Foreword

The National Blood Transfusion Committee (NBTC) acts as a central liaison point between clinical users and the blood service (NHSBT). Our role is both to help and encourage clinicians to use best practice when considering transfusion, and to monitor, consult and feedback on the service provided by the NHSBT. The success of the NBTC, its associated Regional Transfusion Committees (RTCs) and fellow bodies such as Serious Hazards of Transfusion (SHOT) is evident through the dramatic changes in blood use over the last 18 years.

Much of this change has come about through the Better Blood Transfusion initiatives of 2000-2010 and subsequently in the updated initiative of Patient Blood Management (PBM), an internationally active programme embodying the same principles, methods and aims.

Over the last three years we have increased our active discussions with the NHSBT on a variety of issues such as future components and play an active role in Safety of Blood and Transplanted Organs advisory committee (SABTO) and the National Commissioning Group (NCG) for blood.

We have a number of important working groups and I am grateful to the chairs of these groups and their members for their additional work, and in particular to our patient representatives who give up their own time to contribute actively to our deliberations and decisions. Although our remit is for England, we are also pleased to have colleagues from the devolved administrations as observers and contributors.

The report below gives some detail about the activities over the past year.

Though not a decision making body as such the NBTC helps guide transfusion policy both for providers and users. Our work plan for the coming year includes further Patient Blood Management initiatives, working with the NHSBT to look at ways of streamlining the laboratory interface between NHSBT reference services and the hospital blood banks, and looking at possibilities for harmonising some of the regulatory burdens that fall on hospital Blood Banks.

Dr Jonathan Wallis
Chair, National Blood Transfusion Committee
08 February 2018
The Report

The National Blood Transfusion Committee (NBTC) was set up in 2001, with the primary purpose of promoting safe and effective transfusion practice in hospitals.

This report provides evidence that the remit of the NBTC to provide a conduit for the flow of information and good practice between Hospital Transfusion Committees (HTC), Regional Transfusion Committees (RTC) and the NBTC is being fulfilled. Further focused work is achieved through the NBTC working groups and education and audit is supported via the RTC symposiums.

The NBTC monitors the performance of NHS Blood & Transplant (NHSBT), and receives reports on areas of activity in transfusion which have an impact on its work, such as the Serious Hazards of Transfusion (SHOT) scheme, the National Comparative Audit (NCA) programme and the National Commissioning Group (NCG). There are also close links with other stakeholders such as SaBTO and MHRA and representation from a number of Royal Colleges.

The Terms of Reference for the NBTC and Regional Transfusion Committees (RTCs) were updated in 2016 to reflect new working arrangements.

Committee Meetings and Working Groups

The NBTC, Executive Working Group (EWG), Regional Transfusion Committee (RTC) Chairs, all met twice during 2016/17.

Active working groups:-
- Patient Involvement working group (PIWG)
- Transfusion Laboratory Managers working group (TLM)
- Patient Blood Management working group (PBM)
- Education working group
- Anaemia working group

Work of the NBTC in 2016/17

The NBTC has an annual work plan setting out objectives and actions to support the NBTC strategy which remains focussed to support the PBM initiative http://www.transfusionguidelines.org/uk-transfusion-committees/national-blood-transfusion-committee/business.

The working groups also develop individual workplan which are available on the NBTC website www.transfusionguidelines.org.uk.

Regional Transfusion Committees (RTXS)

The RTCs are key to the promotion of better transfusion practice acting as a focus for activity and a conduit between the Hospital Transfusion Committees and the NBTC.

There are 10 RTCs which were realigned in 2006/07 to reflect the boundaries of the ten Strategic Health Authorities, and these boundaries have continued in the face of further NHS reorganisations since HTCs greatly value the current structure and they strongly feel this is needed to promote wide engagement. Continuing concerns expressed by RTC Chairs from their membership in the last year included the effect on transfusion laboratories and transfusion practice through pathology modernisation initiatives focussed on high throughput pathology services and cost saving, and the challenge of engaging hospitals in PBM. NHSBT have initiated both a Supply Modernisation Project for North of England and Leeds/Sheffield Estates Review. Both these projects have implications for stakeholders in the Yorkshire & Humber and East Midlands RTC regions. Engagement between NHSBT and stakeholders, at a regional and local level, thus far on the whole has been good, but continued
Inclusive transparent dialogue with stakeholders is essential to ensure success of these projects for both parties.

