

### SHOT Recommendations of the Year

Target	Recommendation	Compliance	Notes/Action
<p><b>NBTC, General Medical Council (GMC), Postgraduate Medical Education and Training Board (PMETB), Royal Colleges, Deaneries</b></p>	<p><b>Transfusion medicine must be part of the core curriculum for doctors in training.</b> This could be delivered as a 2-stage process: a basic level of working knowledge should be mandatory for FY1 and FY2 doctors, and a higher level for specialist trainees in all clinical hospital disciplines. Progression to the next stage of a hospital career would require this to be signed off as completed.</p>		
<p><b>NBTC, National Transfusion Laboratory Collaborative (NTLC), British Blood Transfusion Society (BBTS), Institute of Biomedical Scientists (IBMS), Hospital Trust Chief Executives Officers (CEOs)</b></p>	<p><b>Professional, accredited staff must take responsibility for transfusion safety in the laboratory and in clinical practice.</b> Trusts must ensure that the skill mix of staff is appropriate, so that specialised transfusion personnel are available at all times. Transfusion practitioners and biomedical scientists (BMS) should be encouraged to obtain qualifications in transfusion medicine and this should be facilitated by employers</p>		
<p><b>NBTC, NHS Blood and Transplant (NHSBT) Appropriate Use of Blood Group, BCSH, Royal Colleges of Midwives, Obstetricians and Gynaecologists, General Practitioners (GPs), HTC's and HTT's.</b></p>	<p><b>Obstetricians and midwives must be familiar with the national guidance for routine antenatal anti-D prophylaxis and the rationale behind it.</b> National guidance regarding all anti-D prophylaxis should be standardised. There is a need for clear and unambiguous advice to ensure that all hospitals are able to develop local guidelines which reflect national consensus.</p>		
<p><b>DH, MHRA, SHOT, Hospital Trust CEOs, Hospital Transfusion Committees (HTCs), Hospital Transfusion Teams (HTTs), UK BTS</b></p>	<p><b>Participation in Haemovigilance must be improved as it is mandatory in the UK and the rest of Europe.</b> Figures from both SHOT and MHRA show that a substantial number of hospitals, including some high users, are not sending reports. This is in breach of European and UK legislation. Trusts with difficulties in meeting this requirement should seek assistance from the UK haemovigilance bodies, the DH, or the Blood Transfusion Services (BTS)</p>		

**CMO's National Blood Transfusion Committee & counterparts in Scotland, Wales and N. Ireland  
Royal Colleges and Professional Bodies**

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<p><b>NBTC, NHS Blood and Transplants (NHSBT) Appropriate Use of Blood Group, BCSH, Royal Colleges of Midwives, Obstetricians and Gynaecologists, General Practitioners (GPs), HTC's and HTT's</b></p>	<p>Obstetricians and midwives must be familiar with the national guidance for routine antenatal anti-D prophylaxis and the rationale behind it. National guidance regarding all anti-D prophylaxis should be standardised. There is a need for clear and unambiguous advice to ensure that all hospitals are able to develop local guidelines which reflect national consensus.</p>		
<p><b>Hospital Trusts, Medical Schools, Deanery, NBTC, Royal Colleges, Speciality Training Committees, GMC, PMETB</b></p>	<p>The importance of irradiation, and the rationale behind it should be focused on during teaching of junior haematology and oncology doctors. This education is part of the curriculum for Specialist Trainees, but foundation year doctors in these specialities may remain ignorant despite being frequently called upon to order components.</p>		
<p><b>Hospital Trusts, Hospital Liaison networks, BBT network, SHOT, Transfusion Practitioner network, BCSH</b></p>	<p>Systems should be put in place for pharmacy to inform the hospital transfusion laboratory of prescriptions for purine analogues. Such systems work well in some Trusts and best practice can be shared.</p>		
<p><b>SHOT, MHRA, DH</b></p>	<p>Participation in SHOT and MHRA reporting should be scrutinised carefully, as there is evidence from both databases that reporting is patchy, with some Trusts that are high component users still not reporting. Reporting rates in the UK are still relatively low compared with some comparable countries, and the different reporting patterns may be rewarding to study.</p>		

