Patient Blood Management

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With thanks to Dr Kate Pendry

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and

Clinical Director for PBM NHSBT

Overview

- What is Patient Blood Management?
- Why is Patient Blood Management important?
- The recommendations
- Implementation of Patient Blood Management

What is Patient Blood Management?

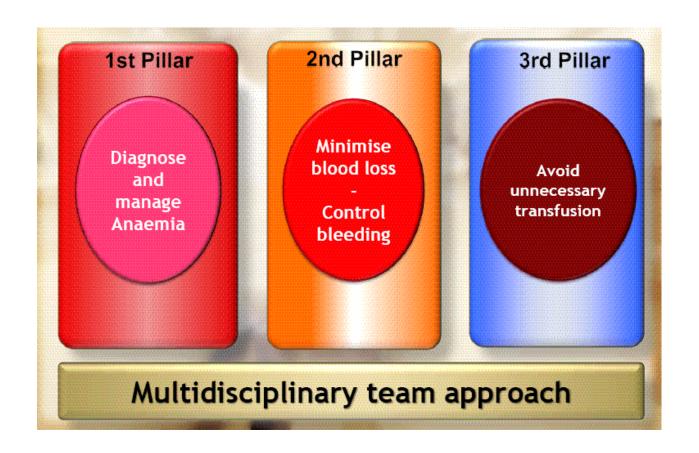
- An evidence-based, multidisciplinary team approach to optimising the care of patients who might need transfusion
- Focuses on measures for blood avoidance as well as correct use of blood components when they are needed
- Improves patient care, optimises use of donor blood and reduces transfusion-associated risk
- Reduces financial costs



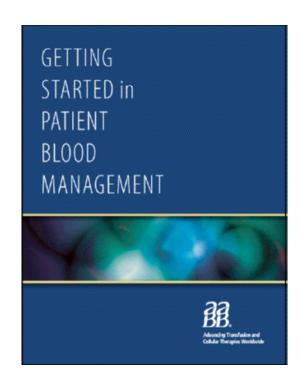
What does it include....

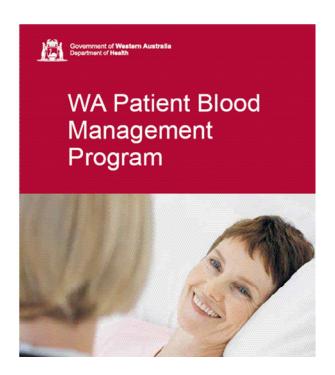
- Involving the patient in the decision making process
- Anaemia management
- Pre-optimisation
- Surgical techniques and alternatives
- Reducing inappropriate use
- Audit

Patient Blood Management



It's International!







Global Forum for Blood Safety: Patient Blood Management

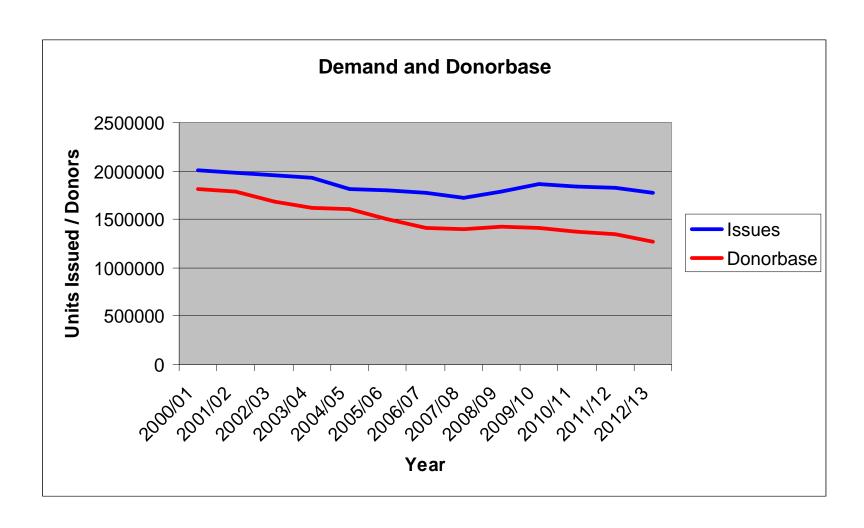
14-15 March 2011, Dubai, United Arab Emirates

Why is Patient Blood Management Important?