**National initiatives that the NBTC/NHSBT have led in 2016/17**

**Patient Blood Management (PBM)**

PBM is an evidence-based, multidisciplinary approach to optimising the care of patients who might need transfusion. It puts the patient at the heart of decisions made about blood transfusion to ensure they receive the best treatment and avoidable, inappropriate use of blood and blood components is reduced. It represents an international initiative in best practice for transfusion medicine.

In June 2014, the initial recommendations from the NBTC about how the NHS should start to implement *Patient Blood Management* were endorsed by NHS England and issued to hospitals.


The National Institute for Health and Clinical Excellence (NICE) published guidelines on Blood Transfusion in 2015 https://www.nice.org.uk/guidance/ng24 and these were followed by quality standards for transfusion which were published in November 2016. The guidelines provide a framework for implementation of patient blood management and cover recommendations on: alternatives to transfusion for patients having surgery, thresholds, targets and doses for blood and blood components, patient safety and patient information.

In 2015, NHSBT produced a PBM Strategic Workplan 2015-2018 in collaboration with the NBTC. This ensured continuing investment by NHSBT into PBM to achieve the following objectives:
Strategic Objective | Key Goals
---|---
1. Embed PBM into hospitals as a long term and sustainable model for the delivery of patient-centred, evidence based, high quality care | A: Lead on transfusion education and learning  
B: Provide evidence to drive and measure the efficacy of PBM  
- Support the implementation of findings from research  
- Development and implementation of national guidelines  
C: Collaborate with influential stakeholders to raise the importance of PBM at corporate, NHS England and Department of Health level  
D: Promote patient and public involvement in PBM  
E: Monitor implementation of PBM through audits and surveys  

2. Implement PBM strategy through a collaborative approach between NHSBT, NBTC and hospitals/primary care | A: Deliver a series of PBM pilots to demonstrate the benefits of PBM and influence change  
B: Undertake health economic analysis based on the pilots to support change  
C: Implement blood component specific projects  
D: Work with other teams to support integration and partnership  

3. Develop structures, tools and processes to support the implementation of PBM | A: Develop PBM benchmarking tools  
- Lead development of clinical benchmarking.  
- Agree a national specification for transfusion requests.  
- Agree a set of key performance indicators for PBM with a scorecard.  
B: Modernise the interface between NHSBT and hospitals to enable information to be collected efficiently and systematically  
C: Workforce development to enable PBM teams to work more effectively  
D: Establish a PBM business support team  
E: Review the structure of the PBM teams within NHSBT and the structure and function of the NBTC and the RTCs  
F: Optimise intraoperative cell salvage in hospitals  

The NBTC promoted involvement of hospitals in the series of audits organised by the National Comparative Audit on Patient Blood Management in Surgery and in Haematology (also see below) and these initiatives are linked to the NIHR funded ‘Audit and Feedback Interventions to Increase evidence-based Transfusion practice’ (AFFINITIE) programme, aiming to test different ways of developing and delivering feedback. A re-audit of PBM in surgery undertaken in 2016 showed an improvement in PBM practice following the initial audit 2015. This was in particular in the use of a restrictive approach to postoperative transfusion, an increase in the use of a single unit transfusion approach post-operatively from 37% to 50% with Tranexamic Acid use increasing from 32% to 42% of cases. There was a very modest improvement in the management of pre-operative anaemia with the relative proportion managed appropriately improving to 50% in 2016 compared to 46% in 2015. However overall, only 11% of patients receiving a post-operative transfusion were found to have had all appropriate PBM measures attempted in 2016, compared to 7.5% in 2015 (P=0.002).

