

‘Transfusing Wisely’ in a Pathology Network

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Two blood bags filled with red blood cells, each with a white label. The labels contain text about the blood component, storage instructions, and patient information. The text is overlaid with a large, bold, black question.

**Are pathology
networks
good or bad for
clinical transfusion?**



An initiative of the ABIM Foundation



<http://www.choosingwisely.co.uk>

**International campaigns to reduce
medical excess and patient harm**



An initiative of the ABIM Foundation



Five Things Physicians and Patients Should Question

1

Don't transfuse more units of blood than absolutely necessary.

Each unit of blood carries risks. A restrictive threshold (7.0-8.0g/dL) should be used for the vast majority of hospitalized, stable patients without evidence of inadequate tissue oxygenation (evidence supports a threshold of 8.0g/dL in patients with pre-existing cardiovascular disease). Transfusion decisions should be influenced by symptoms and hemoglobin concentration. Single unit red cell transfusions should be the standard for non-bleeding, hospitalized patients. Additional units should only be prescribed after re-assessment of the patient and their hemoglobin value.

2

Don't transfuse red blood cells for iron deficiency without hemodynamic instability.

Blood transfusion has become a routine medical response despite cheaper and safer alternatives in some settings. Pre-operative patients with iron deficiency and patients with chronic iron deficiency without hemodynamic instability (even with low hemoglobin levels) should be given oral and/or intravenous iron.

3

Don't routinely use blood products to reverse warfarin.

Patients requiring reversal of warfarin can often be reversed with vitamin K alone. Prothrombin complex concentrates or plasma should only be used for patients with serious bleeding or requiring emergency surgery.

4

Don't perform serial blood counts on clinically stable patients.

Transfusion of red blood cells or platelets should be based on the first laboratory value of the day unless the patient is bleeding or otherwise unstable. Multiple blood draws to recheck whether a patient's parameter has fallen below the transfusion threshold (or unnecessary blood draws for other laboratory tests) can lead to excessive phlebotomy and unnecessary transfusions.

5

Don't transfuse O negative blood except to O negative patients and in emergencies for women of child bearing potential with unknown blood group.

O negative blood units are in chronic short supply due in part to overutilization for patients who are not O negative. O negative red blood cells should be restricted to: (1) O negative patients; or (2) women of childbearing potential with unknown blood group who require emergency transfusion before blood group testing can be performed.

**1998 Better Blood
Transfusion**

**2014 Patient Blood
Management**

**2016 Transfusing
Wisely?**



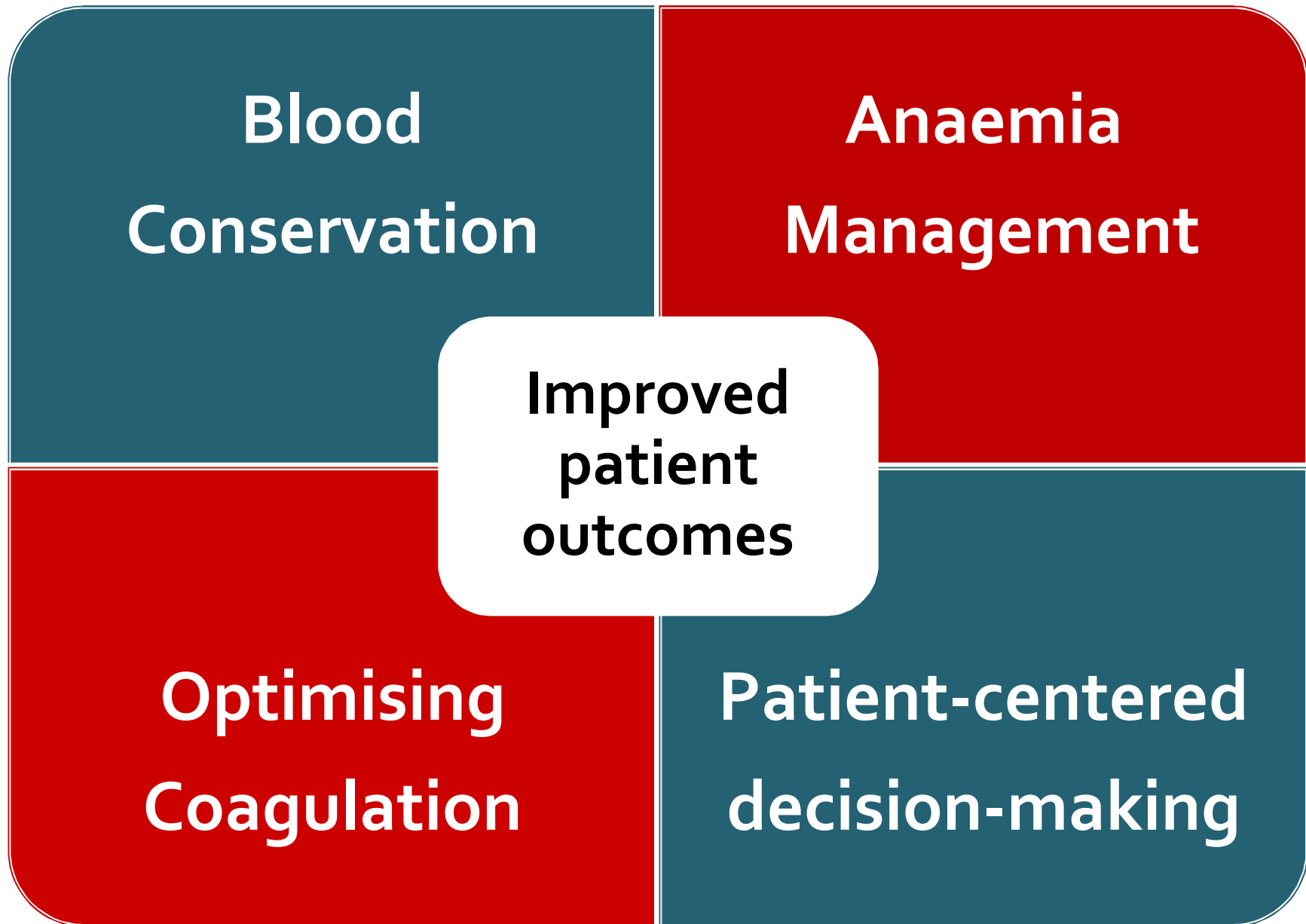
Patient Blood Management...

