Resources required for PBM in hospitals

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Overview of Transfusion 2024
Patient Blood Management

• Improving blood transfusion: what have we achieved?

• An international perspective

• Resources needed for implementation of PBM in hospitals

• Is PBM accreditation needed?
Transfusion 2024 – PBM Session 1
Dr Jonathan Wallis – Improving blood transfusion: what have we achieved?

What have we achieved?
Decreasing red cell use.

What stimulated change in practice?
Research – less transfusion required for safe patient care

How was change achieved?
Education & audit – TP’s & NHSBT clinical input

Is it good medicine?
Yes continued clinical research has demonstrated the safety of restrictive transfusion

Is it cost effective?
Compared to 2000 – 96 million saving per year
The New England Journal of Medicine

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ABSTRACT

MADACOMER, RANDOMIZED, CONTROLLED CLINICAL TRIAL OF TRANSFUSION REQUIREMENTS IN CRITICAL CARE

Paul C. Hertzer, M.D., George Wells, Ph.D., Morris A. Blackman, M.D., John Marshall, M.D., Claudia Martin, M.D., Giuseppe Piazzaiello, M.D., Martin Tweeddale, M.D., Ph.D., Irwin Schweizer, M.Sc., Elizabeth Yetisir, M.S.C., and the Transfusion Requirements in Critical Care Investigators

A multicenter, randomized, controlled clinical trial of transfusion requirements in critical care: Background: To determine whether a restrictive strategy of red-cell transfusion and a liberal strategy produced equivalent results in critically ill patients. Results: A total of 1,282 patients at 24 institutions in the United States, Canada, and the United Kingdom were randomly assigned to a transfusion strategy that required a hemoglobin level of 7.0 g/dL or lower (liberal strategy) or a level of 8.0 g/dL or lower (conservative strategy) to receive a transfusion. The liberal strategy resulted in a significantly higher mean transfusion rate (9.0 vs. 3.4 units per patient-perso

RED-cell transfusions are a cornerstone of critical care practice, but there are divergent views on the risks of anemia and the benefits of transfusion in this setting. One view is that transfusions are safe and beneficial, while another is that they are harmful and unnecessary. This review evaluates the evidence for and against these views, and discusses strategies to improve the safety and efficacy of transfusions in critical care.
• Trends of blood use are useful but they don’t give the full clinical picture

• Missing data for clinical outcomes, patients quality of life, functional outcomes and health economics lacking

• The implementation of PBM internationally and measures of success have varied – success seems to be dependent on engagement at every level, patients, hospitals, clinicians, management, government, blood services. The TP role.

• In low and middle income nations where safe blood is not available the impact of PBM can be enormous
10 minute mission – resource for hospitals

‘Nothing is impossible, the word itself says I’m possible’
Audrey Hepburn

PBM Survey (NHS Blood & Transplant & National Blood Transfusion Committee)

The Successes

Process to ensure patients are involved in the decision to transfuse
2015 – 20%  2018 – 60%

Ensure appropriate use of platelets (single pack transfusion)
2015 – 66%  2018 – 78%

Identifying anaemia prior to transfusion
2015 – 32%  2018 – 45%

The overall reduction in red cell usage

What resources are required to drive the momentum of PBM in hospitals?
Meet the hospital clinical team - introduced in 2002

Hospital Consultant
- 8% - no consultant
- 21% - no dedicated time to PBM

Transfusion Practitioner
- 98% - Yes
Approx. 1TP: 1,3332 Nurses, Doctors, Midwives

Transfusion Data Analyst
- 90% - no

Transfusion Team Administrator
- 72% - no

Transfusion Practitioner Assistant
- 75% - No
TP’s – The Linchpin

Bishop et al (2010)
TP’s role – the global perspective

Implement regulations, recommendations, guidelines
Develop local policies
BSQR, NICE, NBTC, SHOT:-
Educate all staff groups on blood groups
Implement electronic blood management systems
Implement safety checks for transfusion circulatory overload

Training
MHRA / NBTC
Training & competency assessment of all staff involved in transfusion – porters, nurses, doctors, phlebotomists, healthcare assistants.