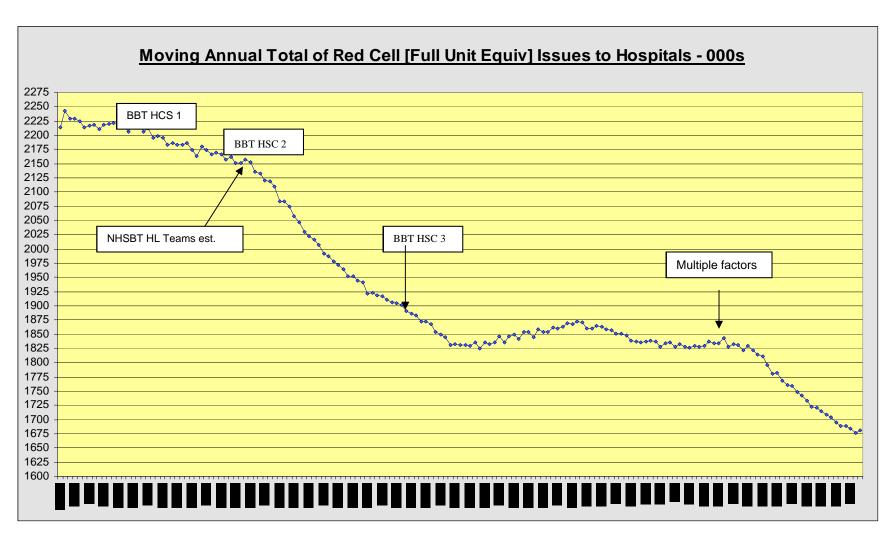
- Limited supply
- Hazards of transfusion
- Variation in practice

Limited Supply

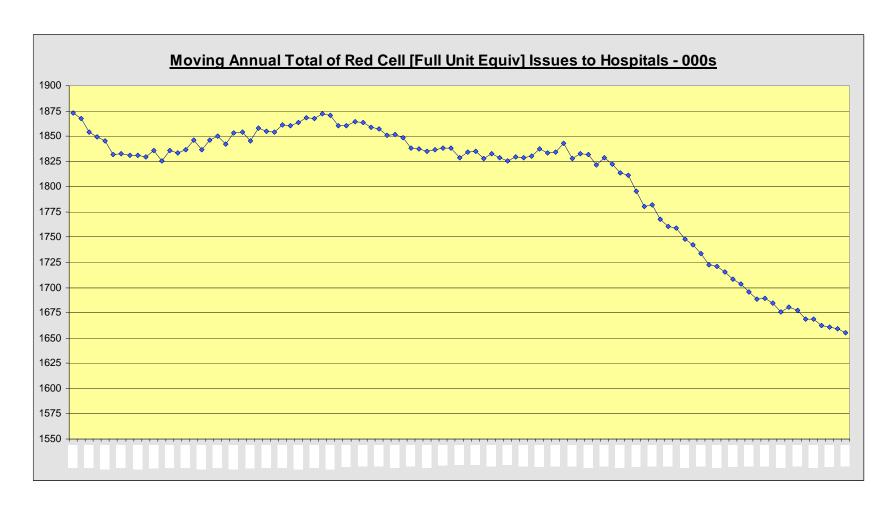
The falling donor base...