Key barriers that need to be overcome include adequate resources to support the infrastructure to deliver effective management and a restructuring of the pre-operative pathway to allow for timely investigation and management. There are also difficulties in resolving the roles of primary and secondary care in pre-operative optimisation of anaemia, and within secondary care in setting up services to manage patients effectively.
The Choosing Wisely campaign – this is an international initiative looking at ways of avoiding ‘too much’ medicine and led by the Academy of Medical Royal Colleges. Three key messages were developed by the NBTC and formed part of the campaign:-

1. ‘Only consider transfusing platelets for patients with chemotherapy-induced thrombocytopenia where the platelet count is < 10 x 10⁹/L except when the patient has clinical significant bleeding or will be undergoing a procedure with a high risk of bleeding.’

2. ‘Use restrictive thresholds for patients needing red cell transfusions and give only one unit at a time except when the patient has active bleeding.’

3. ’Only transfuse O RhD negative red cells to O RhD negative patients and in emergencies for females of childbearing potential with unknown blood group.’

The Transfusion Evidence library – this is a database of systematic reviews and randomised controlled trial relevant to transfusion medicine. It is possible to set up a regular Transfusion Evidence alert to ensure users keep up to date http://www.transfusionevidencelibrary.com/

The James Lind Alliance is requesting feedback on blood transfusion and blood donation from patients, carers and healthcare professionals to support the priority setting of future research questions in this area http://www.jla.nihr.ac.uk/priority-setting-partnerships/blood-transfusion-and-blood-donation/

Changes in Demand for Blood

Red Cells Issues: Trend 1999- 2017

- Approx. reduction of 34% in RBC issues (all groups) from Mar 1999 to Sept 2017
- O D Negative RBC issues to hospitals have remained stable since January 2008
- O D Negative accounts for approx. 12% of total RBC issues

Red cell downward drivers

Patient Blood Management (PBM) initiatives: providing evidence to support guidelines including restrictive transfusion thresholds, indication codes for transfusion which provide best practice guidance on triggers to transfuse. Initiatives in last few years include management of anaemia including pre-surgery optimisation of patients, single unit transfusions.
O D Negative

- Concerns over sustainable supply- (issues are currently approx. 12% but only 8% of population are O D Negative blood group).

Platelet Issues: Trend 2001- 2017

- approx. 19% increase in overall platelet issue March 2001- Sept 2017
- approx. 53% increase in A D neg issues from March 2010 – Sept 2017

Platelet drivers

Population growth and an ageing population are the key drivers. Improved treatments in haematology and cardiothoracic surgery mean more patients are treated intensively and across a wider age group. Although issues are relatively stable, there is evidence of potential for further reductions in platelet demand (2016 National Comparative Audit in Haematology Patients: 96% of hospitals provided data, 41% of platelet transfusions were for chronic bone marrow failure of which only 43% were considered to be appropriate)

FFP Issues: Trend 2001- 2017

- approx. 49% reduction in FFP issues from March 2001 to September 2017.
- approx. 57% increase in issue of Cryoprecipitate over same time period
Drivers for changes in demand for plasma components

There is a requirement to provide plasma-derived components with an assumed lower risk of vCJD transmission than is deemed to exist in UK plasma to those born on or after 01.01.96. As a vCJD risk-reduction measure, source plasma (for FFP and cryo) for this recipient cohort is imported from Austria. As a further risk reduction measure (unrelated to vCJD risk reduction) this source plasma is then pathogen inactivated (using the MB system).

Segmenting the market into pre-1996 and post-1996 birth cohort recipients has established separate demand/supply challenges for each group.

Patients born before 01.01.96 are deemed to have been exposed to the risk of vCJD in the UK food chain and do not therefore require lower-vCJD risk components. Patients in this birth cohort are therefore indicated to receive plasma components manufactured from UK donations.

