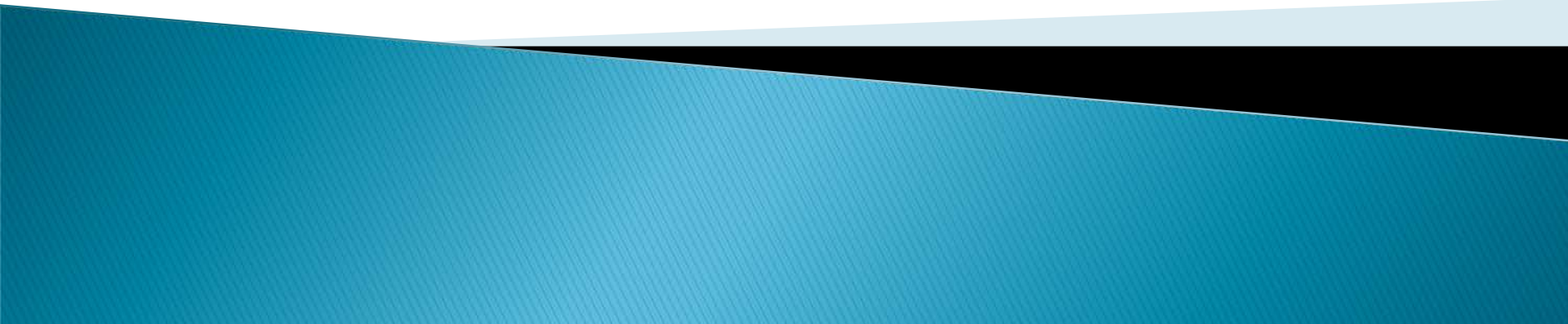
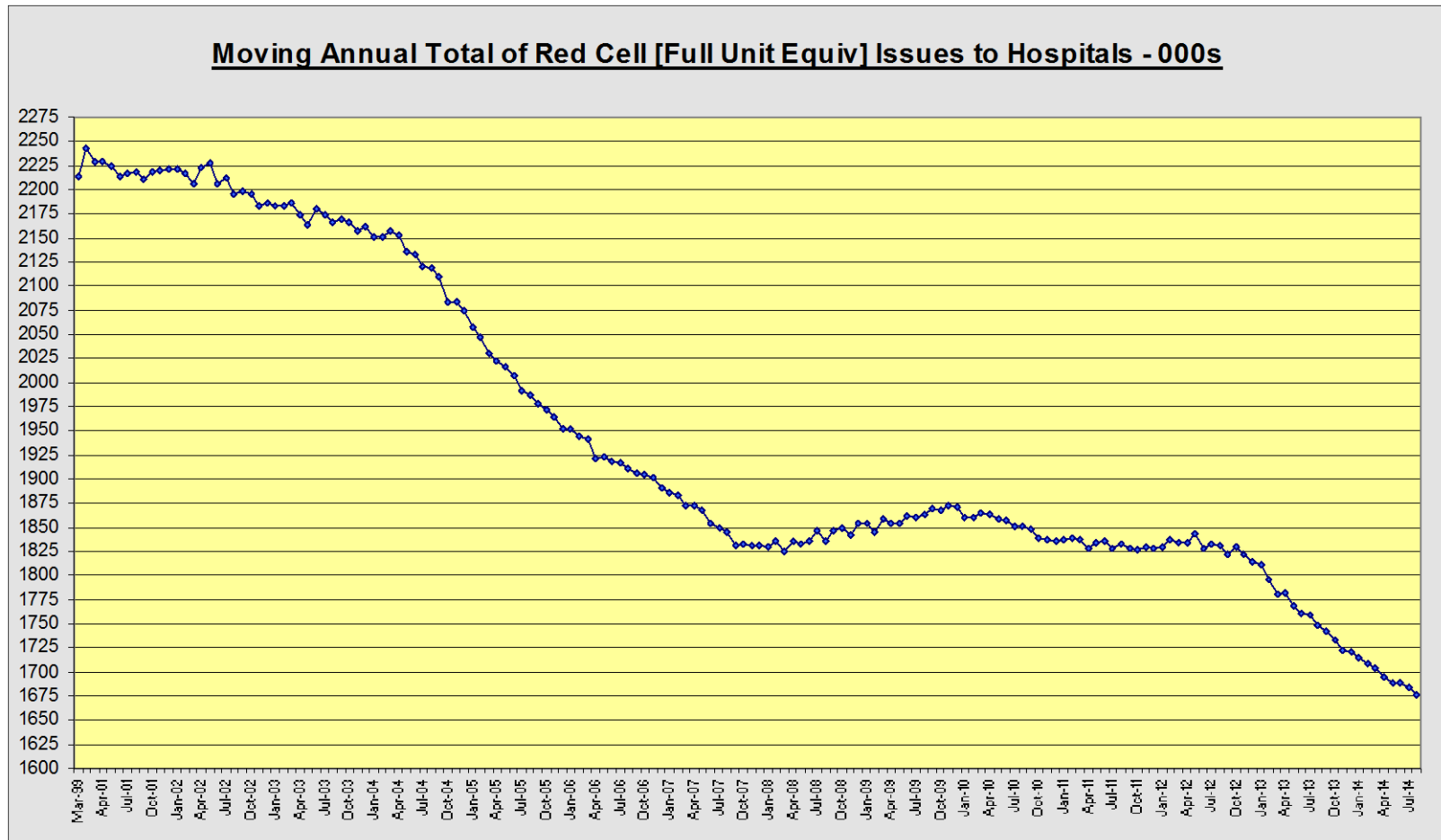