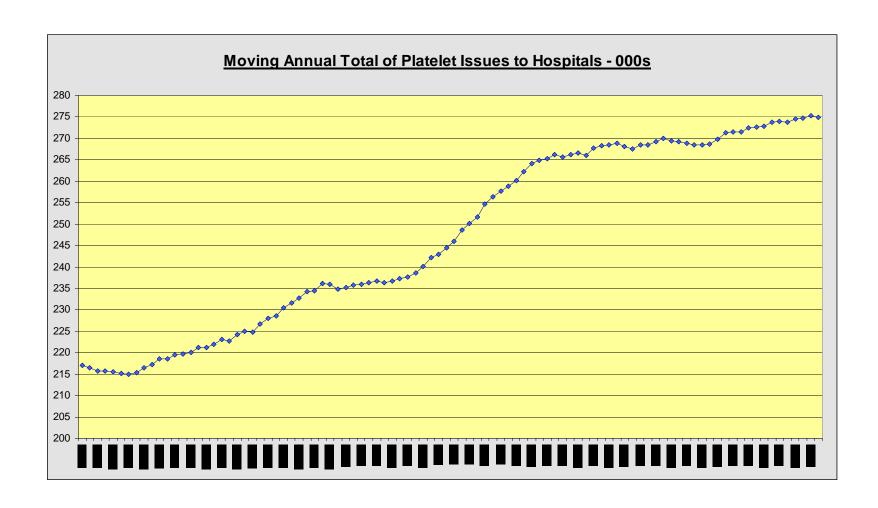
Change in Red cell usage 1999-2014



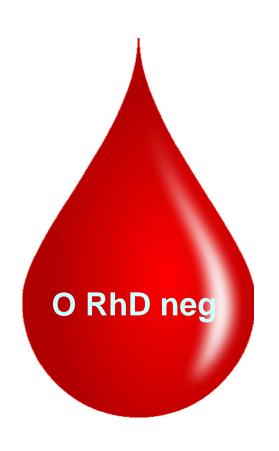
Change in Red cell usage 2007-2015



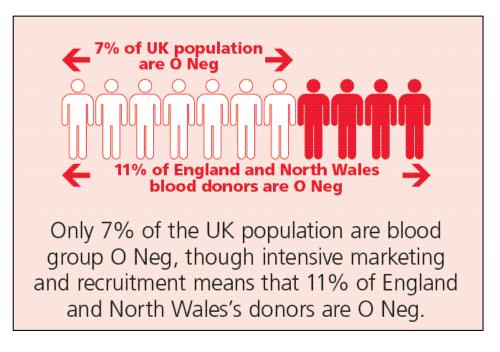
Platelet Issues 2007-2015

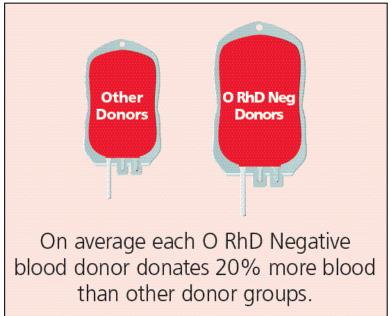


O RhD Negative Red Cells A precious and limited resource

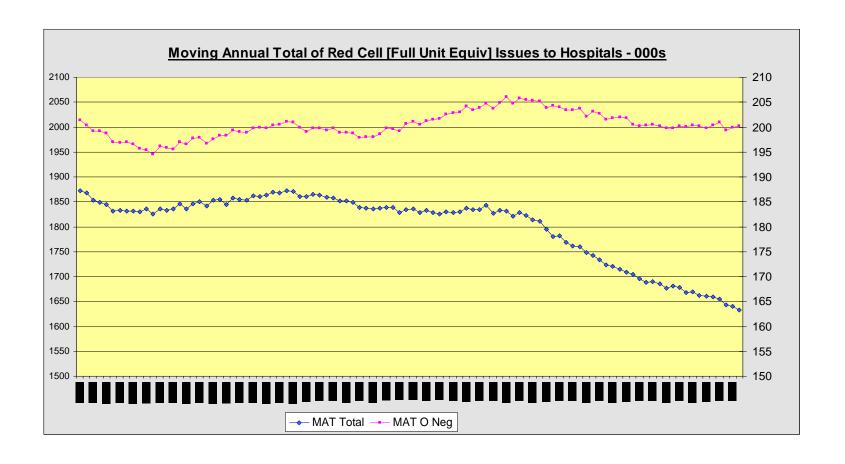


O RhD Neg blood donors





Oneg issues vs total RBC issues



Hazards of Transfusion

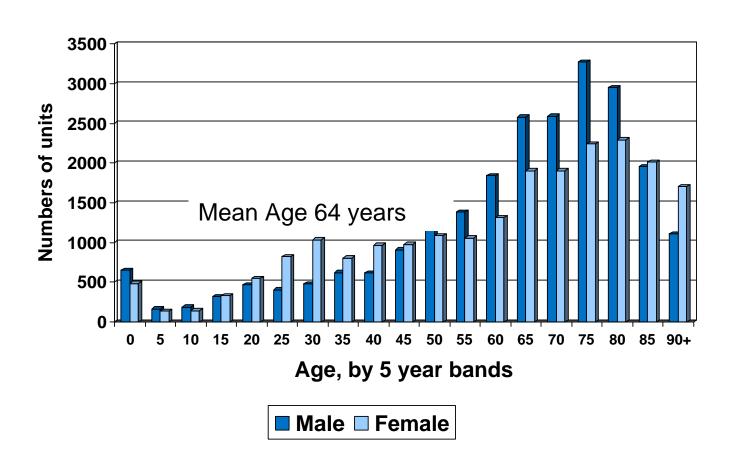
Relative risks of complications of transfusion (SHOT 2012)

Complication	Death - Risk per components transfused	Major morbidity - Risk per components transfused
Overall risks from SHOT data	1 in 322,580	1 in 21,413
Hepatitis B (Public Health data)		1 in 1.3 million
Hepatitis C		1 in 28 million
HIV		1 in 6.7 million
Acute transfusion reaction		1 in 42,473
Haemolytic transfusion reaction		1 in 322,580
Transfusion-associated circulatory overload	1 in 476,190	1 in 99,010
All errors		1 in 169,492