Working Groups:

1) PBM working group

NBTC/ NHSBT PBM survey
In 2015, NHSBT and the NBTC undertook a survey to evaluate progress towards PBM in NHS Trusts in England [http://hospital.blood.co.uk/media/28341/2015-survey-of-patient-blood-management.pdf](http://hospital.blood.co.uk/media/28341/2015-survey-of-patient-blood-management.pdf). The survey, which was reported in 2016, had a response rate of 91%. This was a repeat of a previous survey in 2013 and indicated that despite limited additional resource in terms of staff and funding, NHS Trusts in England are making significant progress particularly in areas of patient consent and training for staff. However, it was identified that further work was required and business cases for further developments are being submitted in a third of Trusts. The barriers to implementation were identified as issues with silo working, ring-fenced budgets and lack of buy-in from managers and senior clinicians. The report provided further recommendations for hospitals to improve and identified further areas for PBM development.

NHSBT PBM projects reported to the NBTC PBM working group

*Single Unit Transfusion Project*
Working with Kings College Hospital, London and University Hospital, Lewisham to implement a single unit transfusion policy for stable non-bleeding in-patients in general medical wards. There was an activity based cost saving averaged at £62.1k on 8 medical wards for a year (£156 per currently transfused unit). At Lewisham, there was a reduction in blood use of 12%, equated to a cost saving of £1,320.00 (based on 2015/16 red cell unit cost of £120).
North West Pre-operative Anaemia Project
Supported NW regional hospitals with implementation of pre-operative anaemia management through sharing practice in an active working group

PBM in Obstetrics Project

Blood Choices App
Development of an App to support decision making in prescribing red cells in stable adult patients (covering anaemia management and consent)

PBM Quality Improvement
Development of a system for hospitals to benchmark against others to allow incremental changes in practice

Indication Codes
The NBTC Indication Codes for blood transfusion were updated to bring them into line with latest evidence and were agreed following consultation with NBTC members in June 2016. The NBTC is funding the development of an ‘app’ which will provide easy access to the indication codes for those in the clinical environment. The app will provide further support in the decision to transfuse the component.

Further information can be found here: http://hospital.blood.co.uk/patient-services/patient-blood-management/

2) Blood Components working group

Following an active Components workshop organised by the NBTC in 2016 there was considerable interest expressed by hospital representatives in the use of whole blood for major haemorrhage. The NHSBT Components lab is now working on a planned clinical study looking at the potential use of whole blood (leukocyte depleted) for treatment of traumatic haemorrhage, especially preadmission. This follows work in the military setting. General uptake may add complexity to supply chain and wastage may increase if not suitable for other patients, although there is interest in other areas e.g. cardiac surgery. Effect of cold storage on platelet function and shelf life also requires consideration.

The NBTC also strongly supports the development of universal plasma. NHSBT is collaborating with Nonwovens Innovation and Research Institute, Carbosynth and MacoPharma to develop a prototype anti-A and B removal filter. The consortium has applied for a National Institute for Health Research grant to develop the system over 3 years to a stage where CE marking and marketisation may follow. The system would allow removal of anti-A and B from plasma, creating a ‘universal’ plasma component. Further development might allow removal of A and B antibodies from platelet concentrates and RBC containing plasma e.g. for exchange transfusion or whole blood.

The NBTC is active stakeholder involved in supporting discussions within SaBTO on the continued importation of fresh frozen plasma for recipients born on or after 1st January 1996 as a risk reduction measure for vCJD.
3) **Education and training**

An active Education Working Group with updated Terms of Reference to cover a wide remit maintaining oversight of undergraduate and postgraduate education in Transfusion Medicine across many healthcare professionals. Multidisciplinary membership with defined project groups tackling key objectives. Organised a well attended Education Workshop as part of March 2017 NBTC meeting to discuss concerns and highlight priorities around training.

