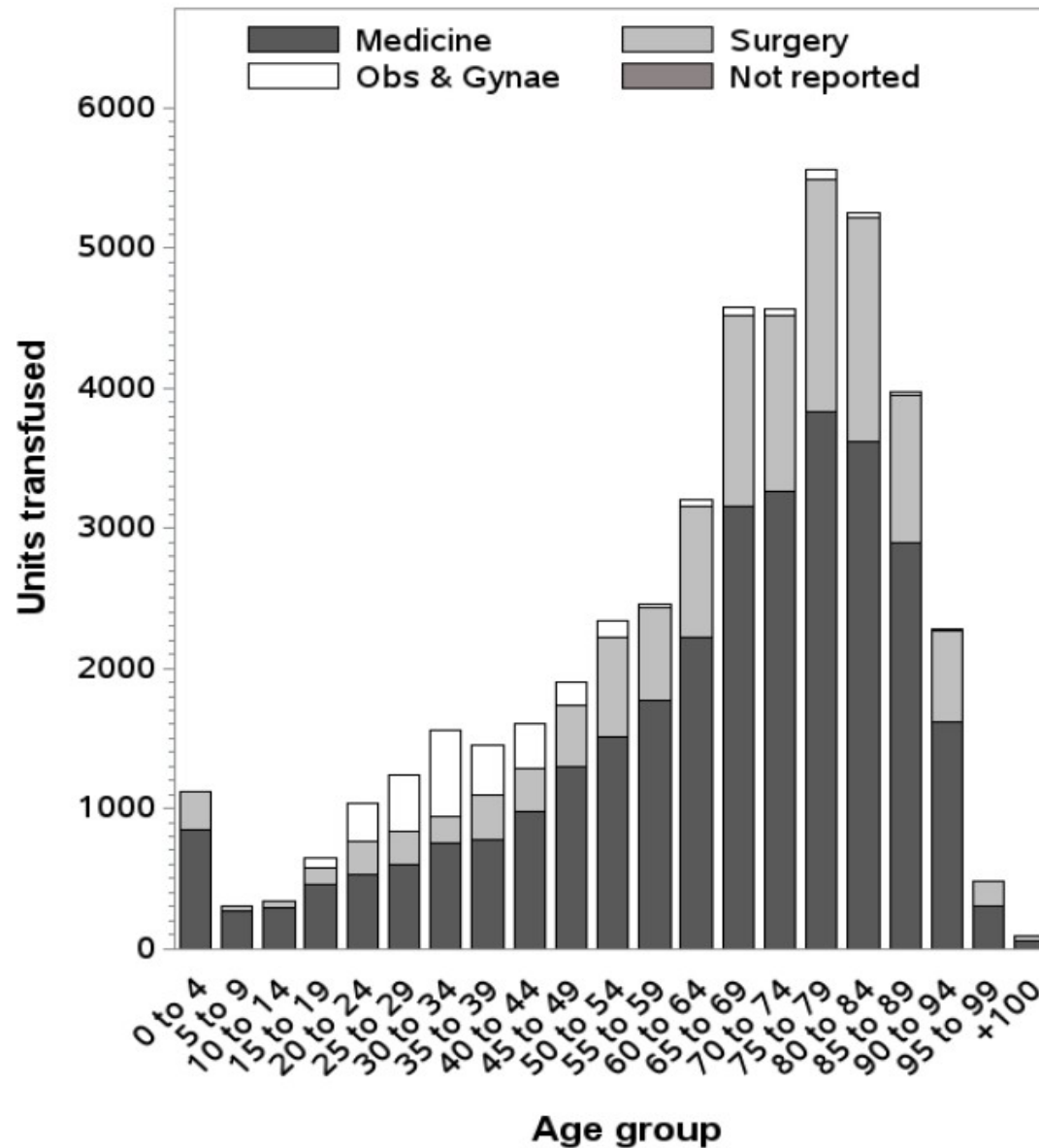
**Figure 1 Red cell units transfused by age group and gender**