...is a multidisciplinary, evidence-based approach to optimising the care of patients who might need blood transfusion

...puts the patient at the heart of decisions made about blood transfusion to ensure they receive the best treatment

...represents an international initiative in best practice for transfusion medicine

... and avoidable, inappropriate use of blood and blood components is reduced



When did **transfusion** networking start?

Doctors, nurses and biomedical scientists
working together

1998 BBT gave us:

- ✓ Transfusion Practitioners
- ✓ Hospital Transfusion Teams



'Hospital Model' of Transfusion Service Delivery

A simple one-site model aligned with local clinical transfusion practice
(+ support for community hospitals)

Hospital Transfusion Team

Transfusion practitioner, transfusion lab manager, haematologist

- “ Same employer
- “ Liaison between all blood-using clinical specialties (via HTC)
- “ Blood safety and appropriate use of blood



EDUCATION

EDUCATION

EDUCATION

Pathology Modernisation

Could pathology be:
better organised?
harmonised?
collaborative?
cheaper????

Investment in:
staff
equipment and
IT
training

etc, etc...



'Network Model' of Pathology* Service Delivery

Complex multi-site model to support acute Trusts (of different sizes) as well as community hospitals and GPs

- ” Hub/spoke laboratory services
 - BT aligned with haematology (expertise, staff, on-call)
- ” Service has to meet local clinical need
 - Greater expertise shared across network
- ” Networks have to save money
 - Loss of staff, central procurement, income generation

Vital to recognise that you need **good clinical leadership, effective and transparent governance and IT that is fit for purpose**

* BT is only a very small part of networked pathology and is quite different in many ways



“Trusts should ensure pathology departments achieve their benchmarks as agreed with NHS Improvement by April 2017 so there is a consistent approach to quality and cost of diagnostic services across the NHS”

“If benchmarks for pathology are unlikely to be achieved, Trusts should have agreed plans for consolidation with, or outsourcing to, other providers by January 2017”

NHS Improvement writes to Trusts in July/August 2016 and asks for plans for consolidation within 2 weeks.

RCPATH and IBMS respond reiterating their response to the Carter report. One size does not fit all and not all pathology networks have been successful



**Are pathology
networks
good or bad for
clinical transfusion?**

The image shows two blood transfusion packs, each containing 46.0 ml of red cells in additive solution. The packs are labeled 'RED CELLS IN ADDITIVE SOLUTION LEUCOCYTE DEPLETED FOR NEONATAL USE' and 'STORE AT 4 °C ± 2 °C'. The right pack is also labeled 'Rh D NEGATIVE' and 'PACK ONE'. Both packs have a lot number of 1507070918 and a pack type of REF. The labels also include a barcode and a warning to always check patient/component compatibility and inspect for signs of deterioration.