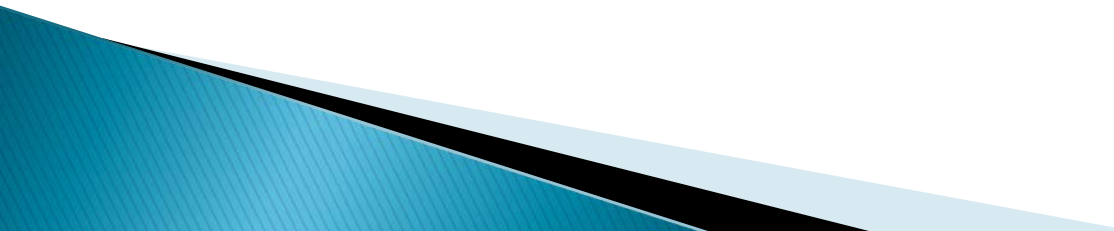
National survey of red cell use 2014



Changes in the demand for red cells are a significant challenge: figures up to August 2014



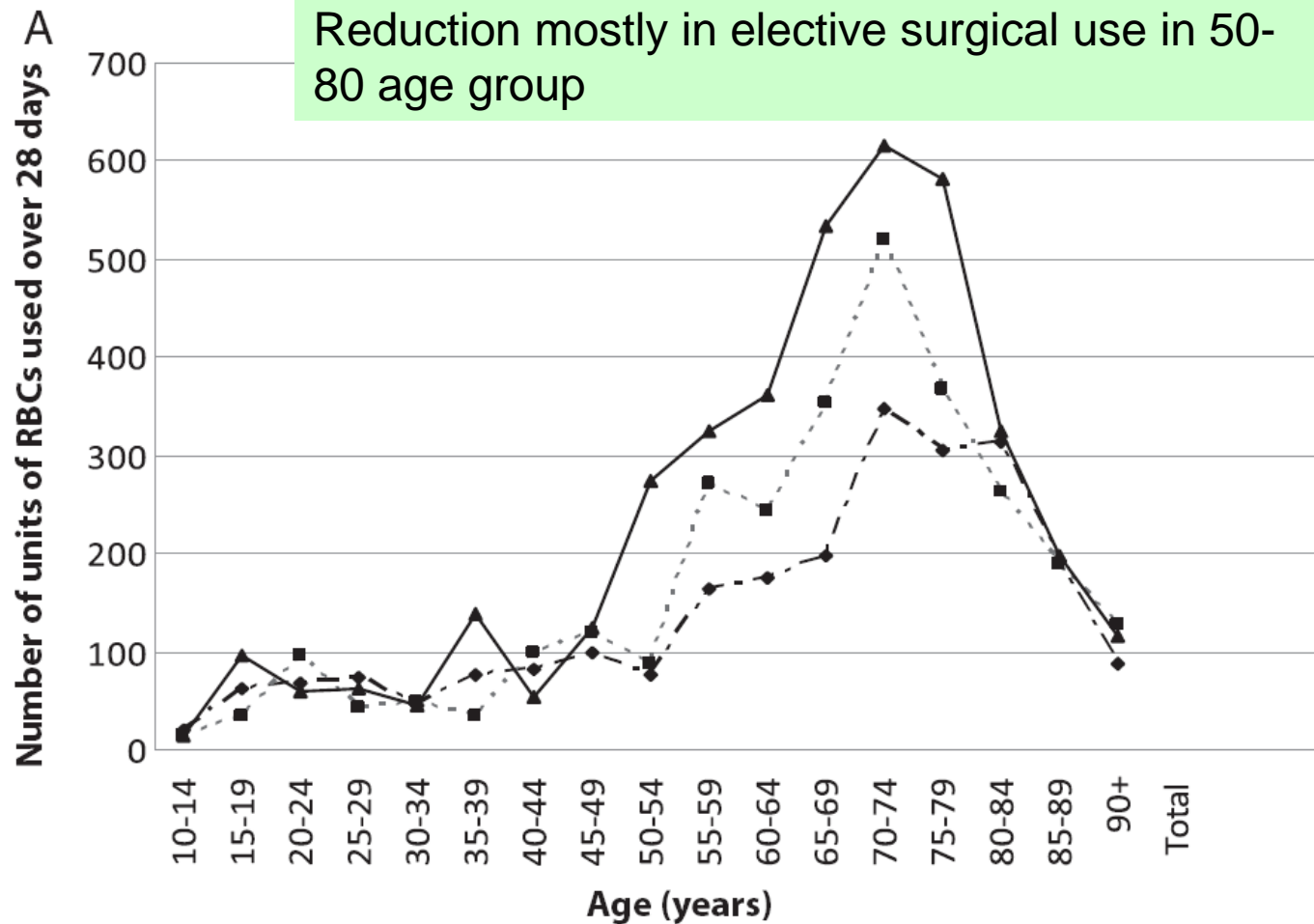
National survey of red cell use, 2014

- ▶ Enable hospitals to identify their current use and compare with national data
 - ▶ Explain continued fall in red cell use
 - ▶ Identify target specialties, and provide a baseline for PBM initiatives
 - ▶ Provide denominator data for SHOT
- 

Studies of red cell use in the “old” Northern region

Period under study	1999-2000	2004	2009
Total units	9774	9003	8025
Transfusion rate per 1000 inhabitants	42.7		36
Mean age	62.7		63.2
Medical use %	51.6	61.9	64.2
Surgical	40.7	33.1	29.4
O and G	6.3	5.0	6.4
Not known	1.4		

Changes in surgical use, Northern region, 1999–2009



(▲) 1999.

(■) 2004;

(◆) 2009;

2014 national survey of red cell use

- ▶ Invited all NHS and private hospitals supplied by NHSBT
- ▶ Record clinical indication for each unit of red cells transfused for two 7 day periods
 - 24.02.14
 - 12.05.14
- ▶ Used clinical categories based on previous studies in Northern region
- ▶ Returns could be checked against BSMS data and national issues figures
- ▶ Wastage data from BSMS
- ▶ Data handled by NCA
- ▶ Statistical support
- ▶ Major undertaking for participating hospitals

Red Cell Issue Trace Survey Cycle 1, 2014, Draft 3

No of units:

Patient's
Year of birth

Male ☐ Female ☐

Link no. (for
your ref)

Cardiothoracic Surgery

- 1 CABG (first) ☐
- 2 CABG (redo) ☐
- 3 Valve replacement (+/- CABG) ☐
- 4 ECMO ☐
- 5 Congenital Heart Disease ☐
- 6 Other (please state)