**Recommendations from the 2007 Serious Hazards of Transfusion Annual Report**

<p><b>NBTC, Royal Colleges, Specialist Training Committees, GMC</b></p>	<p>Education of doctors and nurses involved in transfusion must continue beyond basic training and competency to a level where the reasoning and rationale behind protocols and practices is understood. Transfusion medicine needs to be a mandatory part of the curriculum to achieve CCST in all hospital specialties, and should be incorporated into the nursing and midwifery curriculum.</p>		
<p><b>Hospital Trusts CEOs, HTCs and HTTs, NPSA, NBTC, Royal Colleges, Specialist Training Committees</b></p>	<p>Only staff who are qualified to make a decision to transfuse, to prescribe, and to administer and monitor transfusions should be performing these tasks</p>		
<p><b>GMC, Medical Professional's insurance schemes, e.g. the Medical Defence Union (MDU) and Medical Protection Scheme (MPS), Nursing and Midwifery Council (NMC), IBMS</b></p>	<p>Staff involved in blood component issue and administration must be aware of their professional accountability and responsibility, and should not carry out tasks unless they consider themselves competent to do so. Effective and comprehensive handover between different staff shifts or teams is part of this professional responsibility</p>		

**Trust CEO's, Consultant Haematologists & Hospital Transfusion Committees / Teams**

Target	Recommendation	Compliance	Notes/Action
<b>HTT and clinical users of blood</b>	Prescribing for paediatric patients should be carried out only by those with appropriate knowledge and expertise in calculating dosage and administration rates for this group		
<b>HTT and clinical users of blood</b>	Special requirements are more common in paediatric patients, because of the range of congenital and malignant conditions for which they may be hospitalised, and particular care is needed to ensure that documentation, handover and communication is effective and comprehensive		
<b>HTT, hospital transfusion laboratories and consultant haematologists with responsibility for transfusion</b>	Laboratory BMSs must be aware of special component requirements in patients under 16, and routine checking for additional flags should be carried out based on the date of birth		
<b>HTTs / nurses / BMS's</b>	Staff involved in transfusion should remain vigilant for visual signs of bacterial contamination of red cell and platelet units. However, bacterial contamination is possible even in the absence of visible features, so staff should remain vigilant for any adverse reactions post transfusion.		
<b>HTCs, HTTs, Consultant haematologists with responsibility for transfusion</b>	Prothrombin complex concentrate (PCC), rather than FFP, is the product of choice for the reversal of oral anticoagulation (warfarin) in patients with major bleeding. In the absence of major bleeding, PCC (or FFP if PCC is not available) could be used for warfarin reversal for emergency surgery		

**Recommendations from the 2007 Serious Hazards of Transfusion Annual Report**

<p><b>Trust CEOs, HTC, HTTs</b></p>	<p>Hospitals should have a policy that ensures that serious adverse reactions to transfusions are recognised and reported. This is a legal requirement under the terms of the BSQR</p>		
<p><b>Trust CEOs, consultant haematologists with responsibility for transfusion, HTC, HTTs</b></p>	<p>There should be clinical follow-up and retesting in 6 months of patients in whom anti-D administration has been delayed or omitted. The outcome should be reported to SHOT as well as internally within the Trust</p>		
<p><b>Trust CEOs, consultant haematologists with responsibility for transfusion, HTC, HTTs</b></p>	<p>Trusts should comply with the requirement in Better Blood Transfusion 3. 'Ensure the use of anti-D immunoglobulin follows the same rigorous patient identification, recording and traceability requirements as all other blood products and components.'</p>		
<p><b>Trust CEOs, consultant haematologists with responsibility for transfusion, HTC, HTTs</b></p>	<p>D-typing should be performed by the routine methodology available in the blood bank, not by emergency techniques which may not be as robust</p>		
<p><b>Trust CEOs, HTC, HTTs</b></p>	<p>Laboratories must develop a robust quality system in line with the Blood Safety and Quality Regulations. This should include:</p> <ul style="list-style-type: none"> <li>○ Task-based training and competency assessment for all staff in the transfusion laboratory</li> <li>○ A robust quality incident reporting system which encompasses root cause analysis and CAPA</li> <li>○ Documented change control</li> <li>○ Defined communication systems for staff at handover periods and following implementation of change.</li> </ul>		