Audit
Local, Regional & National Comparative Audit

Investigation, solutions & actions
SHOT/MHRA/CQC
Transfusion incidents
Transfusion reactions
Reporting

Service Development
PBM Initiatives

Transfusion 2024
Setting a 5-year strategy for clinical and laboratory transfusion practice
PBM Survey 2015 – Priorities & Focus

Transfusion 2024
Setting a 5-year strategy for clinical and laboratory transfusion practice
TP - Workforce planning & framework for role development

Key points on role:

- Variation in focus of responsibility depending on the organisation
- Different team structures between organisations with varying practitioner numbers
- There is no uniform job specification for the role, no core competencies, no set ‘baseline’ qualification for the role
- TP’s evolving role - Requests for support with change management, service development, leadership development.
Multi-professional framework for advanced clinical practice in England

“New solutions are required to deliver healthcare to meet the changing needs of the population. This will need new ways of working, new roles and new behaviours.”

Transfusion 2024
Setting a 5-year strategy for clinical and laboratory transfusion practice
Potential return on investment?

Missing Quality Indicators
Impact on patient outcomes?
Number of patients presenting with anaemia and receiving Iron?
Impact on hospital stay & hospital acquired infection?

Data to guide interventions
Reports on clinical variation within a trust

Data collector or analyst required

Transfusion 2024
Setting a 5-year strategy for clinical and laboratory transfusion practice
Data and IT Support required

Data consistent, reliable, robust

A Laboratory Information Management System that records the reason for transfusion

A LIMS that interfaces to the Patient Information System for easy data extraction

A data analyst – user reports to clinical areas

Template algorithm for electronic ‘prescribing’ – with information/guidance embedded

App based tools for audit
Quality Improvement & Research Support

Research on effective PBM implementation
RTC regions used as ‘laboratories’
What teaching strategies lead to improvement?
What information do patients find most valuable?
What strategies lead to user engagement within trusts?
What are effective strategies to influence transfusion decisions?

Networks/Framework to grow evidence base

Transfusion 2024
Setting a 5-year strategy for clinical and laboratory transfusion practice
Blurring the boundaries

Joint PBM projects between community and trusts?

2018 PBM survey ‘How can the NHSBT PBM team support you?’

The largest request to support PBM by hospitals
‘Education tools to support anaemia management in primary care’

• Time for the community TP/PBM team?
Finally – recognition of work

- Introduce national targets for PBM and link to CQC?
- PBM Accreditation – Over to Professor Murphy…
- (Session 4 PBM)
- But today over to you….

PBM survey 2018 – Self accreditation tool 58%
Support requested by trust from NHSBT in relation to PBM – Survey 2018

- Standardised education and training education programmes for transfusion across professional groups – 73%
  - Support identification of anaemia in primary care – 87%
  - Working more closely with individual trusts on specific PBM projects – 61%
- Informing and empowering patients and the public on PBM through campaigns and educational resources – 78%
• ‘Every day that a junior doctor stays in the job, they are choosing to stay, thereby renewing their commitment to the specialty. In a post-Bawa-Garba era, when doctors can be tried and jailed for human error, it can feel like your career lies in the hands of fate.’

Rebecca Grossman

4th April 2019


The themes from the sessions

• Despite the challenges there has been achievement

• People & resources are key to delivery

• Data is required to guide intervention

• Research is required, both to further transfusion knowledge but also strategies for effective implementation of PBM
Thank you & References

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- NHSBT PBM team
- Andrew Miller, Transfusion Integration Implementation Manager, King’s Health Partners Haematology
- Rachel Moss, Senior Transfusion Practitioner Great Ormond Street Hospital NHS Foundation Trust
- Janice Robertson, RTC Administrator

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