ENT

Gastrointestinal Surgery

- 8 Oesophageal ☐
- 9 Gastric ☐
- 10 Pancreatic ☐
- 11 Colorectal ☐
- 12 Liver ☐
- 13 Other (please state)

14 Neurosurgery (including head injury)

Trauma

- 15 Blunt ☐
- 16 Penetrating ☐
- 17 Fractured femur ☐
- 18 Fractured pelvis ☐
- 19 Other fracture ☐
- 20 Other (please state)

21 Urology

22 Solid Organ Transplant

(State organ)

Vascular Surgery

- 23 Emergency AAA repair ☐
- 24 Elective open AAA repair ☐
- 25 Other (please state)

Orthopaedics

- 26 THR (first) ☐
- 27 THR (redo) ☐
- 28 TKR (first) ☐
- 29 TKR (redo) ☐
- 30 Other (please state)

Plastic surgery

- 31 Maxillo-Facial ☐
- 32 Other, including burns ☐

Other surgery

- 33 not specified elsewhere (please state)

Obs & Gyn

- 34 Gynae (non malignant) ☐
- 35 Gynae oncology ☐
- 36 Obstetric anaemia ☐
- 37 Obstetric haemorrhage ☐

Neonatal/fetal

- 38 Neonatal top up ☐
- 39 Neonatal exchange ☐
- 40 Neonatal large volume transfusion ☐
- 41 Intrauterine transfusion ☐
- 42 Other (please state)

GI bleed

- 43 Upper acute ☐
- 44 Lower acute ☐
- 45 Upper chronic ☐
- 46 Lower chronic ☐
- 47 Site of bleeding not known ☐

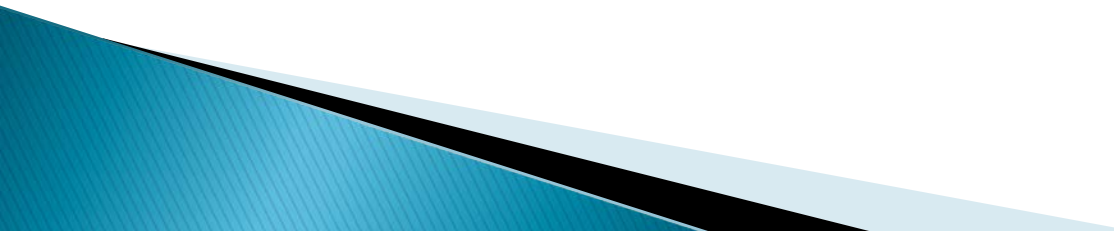
Anaemia due to:

- 48 Renal failure ☐
- 49 Cancer (non haem) ☐
- 50 Iron deficiency ☐
- 51 B12/folate def ☐
- 52 Chronic disorders eg. rheumatoid arthritis ☐
- 53 Critical care not related to surgery, trauma or GI blood loss ☐
- 54 Other (please state)

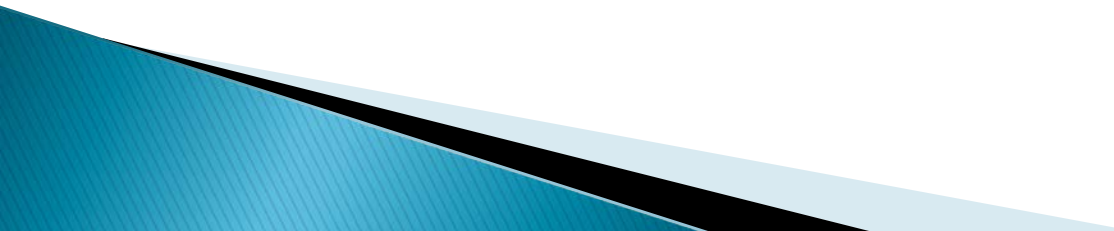
Haematological

- 55 MDS ☐
- 56 AML (including APML) ☐
- 57 ALL ☐
- 58 Myeloma ☐
- 59 Hodgkins/NHL/CLL ☐
- 60 Acquired Haemolytic anaemia ☐
- 61 Thalassaemia ☐
- 62 Sickle cell disease ☐
- 63 Other inherited anaemia ☐
- 64 Myeloproliferative disease ☐
- 65 CML ☐
- 66 Aplastic anaemia ☐
- 67 Other (please state)