**Medical Undergraduate Training**
- Active collaboration with British Society for Haematology Education Committee
- Contributing to BSH education committee undergraduate training days in Haematology with emphasis on regional days to improve accessibility across the country.
- Contributing to updated BSH Education website
- Planned participation in RCP careers day to be held in Oct 2017

**Foundation Training**
- Completed development of a CE marked PBM App as a medical Smartphone device to support decision making around anaemia management and use of red cells in non bleeding adult patients based on NICE and BSH guidelines. Abstract from Phase 1 study of accuracy and evaluation completed and presented as oral communication at the International Society of Blood Transfusion meeting in Copenhagen in June 2017. The usability of the App is now being assessed amongst junior doctors.
- Transfusion Education Initiative in collaboration with BSH with pilot course planned for Spring 2018 aiming to improve transfusion training of junior doctors using Team Based Learning and social media to enhance participation and maximise learning opportunities with two single day events, with online tutorials using social media and Interactive lectures. Participants will be encouraged to undertake a transfusion-related Quality Improvement Programme within own Trust.

**Postgraduate core medical and higher speciality training**
- NBTC Education Workshop in March 2017 with representatives of Royal Colleges who presented postgraduate curricula content and key areas for action
- Project group working on development of key competencies for medical staff at different levels of seniority
- Continuing to raise profile of transfusion medicine across clinical disciplines via various activities such as participation and leading on National Comparative Audits, contribution to professional guidelines (e.g. BSH Guidelines, RCOG, NICE), publications

**Haematology Specialist Registrar training**
- Annual meeting to review course content and evaluation of NHSBT delivered Transfusion courses for Haematology trainees. Input from NHSBT and hospital teams and trainees with a view to further strengthening courses. Ongoing updates to JRCPTB Haematology SAC with upload of 2017/18 dates on JRCPTB website.
- Development of web based training material (TxED talks)
- Supporting Transfusion attachments in partnership with Trusts and NHSBT at 7 centres with further meeting to review training content in Sep 2017
- Supporting NHSBT strategy for international placements within framework of RCP Medical Training Initiative.
Scientific training

- Ongoing Contribution to HSST Transfusion Medicine training. Curriculum completed and uploaded onto RCPath website. Part I FRCPath exam held in Spring 2017 and Part II being developed for Autumn 2018
- Explore development of International framework for Transfusion scientist trainees within RCPath Medical training initiative.

Nursing & Midwifery training

- Review of Non Medical Authorisation courses (NMA). Objective review of course content with shortening of face to face course from 4 to 3 days. Completion of development of cases and workbook together with pre and post learning assessment.
- Successful student nurse pilot in Oxford. Continue to work with 4 universities, RCN, RCM, NMC and RCN student nurse committee to develop and trial a variety of educational templates
- Develop programme for education days for TPs, Midwives and specialist nursing groups and organise further Leadership in Transfusion conferences.

4) Patient and Public Involvement

The Patient Involvement working group (PIWG) was established to promote patient and public involvement in blood transfusion. The working group was involved in several patient-related activities during 2016/17:-

- **Further develop information on blood transfusion for patients and the public**
  Partnership work continues between the NHSBT PBM team and approximately 20 patient organisations and charities that are associated with patients that are often transfused, to promote patient information on their respective websites and link to the Hospitals and Science and blood.co.uk websites. Approximately 8 organisations have agreed to this and show links from their website.

- **Ensure Patient Information Leaflets (PILs) relevant and up to date**
  12 of the PILs have been updated between April 16 - 17 and are available here: [http://hospital.blood.co.uk/patient-services/patient-blood-management/patient-information-leaflets/](http://hospital.blood.co.uk/patient-services/patient-blood-management/patient-information-leaflets/)
  Work progresses to achieve the “Information Standard’ which is awarded by NHS England as a kite mark for excellence in patient information. This process is lengthy and work is well underway to meet the standards required and apply this to future publication processes. It is hoped that this will be awarded in Autumn 2017.