**Figure 2 Broad group of indications for red cells transfused**



**Figure 3 Broad group of indications for red cells transfused, by age group**



**Table 4 Number of red cell units transfused for a medical indication**


Medicine specialty	Sub-category	National	
		N	%
Neonatal/fetal	Top up	479	(1.0)
	Exchange	9	(0.0)
	Large volume transfusion	24	(0.1)
	Intrauterine transfusion	2	(0.0)
	Other neonatal	40	(0.1)
	<b>Total neonatal</b>	<b>554</b>	<b>(1.2)</b>
GI bleed	Upper acute	2195	(4.8)
	Lower acute	1237	(2.7)
	Upper chronic	337	(0.7)
	Lower chronic	537	(1.2)
	Site of bleeding unknown	1071	(2.3)
	<b>Total GI bleed</b>	<b>5377</b>	<b>(11.7)</b>
Non-haematological anaemia	Renal failure	2257	(4.9)
	Cancer non haem	4549	(9.9)
	Iron deficiency	1260	(2.7)
	B12/folate def	104	(0.2)
	Chronic disorders	1319	(2.9)
	Critical care	1663	(3.6)
	Other anaemia	1484	(3.2)
	<b>Total non-haematological anaemia</b>	<b>12636</b>	<b>(27.4)</b>
Haematological	MDS	2890	(6.3)
	AML including APML	1983	(4.3)
	ALL	537	(1.2)
	Myeloma	1083	(2.3)
	Hodgkins/NHL/CLL	1876	(4.1)
	Acquired Haemolytic Anaemia	238	(0.5)
	Thalassaemia	722	(1.6)
	Sickle cell disease	1350	(2.9)
	Other inherited anaemia	202	(0.4)
	Myeloproliferative disease	575	(1.2)
	CML	218	(0.5)
	Aplastic anaemia	323	(0.7)
	Other haematological	519	(1.1)
	<b>Total haematological</b>	<b>12516</b>	<b>(27.1)</b>
<b>TOTAL Medicine (%)</b>		<b>31083</b>	<b>(67.4)</b>

% Percentage of 46111 units nationally and 857 units at Anonymous

Transfusion Committee  
27<sup>th</sup> November 2014



**Table 5 Number of red cell units transfused for a surgical indication**

Surgery specialty	Sub-category	National	
		N	%
Cardiothoracic surgery	CABG First	678	(1.5)
	CABG Redo	124	(0.3)
	Valve replacement +/- CABG	803	(1.7)
	ECMO	318	(0.7)
	Congenital Heart Disease	272	(0.6)
	Other cardiothoracic surgery	561	(1.2)
	<b>Total cardiothoracic surgery</b>	<b>2756</b>	<b>(6.0)</b>
ENT	<b>Total ENT</b>	<b>194</b>	<b>(0.4)</b>
Gastrointestinal surgery	Oesophageal	71	(0.2)
	Gastric	331	(0.7)
	Pancreatic	164	(0.4)
	Colorectal	816	(1.8)
	Liver	199	(0.4)
	Other gastrointestinal surgery	183	(0.4)
	<b>Total gastrointestinal surgery</b>	<b>1764</b>	<b>(3.8)</b>
Neurosurgery including head injury	<b>Total neurosurgery</b>	<b>279</b>	<b>(0.6)</b>
Trauma	Blunt	225	(0.5)
	Penetrating	54	(0.1)
	Fractured femur	1297	(2.8)
	Fractured pelvis	108	(0.2)
	Other fracture	257	(0.6)
	Other trauma	252	(0.5)
	<b>Total trauma</b>	<b>2193</b>	<b>(4.8)</b>
Urology	<b>Total urology</b>	<b>942</b>	<b>(2.0)</b>
Solid organ transplant	<b>Total solid organ transplant</b>	<b>486</b>	<b>(1.1)</b>
Vascular surgery	Emergency AAA repair	379	(0.8)
	Elective open AAA repair	222	(0.5)
	Other vascular surgery	490	(1.1)
	<b>Total vascular surgery</b>	<b>1091</b>	<b>(2.4)</b>
Orthopaedics	THR first	751	(1.6)
	THR redo	291	(0.6)
	TKR first	261	(0.6)
	TKR redo	76	(0.2)
	Other orthopaedics	432	(0.9)
	<b>Total orthopaedics</b>	<b>1811</b>	<b>(3.9)</b>
Plastic surgery	Maxillo Facial	56	(0.1)
	Other including burns	151	(0.3)
	<b>Total plastic surgery</b>	<b>207</b>	<b>(0.4)</b>
Other surgery	<b>Total other Surgery</b>	<b>595</b>	<b>(1.3)</b>
<b>TOTAL Surgery (%)</b>		<b>12318</b>	<b>(26.7)</b>
% Percentage of 46111 units nationally			

**Table 6 Number of red cell units transfused for obstetrics and gynaecology**

<b>Obs and Gynae specialty</b>	<b>N</b>	<b>%</b>	
Gynae non malignant	819	(1.8)	
Gynae oncology	259	(0.6)	
Obstetric anaemia	308	(0.7)	
Obstetric haemorrhage	1299	(2.8)	
Not reported	5	(0.0)	
<b>TOTAL Obs &amp; Gynae (%)</b>	<b>2690</b>	<b>(5.8)</b>	
% Percentage of 46111 units nationally			