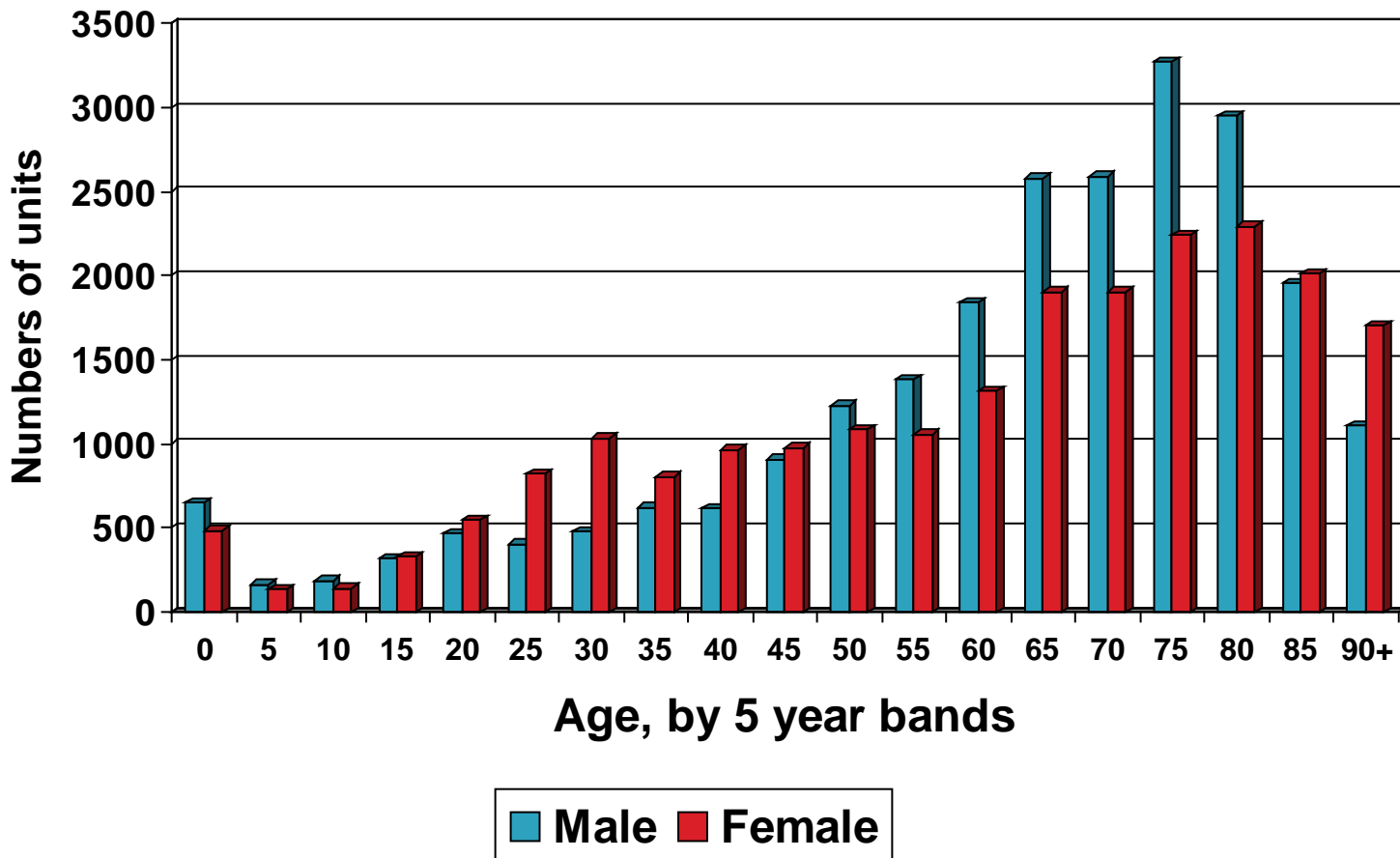
Participation: both cycles

- ▶ Cycle 1: **21,390** units (73% of all usage* for that week)
 - February 2014 136,901 units issued
 - ▶ Cycle 2: **24,946** units (75% of usage*)
 - May 2014 146,582 units issued
 - ▶ **Total 46,336 units**
-
- ▶ *Allowing for 1.5% wastage
- 