## Hospital Laboratory IT Systems

Target	Recommendation	Compliance	Notes/Action
<p><b>Trust CEOs, Hospital Laboratories</b></p>	<p>Frequent reconciliation of multiple computer records on the same patient is important for safe practice (a clear historical trail of all amendments to the records must be maintained to comply with BSQR). This should be a routine laboratory process that can be performed by appropriately trained and competency-assessed staff.</p> <p>The problem of multiple hospital numbers and case records could be reduced by routine use of the unique NHS Number as a primary patient identifier in line with the recommendation from the NPSA SPN 24. However, this change must be carefully managed because not all current LIMS can use the NHS number as a primary identifier and there is the potential to lose access to historical records with unintended adverse consequences.</p> <p>When laboratory IT systems are 'off-line', non-essential transfusions should be avoided. Robust manual back-up procedures and recovery plans must be in place and tested.</p> <p>Laboratory IT systems should be designed to ensure that 'warning flags' are prominently displayed, preferably on the opening screen. Where appropriate (e.g. criteria for electronic selection) it should not be possible to override or bypass flags.</p> <p>Staff must be trained in appropriate search strategies to ensure that all relevant records are accessed. Work is required to develop appropriate and effective search strategies, perhaps co-ordinately by the BCSH Transfusion Task Force.</p> <p>Transfusion laboratories should have direct access to the hospital Patient Administration System (PAS) and the ability to review haematology results online (ideally on the same screen).</p>		

Recommendations from the 2007 Serious Hazards of Transfusion Annual Report

When new laboratory IT systems are installed, patient data from the old system should be transferred to the new system. Wherever possible this should be done electronically to avoid transcription errors (see SHOT Annual Report 2005).

Most failures to consult the historical record or the use of inappropriate search strategies were made during normal working hours by BMSs who work regularly in the transfusion laboratory. This problem is clearly not confined to 'on call' or rotating staff. Laboratories must ensure that all staff (including locums) using the IT systems have appropriate training, updates and documents competency assessment.

The increasing use of routine computer alerts from pharmacies to transfusion laboratories has great potential to ensure that appropriate patients receive irradiated components. However, these systems must be robust, comprehensive and timely.

As noted in previous SHOT Annual Reports, the development of IT links between transfusion laboratories, or access to an electronic patient record (EPR) containing accurate and up-to-date transfusion data, would significantly reduce the number of IBCT due to failure to meet special requirements. This would also impact on delayed haemolytic transfusion reactions caused by blood group alloantibodies that have fallen to undetectable levels. The UK Connecting for Health project has the potential to meet these needs but the question of how and when transfusion data are entered on the EPR must be resolved.

All laboratories using electronic selection to issue red cells must ensure that their operating procedures are consistent with national guidelines and followed by laboratory staff. The computer algorithms in use must prevent issue outside the guidelines.

**Recommendations from the 2007 Serious Hazards of Transfusion Annual Report**

	<p>IT systems to support transfusion safety, monitoring and traceability outside the laboratory (e.g. blood-tracking systems and beside ID systems) should integrate with laboratory systems and processes. Laboratory staff should understand the working of these systems and be able to provide support and advice to clinical areas on a 24/7 basis. All clinical staff using these systems must be trained and competency-assessed. This is crucially important in clinical areas, such as operating theatres and delivery suites, where rapid access to emergency blood stocks is essential</p>		
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