Effective PBM is multidisciplinary and involves teamwork, interaction and understanding between HTT/HTC and Clinicians (and Hospital Managers)

Transfusion Practitioners are key to delivery of PBM recommendations BUT so is the **Transfusion Laboratory** and the **Haematologist**



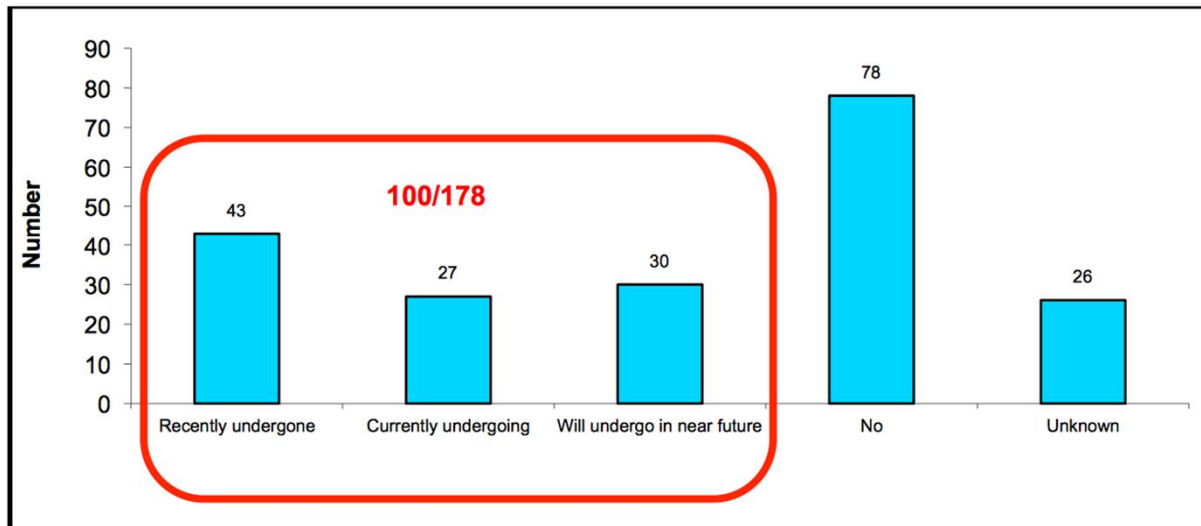
UK Transfusion Laboratory Collaborative Surveys

Stretched resources for BT service delivery - Lack of compliance with UK TLC recommendations (staffing, training and competency and laboratory automation)

Little additional capacity for taking on PBM responsibilities



Figure 13: Has your laboratory undergone reorganisation in the past 2 years?

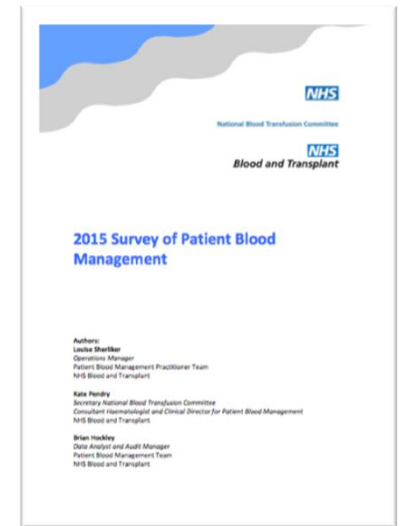


**Is it better
or worse
in
pathology
networks?**

NHSBT PBM Surveys

2013 and 2015 PBM surveys

- “ Insufficient HTT resources to prioritise PBM over other Hospital priorities.
- “ More time is taken to deliver BT teaching & competency and BT incident investigation & management than to undertake clinical audits and promote appropriate use



NHSBT PBM Survey 2015

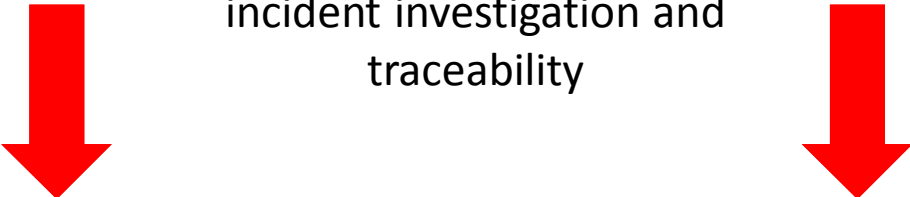
<http://hospital.blood.co.uk>



**Pathology
networks
and/or merged
Trusts – do
they do better
or worse?**

TPs support the transfusion laboratory by being involved in incident investigation and traceability