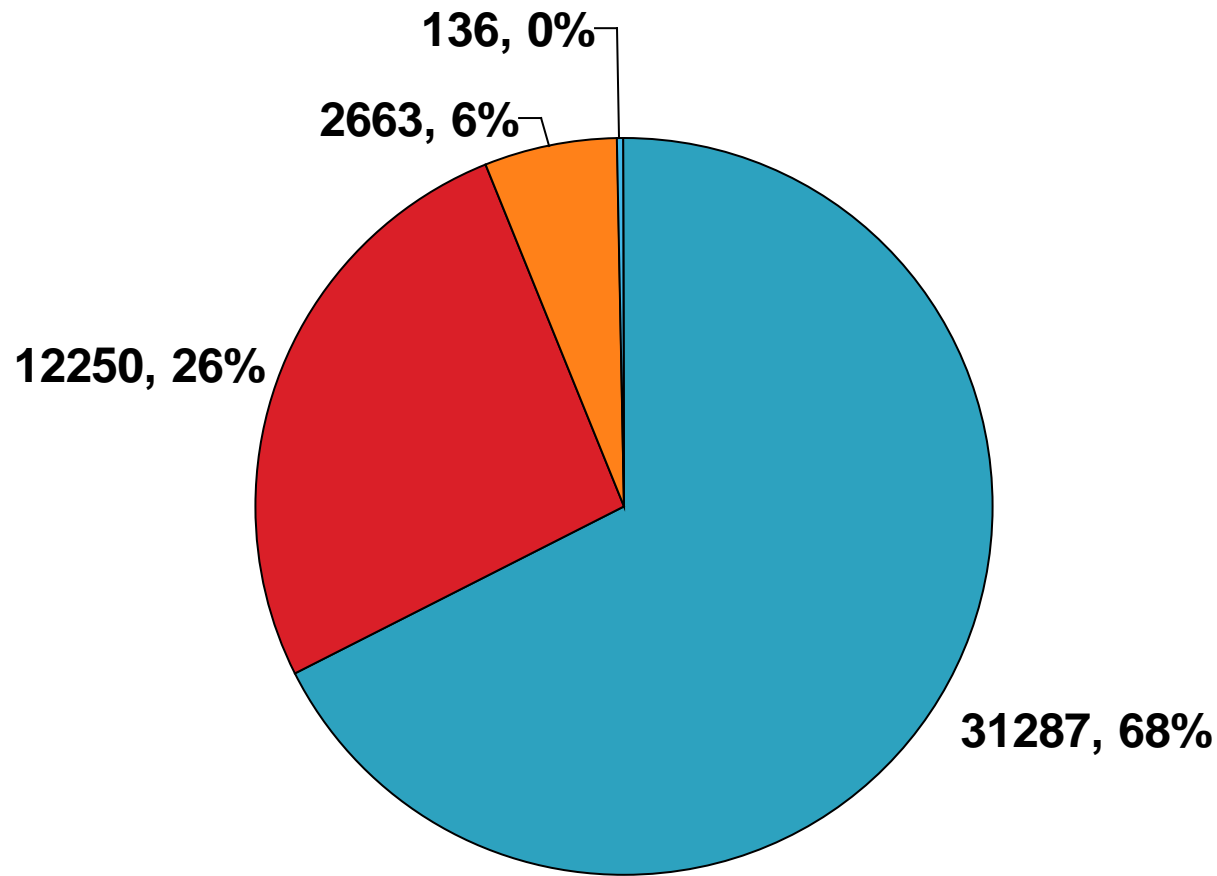
Demographic data from both cycles

- ▶ Transfusion rate is 31.5 per 1000 individuals (cycle 1)
 - ▶ Mean age of recipients is 64
 - ▶ Transfused to males 51.5%
 - ▶ Transfused to females 47.2%
 - ▶ Missing gender 1.3%
- 