- **Promote Transfusion awareness in collaboration with specialist societies and groups**
  The NHSBT PBM team supported the following in 2016 / 2017:-
  - Annual Schools science conference April 2016
  - RCN Congress June 2016
  - Exhibition stand at SHOT 2016
  - RCM Annual Conference October 2016 and European Midwives international Conference December 2016
  - Exhibition stand at RCPath advances in Transfusion medicine October 2016
The NHSBT PBM team has supported Dr Biddy Ridler with her Masters degree investigating patient and public perception of blood transfusion services and blood conservation. Expressions of interest and number of transfusion labs supporting the development of Harvey’s gang continues to increase slowly.

- **Promote Implementation of SaBTO guidance on consent**

  Following the publication of the NCA Patient Information and Consent report an action plan was drawn up by members of the PIWG.

The section on Consent on the PBM Toolkit on the Hospitals and Science website can be found at: [http://hospital.blood.co.uk/patient-services/patient-blood-management/consent-for-transfusion/](http://hospital.blood.co.uk/patient-services/patient-blood-management/consent-for-transfusion/) It continues to be updated and contains a link to a consent video developed in partnership with University Hospital Birmingham on “you tube”. A consent event will be held at the NBTC in September 2017 to discuss what the next steps should be.

- **Lay membership- comments from representatives**

  For many years, the NBTC has had patient/lay members. Moreover, such participation is encouraged, not just tolerated and, if we do not offer contributions, we are asked for them. Between us we serve on most NBTC working groups, though not the Executive Working Group. There is room for still wider lay participation, so that we are not constantly reporting back to ourselves.

  We have no formal role. We think we are there to ensure that patients’ views are represented by saying what patients would want to know and asking questions they would like asked, and by pressing for the language of all communications to be understandable, rather than medicalised. We aim to keep abreast of current developments in transfusion by attending meetings and educational events. We regularly comment on documents and policies, and try to bear in mind what patients would want to know and have explained to them.

  Formalising the role would also assist future recruitment of lay/patient representatives. Neither of us joined NBTC via a formal process; any future members should be recruited in a more transparent way.

5) **Transfusion Laboratory Managers working group**

The group is supporting the start up of the RCI ASSIST project in collaboration between NHSBT and hospitals. The proposed pilot study will focus on evaluating the potential benefits of adopting a more algorithmic approach to testing across RCI and hospital transfusion laboratories. In this model, small networks of hospital transfusion laboratories agree testing protocols with NHSBT; this includes triggers for referring investigations to RCI. In this way, hospital-based testing would be standardised and optimised to fit the resources available in each laboratory. By adopting agreed and standardised testing protocols, NHSBT would support hospital-based activities such staff training, validation, change control, documentation, and compliance.

The group will also monitor the progress of plans for Pathology consolidation and highlight concerns where needed; 29 networks have been proposed by NHS Improvement with aim of implementing hub and spoke model over the next three years.
6) Anaemia working group

A key pillar of patient blood management is the timely recognition, investigation and management of anaemia. The 2011 National Comparative Audit of transfusion in medical patients highlighted the fact that many patients with reversible anaemia (mainly due to iron deficiency) were being transfused unnecessarily but were also not being investigated adequately. NICE blood transfusion guideline (NG24), National Blood Transfusion Committee (NBTC) Patient Blood Management (PBM) recommendations, and British Society Haematology (BSH) guidelines for pre operative anaemia and anaemia in pregnancy all recommend effective anaemia management. This newly formed group has key objectives to:-

1) Produce overarching patient blood management guideline for management of anaemia
2) Raise awareness of importance of anaemia recognition, investigation and management with clinicians, patients and public
3) Develop tools to support implementation of anaemia management across primary and secondary care
4) Work with commissioners to commission pathways that support best practice
5) Develop KPIs to monitor compliance with quality standards in anaemia management

Other groups/members

National comparative audit of blood transfusion (NCA)

The focus of the NHSBT/Royal College of Physicians National Comparative Audit of Blood Transfusion (NCABT) programme is to conduct audits of the safe and appropriate use of blood. Audit reports can be found here: http://hospital.blood.co.uk/audits/national-comparative-audit/national-comparative-audit-reports/