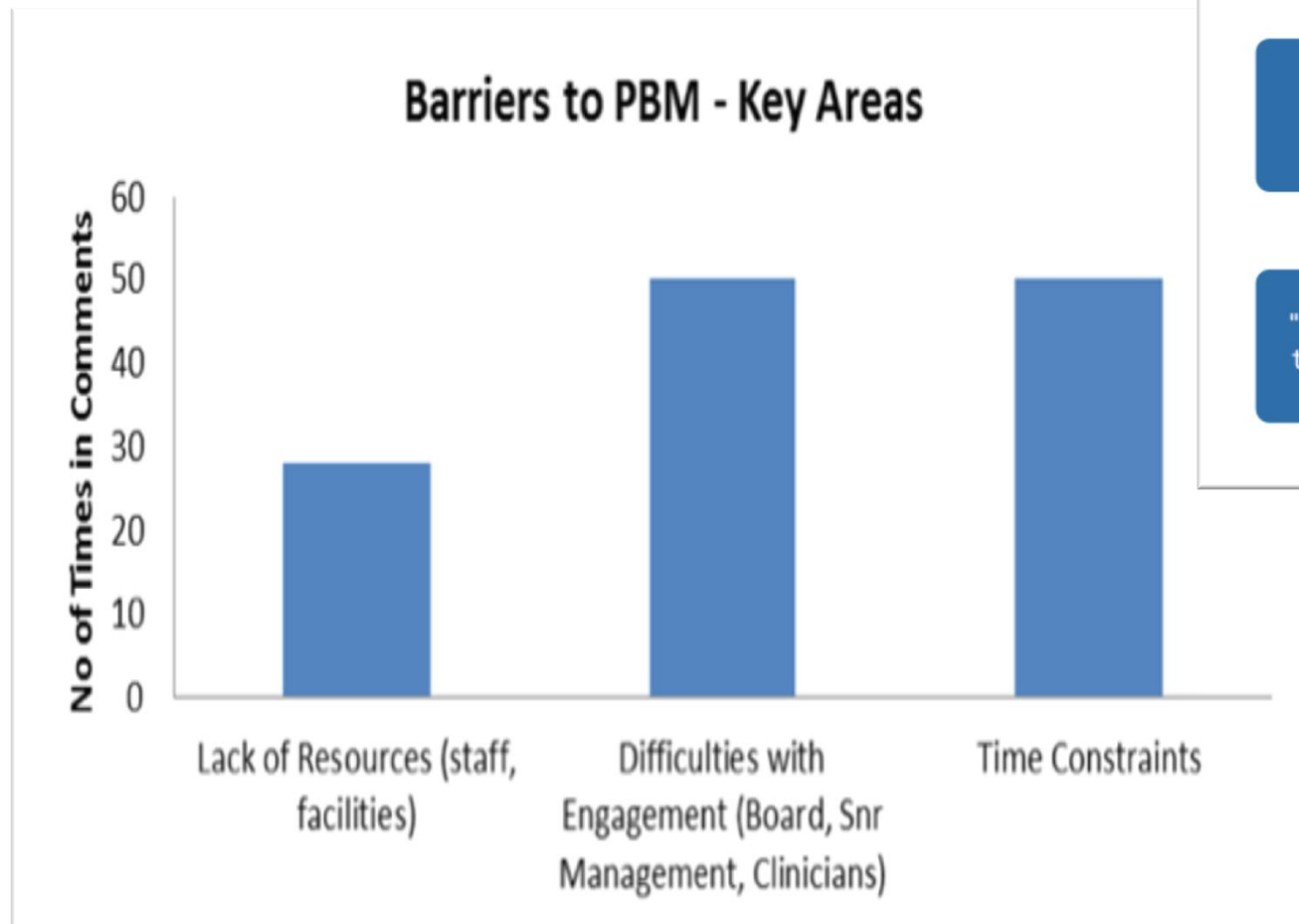
Table 3



Analysis % Respondents	Incident investigations	Education	Competency assessments	Tracing component use	Audits	Appropriate use of components
Total	132	131	131	129	129	128
Rank 1	20%	55%	5%	9%	3%	9%
Rank 2	24%	25%	17%	14%	8%	11%
Rank 3	28%	7%	21%	11%	19%	15%
Rank 4	14%	4%	17%	12%	31%	17%
Rank 5	11%	4%	23%	21%	23%	19%
Rank 6	2%	4%	14%	32%	15%	29%

Top priority for many TP is education
PBM and audit is currently very low down the
priority list

Barriers to PBM Implementation



"Lack of Transfusion Practitioner time to support PBM".