Age and gender distribution



Usage by broad category



■ Medicine ■ Surgery ■ O and G ■ Not recorded

Breakdown of medical use by main category

Category	Number	Percentage of total
Non-haematological anaemia	12704	27.42
Haematology	12589	27.17
GI Bleed	5410	11.68
Neonatal/fetal	584	1.26
Total	32187	67.52

Highest use by diagnosis in medicine

Sub-category	Number	Percentage of total usage
Non-haematological cancer	4541	9.8
Myelodysplasia	2923	6.31
Renal failure	2242	4.84
Acute upper GI bleed	2192	4.73
Acute Myeloid leukaemia	1987	4.29
Lymphoma/CLL	1881	4.06
Critical care	1649	3.56
Sickle cell anaemia	1350	2.91
Non-haem anaemia, not specified	1338	2.89
Acute lower GI bleed	1255	2.71
Iron deficiency	1255	2.71
GI blood loss, site unknown	1091	2.35
Myeloma	1085	2.34
Total	24789	53.5

Highest-using sub-categories in medicine

Sub-category	Number	Percentage of total usage
Non-haematological cancer	4541	9.8
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Myeloma	1085	2.34
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Highest-using specialties in surgery by main category

Category	Number	Percentage of total
Cardiothoracic	2838	6.12
Trauma	2199	4.75
Orthopaedics	1767	3.81
GI Surgery	1737	3.75
Vascular	1109	2.39
Urology	938	2.02
Solid Organ Tx	409	0.88
Neuro surgery inc injury	279	0.6
Plastic inc burns	204	0.44
ENT	191	0.41
Other surgery	579	1.25
Total	12250	26.44

Highest use by procedure in surgery

Subcategory	Number	Percentage of total
Fractured femur	1313	2.83
All urology	938	2.02
Valve replacement +/- CABG	856	1.85
Colorectal surgery	800	1.73
First THR	752	1.62
First CABG	704	1.52
Total	5363	11.57

Highest-using sub-categories in surgery

Subcategory	Number	Percentage of total
Fractured femur	1313	2.83
All urology	938	2.02
Valve replacement +/- CABG	856	1.85
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Comments

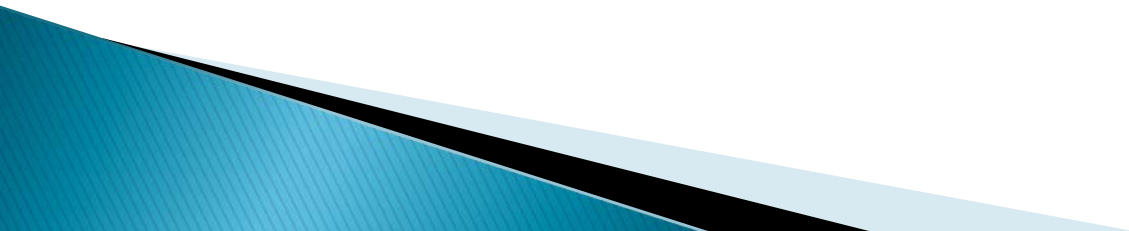
- ▶ Changing use due to change in transfusion practice rather than changing incidence of conditions/procedures
 - In the North of England in 1999/2000, orthopaedic use accounted for 14% of total
 - In national study 2014, it was 4%
- ▶ Several areas of high medical and surgical use are now the subject of Patient Blood Management initiatives
 - 15–20% of red cells still used inappropriately
 - Blood conservation methods in surgery
 - Individualised transfusion plans
 - “Don’t use two without review”
 - Pre-operative anaemia screening performed in timely manner

Thanks to my colleagues

- ▶ Paul Babra, John Grant–Casey, Cathy Hopkinson, Jot Hyare, Mike Murphy, Frances Seeney, Jonathan Wallis, Denise Watson

And thank you

- ▶ To all who provided data: it was hard work but I hope you think it is worth it!
- ▶ To NCA for their support



Any questions?