Audits 2016/17:-

- Transfusion in children and adults with Sickle Cell Disease- performed in 2014. To be reported
- Re-audit of the 2015 Audit of Patient Blood Management in adults undergoing scheduled surgery. The Group is aiming to report the audit June 2017.
- 2016 Audit of red cell and platelet transfusion in adult haematology patients. The first round report was issued towards the end of 2016. The second round of the audit will start in early July 2017.
- 2016 Audit of Red Cell Transfusion in Hospices. Audit and data is being prepared for analysis. 138/200 (69%) of hospices from around the UK submitted data in this first ever audit of red cell transfusion in this patient group.

Future audit topics:-

We are in the initial stages of planning 2 audits, to be offered during later 2017 and through 2018:-

- Audit of blood sampling and labelling, collection of blood from blood bank and administration to the patient (known as the Vein to Vein [V2V] audit
- Audit of the use of FFP in children and neonates
Serious Hazards of Transfusion (SHOT) scheme

Key Messages and Recommendations

- There is no substitute for correct patient identification at all stages in the transfusion process

- The severity of the outcome is not the determinant of the seriousness of the error. Near miss reporting demonstrated 889 errors which could have resulted in incorrect blood component transfusions, of which 288 were known to be potentially ABO-incompatible

- **Delay** in appropriate transfusion contributes to death in sick patients

- **Risk assessment** before transfusion. Transfusion-associated circulatory overload (TACO) is the most common cause of death and of major morbidity and may be preventable. Patients should be properly assessed prior to transfusion to identify those at particular risk and to ensure the transfusion is required

- **Information technology (IT) systems** depend on correct set up and validation to ensure they are fit for purpose and contribute to patient safety rather than impede it

- **Errors in the administration of anti-D immunoglobulin** remain disappointingly high; clear local guidelines and thorough training of all staff involved is essential

- **Checking means checking** with no short cuts

- **Laboratory error reports** to SHOT have increased and human error accounts for 96.7% of serious adverse events reported to the Medicines and Healthcare Products Regulatory Agency (MHRA).

  Work is continuing with the MHRA to develop a combined haemovigilance reporting system. Serious adverse reaction reporting is now the responsibility of SHOT experts (phase 1). In phase 2, a single portal for haemovigilance reporting will be developed. Phase 2 is at an advanced stage of development. The go-live date is anticipated to be March 2017

Medicines and Healthcare Products Regulatory Agency (MHRA)

2016 was the first full year of data since phase 1 changes to SABRE/SHOT reporting process

Has led to an increase in reportable SAEs and SARs reported to MHRA: (SAE’s-2015: 765, 2016: 1027) (SAR’s-2015: 262, 2016: 465)

This increase in numbers should not be interpreted as a reduction in quality and safety in reporting establishments.

**Human Factors**

Human error continues to remain the highest root cause of all SAEs reported. Due to this, the MHRA has further subdivided the human error category to try and understand exactly why they occur.
This year reports have been assessed to identify significant staffing and workload problems.

- 10% of reports are a result of errors made when workload was considered to be too high or staffing too low (these do not include reports where errors were made when staff were considered “busy”, but staffing and workload within accepted levels)
- 45% of all reports due to errors made by staff where procedures were performed incorrectly, the wrong procedure performed or steps missed –These are usually due to wrong decision making or unexplained slips and lapses rather than faults in the QMS –More thorough investigation or detailed reporting may have identified alternative human factors
- Nearly 20% of reports are considered to be due to the lack of a robust process

Review of the performance of the NHSBT

NHSBT has met targets in the following areas:-

- Average age of issue of components
- Components issued on time in full

Targets not met around Ro units supplied: Demand has significantly increased over the past few years due to changes in treatment for sickle cell anaemia patients. NHSBT has implemented donor recruitment strategies to address this shortfall.