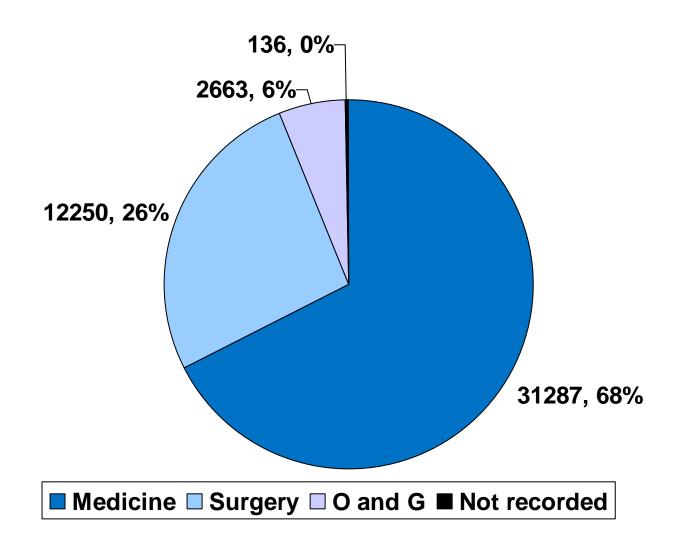
Variation in practice

Where Do Red Cells Go in 2014?

Age and gender distribution



Usage by broad category



Breakdown of medical use by main category

Category	Number	Percentage of total
Haematology	12589	27.17
GI Bleed	5410	11.68
Non-haematological anaemia	12704	27.42
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 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

Implementation of PBM

- Resources
- PBM champions
- NHSBT PBM Practitioners
- HTCs and HTTs
- Consultant haematologist dedicated to Tx
- NBTC PBM Recommendations

PBM Recommendations July 2014

transfusionguidelines.org

NICE Guidelines

due to be published August 2015

Support from NHSBT.....

NHS Blood and Transplant

Platelets Don't use two...





...when one will do

For prophylactic use in a 70kg adult, one adult therapeutic dose (ATD) typically gives an immediate rise in platelet count of

approximately 20 - 40 x 10%/I...

Do not administer double dose platelets for prophylactic transfusions as this practice does not decrease the risk of bleeding

Request and administer one unit/ATD, then reassess your patient A platelet increment can be obtained 10 minutes after completion of the transfusion

- McClelland DBL (Ed) (2005) Handbook of Transfusion Medicine 4th Edition, The Stationery Off
- Sichter SJ, Kaufman RM, Assmann SF, et al. Dose of prophylactic platelet transfusions and prevention of haemonihage. N Endl J Med 2019;362:609-13.



Better Blood Transfusion: maintaining the supply and safety of blood

Maintaining the supply and safety of blood is a key priority for NHS Blood and Transplant (NHSBT), but just as important is ensuring that it is used appropriately. Through the Better Blood Transfusion (BBT) initiative, NHSBT is working hard in partnership with hospitals on improving transfusion practice and to help facilitate this insultants have a vital role to play says Rebecca Gerrard...



england and norm waves.

colls; there has been a reduction in the use
NHSET BET teams provide specialist of blood in surgery of almost 20 per cent in
transfersion advice and information, including
a decade. We now need to focus more on

Posters

Safety Advice

Information for healthcare staff



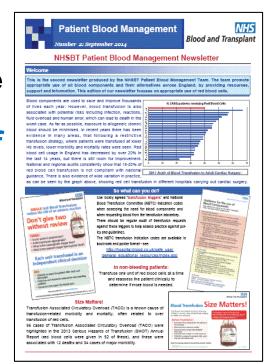




Articles



Guidance for hospital staff





Patient Blood Management Optimising the care of patients who may

PBM is an evidence-based, multi-disciplinary approach to optimising the care of patients who may need a blood transfusion.

PBM puts the patient at the heart of decision making PBM represents an international initiative in best practice

Why is PBM needed?

Improve patient outcomes.

Avoid inappropriate use of blood – blood is then available for those who really need it.



show inappropriate use of all blood components of between 15-30%

Who needs to be involved?

• Everyone involved in patient care

- . Clinicians from both primary and secondary care

Information for Patients

- Will I need a blood transfusion?
- Iron in your diet
- Receiving a plasma transfusion
- Children's leaflets
- PBM
- Anaemia
- FFP and cryo





Current pilots

- •SW: linking pre and post transfusion lab test results to transfusion episode (Clinisys)
- NW: Implementation of pre operative anaemia services
- London: Introduction of a single unit transfusion policy

Other PBM activities

- Development of a PBM App
- Medical Audit Working Group: anaemia management algorithm, laboratory algorithm, definition of minimum transfusion dataset to standardise requesting
- Supporting Clinical benchmarking database
- Audits

Who needs to be involved?

Everyone!

- National and regional leaders
- Hospital management
- Health professionals