"Only one TP in very high use hospital".

"Lack of engagement in a large teaching hospital".

"Lack of allocated laboratory staff time to support this programme."

Scotland

Transfusion Practitioners

- “ Better Blood Transfusion team based in SNBTS
 - . SNBTS employs all Scottish transfusion practitioners who they work out in the hospitals
- “ Similar profile of TP activity
 - . Education>incidents>data & traceability
- “ Account for Blood
 - . Can use as a baseline for monitoring quality improvements and PBM initiatives

National Group = SCTAC

Scotland

Transfusion Laboratories

- “ Network of 5 SNBTS blood banks based in Glasgow, Edinburgh, Dundee, Aberdeen and Inverness
 - . Same IT, linked to reference services
- “ Systematic harmonisation of transfusion laboratory practice
 - . SOPs, training, competency, quality systems
- “ Different IT systems in other pathology laboratories and in non-SNBTS blood banks
 - . Potential loss of networking benefits

1. Successful pathology networks both with and without incorporated blood transfusion laboratories
2. Successful pathology and transfusion networks with hub and spoke laboratories – NHS and private
3. Pathology networks that have failed to deliver safe and effective transfusion services
 - . not engaged with clinicians
 - . focused on saving money
 - . inadequate QMS resources
 - . inadequate IT

**Are pathology
laboratory networks
an opportunity or
threat to transfusing
wisely?**

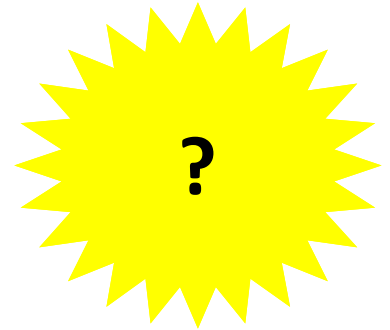
Opportunity?



YES!

- “ Standardisation of policies and sharing practice across linked sites
- “ TPs and haematologists working across multiple sites could provide specialisation in specific areas and roll-out of projects
- “ If common LIMS and PAS potential for effective benchmarking could be improved

Threat?



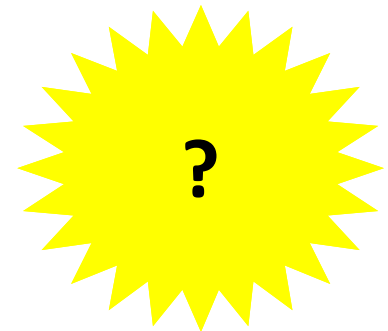
Haematologists, TPs and TLMs may have different:

- “ Employing organisations
- “ Line management structures
- “ Governance arrangements
- “ Priorities

Potential to compromise regular professional interaction

- “ Planned formal meetings plus *ad hoc* daily interaction

- “ Lack of recognition of the contribution of haematologists and TPs to blood transfusion service delivery and therefore no funding (and therefore no clear clinical responsibility)
- “ Separation of LIMS and PAS systems which make PBM data collection more difficult
- “ BT is a ‘service provider’ and therefore less likely to put resources into demand management seeing that as the role of the ‘service user’



STANDARDISATION

FRAGMENTATION

DATA AND
BENCHMARKING

RESOURCES
MORE OR LESS?

SPECIALISATION

ISOLATION

SHARING

LACK OF DEMAND
MANAGEMENT

LEADERSHIP

Next steps

Need to define and promote good transfusion practice that is

- . Cost effective
- . Safe
- . Clinically effective
- . Good governance



Need to do so quickly and transparently

- . because undoing an ineffective system is more difficult than doing it right in the first place

Practical Suggestions

1. Respond to next UK TLC questionnaire – this is an influential group
2. If you are undergoing change, form a transfusion group, show leadership (don't let yourselves be ignored) and use data!
3. Share your good, bad and mixed experiences with the RCPath – they are producing some 'top tips' for successful networking and consolidation



The background features a cluster of overlapping speech bubbles in various colors: pink, red, blue, and green. Each bubble contains a white question mark. The bubbles are arranged in a way that they appear to be floating and overlapping each other, creating a sense of depth and inquiry.

Thank you!

Any questions?