Targets not met around percentage of red cells and platelets produced not issued ( red cells 4.9%, target 4.8%, platelets 9.5%, target 8.6%). Rationale includes excess of group A D neg red cells produced as a result of a continued high demand for A D neg platelets. Remaining reasons are wastage due to underweight donations (1.9%), manufacturing/testing (2%) High % K neg red cell orders are contributing to high wastage in K pos.

There have been no occasions where red cell stock (for any blood group) was below the three-day alert level for three or more consecutive days in comparison where there were 16 occasions for platelets.

Further information about the terms of reference, membership, and work of the NBTC can be obtained from Celina Bernstrom, EA to the NBTC (celina.bernstrom@nhsbt.nhs.uk) or via the following link:


Next steps 2018 and beyond

- The NBTC will continue to develop a series of focussed multidisciplinary workshops allied to the main committee meetings to work with hospitals and NHSBT on particular areas of interest within transfusion. This will include in particular the scope of implementation of genotyping for multitransfused patients.
- The Education Working Group will focus on the development and implementation of resources such as Apps in promoting a change in practice amongst junior doctors and healthcare professionals and will also aim to develop more web based resources as an ‘Education Toolkit’.
• The Laboratory manager’s group will work closely with NHSBT in development of the RCI ASSIST pilot. We will also be working with the Royal College of Pathologists in reviewing progress and challenges around pathology consolidation.

• The Patient Involvement Working Group will actively promote patient information and consent with sharing of best practice within hospitals and explore challenges and solutions around positive patient identification.

• We are also reconvening an NBTC Emergency Planning Group in collaboration with NHSBT and other key stakeholders to update guidance for hospitals with lessons learnt from a spate of major incidents including cyberattacks.

• In particular we will continue to focus actively on implementation of Patient Blood Management with a survey to monitor progress on the development of the infrastructure needed within hospitals and review practice in areas highlighted in the NICE Clinical Transfusion Guidelines and Quality Standards. We will promote further work required to deliver timely pre-operative anaemia management in particular and to ensure consistent implementation of various PBM measures.

• We will also be working towards a further Symposium in Spring 2019 aiming to actively seek support from NHS England with participation from a wide range of stakeholders to tackle key challenges including Patient Blood Management and role of Big Data, benchmarking and PBM accreditation, Blood bank staffing: problems and solution, Safety and Regulation: error reporting and accreditation and implementation of developments such as Genotyping

Acknowledgements

We are grateful to Louise Sherliker, National Lead, PBM Practitioners team at NHSBT for the active support her team provides to support RTC and NBTC activities and for her assistance in compiling this report. We are grateful to all the members and co-opted members of the committee for their work and to the NHSBT for allowing secretarial assistance and time. We thank our observers from Scotland, Wales and Northern Ireland for their attendance and contribution.

Dr Jonathan Wallis
Chair, NBTC

Dr Shubha Allard
Secretary, NBTC
### Glossary of Terms

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<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>AFFINITE</td>
<td>Bone marrow failure</td>
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<td>BMF</td>
<td>British Society of Haematology</td>
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<td>FFP</td>
<td>Fresh Frozen Plasma</td>
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<td>FRCPath</td>
<td>Fellowship of the Royal College of Pathologists</td>
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<td>Haem SAC</td>
<td>Haematology Specialist Advisory Committee</td>
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<td>HSST</td>
<td>Higher Specialist Scientific Training</td>
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<td>JRCPTB</td>
<td>Joint Royal Colleges of Physicians Training Board</td>
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<td>LGIB</td>
<td>Lower gastrointestinal bleeding</td>
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<td>MHRA</td>
<td>Medicines and Healthcare Regulatory Agency</td>
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<tr>
<td>NBTC</td>
<td>National Blood Transfusion Committee</td>
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<td>NCABT</td>
<td>National Comparative Audit of Blood Transfusion</td>
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<td>National Institute for Health and Clinical Excellence</td>
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<td>Non Medical Authorisation</td>
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<td>PBM</td>
<td>Patient Blood Management</td>
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<td>Red cell units with the blood group Ro</td>
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<tr>
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