Recommendations from the 2010 SHOT Report

SERIOUS HAZARDS OF TRANSFUSION SHOT

Main Recommendations

Action	Recommendation	Compliance
NBTC, Trust/hospital chief executive officers (CEOs)	There should be a review of the practical aspects of the implementation of NPSA SPN 14 and other national transfusion competency initiatives with a view to new guidance being issued and that Trusts should ensure that individual transfusion practitioners are fully supported with the allocation of additional link nurses in the escalation of training and assessment.	
BCSH, Transfusion Taskforce	The existing British Committee for Standards in Haematology (BCSH) guidelines for the Administration of Blood Components should be supplemented by an amendment dealing with measures to avoid the development of TACO and over-transfusion, particularly in vulnerable patients, including pre-transfusion clinical assessment, rate of transfusion, fluid balance, regular monitoring of Hb and prescription of diuretics.	
NHSBT	There should be a systematic review of the application of weight-related empirical formulae or algorithms in prescribing for low body weight adults	
Education Working Groups of national transfusion committees	Transfusion medicine must be part of the core curriculum for doctors in training.	
Trusts/hospitals	To avoid inappropriate and unnecessary transfusions due to lack of adequate clinical handover, decisions made concerning the need for transfusion support should be documented in the clinical handover templates.	
Hospital transfusion teams (HTT)s	All under- and delayed transfusions that have a significant impact on patient outcomes should be reported to SHOT.	
SHOT team	The Dendrite database should be enhanced to fully capture the salient clinical features and details of the timeliness of blood component support.	
Trusts/hospitals	Trusts should implement the recommendations of the UK Transfusion Laboratory Collaborative	
Manufacturers of laboratory IT systems	Work should continue with suppliers of LIMS to improve the capability of IT systems to generate warning flags and implement component selection algorithms based on data incorporated in the component label. These improvements should be in line with the recommendations of the BCSH guidelines on laboratory IT systems currently in preparation.	

Chapter recommendations

Action	Recommendation	Compliance
Transfusion laboratories, HTTs, hospital transfusion committees (HTCs)	Robust communication procedures are required both within the laboratory and to cover the laboratory/clinical interface.	
Transfusion laboratories, HTTs, HTCs	Easily interpreted flowcharts should be considered to clarify existing policies and procedures	
Transfusion laboratories, pathology managers, clinical risk committees	Successive SHOT reports have demonstrated that the majority of ABO/D grouping errors are incurred with manual procedures. The UKTLC has therefore recommended the use of 24/7 automation. In the event that resources cannot be made in the short term to fund this development, a risk assessment must be conducted with clear mitigation strategies.	
Lead BMS for hospital transfusion laboratories, transfusion laboratory managers	Transcription errors in entering semi-automated or manually performed cord blood grouping results into the LIMS can result in unnecessary administration or failure to administer postnatal anti-D Ig. Wherever possible, test results should be transferred electronically into the LIMS. Otherwise, there should be robust independent checking procedures in place to review and confirm manually transcribed data	
Leads/directors of pathology	Every Trust/hospital must ensure compliance with CPA standards when giving telephoned results, in obtaining confirmation of the correct transmission	
HTCs	Every Trust must review its major haemorrhage protocol to ensure that it meets the recommendations of the NPSA Rapid Response Report ’The transfusion of blood and blood components in an emergency’ NPSA/2010/017	
HTCs, clinical governance committees	All nurses and midwives making the clinical decision and providing the written instruction for blood component transfusion must operate within a governance framework ratified by the Trust and be aware of their professional accountability.	

Clinical governance committees	Handover information must include the decisions that have been taken with respect to transfusion support and the laboratory tests that have been requested	
Royal College of Midwives, Royal College of Obstetricians and Gynaecologists, Royal College of General Practitioners	All healthcare professionals involved in the issue and administration of anti-D Ig must complete the anti-D modules in the Learn Blood Transfusion e-learning programme.	
HTCs	If there is any doubt as to the true RhD status of a patient, or whether anti-D detected in an antibody screen is of immune or prophylactic origin, and these questions cannot be quickly resolved, then prophylactic anti-D Ig should be administered rather than place the patient at risk by withholding it.	
HTCs	Transfusions should only be performed where there are facilities to recognise and treat anaphylaxis, according to UK Resuscitation Council (UKRC) guidelines. In supplying to community hospitals or for home transfusions, providers must ensure that staff caring for patients have the competency and facilites to deal with this adverse reaction	
HTCs	Clinicians looking after patients with sickle cell disease should be aware that symptoms of a sickle cell crisis occurring up to 14 days post transfusion could be due to a DHTR, and should send samples for serological investigation	
HTCs	Clinicians should be aware of the existence of hyperhaemolysis in sickle cell disease in which the Hb drops to levels lower than pre transfusion. Urine Hb HPLC can be useful to demonstrate the presence of both HbS and HbA and advice on the use of IVIg and/or steroids should be sought from a specialist unit or the Blood Service.	
UK Blood Services	Robust systems must be put in place to prevent issue of female FFP or platelet pools suspended in female donor plasma	
UK Blood Services	A risk assessment should be conducted of screening existing female platelet apheresis donors for HLA and granulocyte antibodies, and for retesting for these antibodies after subsequent pregnancies	

HTTs	Transfusion-related respiratory events that occur later than the accepted 6-hour definition for TRALI should be reported to SHOT in another category (e.g. TAD).	
BCSH	National guidelines are required on clinical assessment pre transfusion, which should include taking into account concomitant medical conditions that increase the risk of TACO (cardiac failure, renal impairment, hypoalbuminaemia, fluid overload) and measures to reduce the risk of TACO	
BCSH	The rate of transfusion also merits review, particularly in patients >70 years and those with concomitant factors that increase the risk of TACO	
HTTs	Assessment of all cases of respiratory distress associated with transfusion should include assessment of oxygen saturation/arterial blood gases and CXR appearances.	
HTTs	In cases of suspected ATR where the predominant feature is respiratory distress, the case should be reported to SHOT as a pulmonary complication of transfusion (e.g. TAD).	
HTCs	Clinicians are encouraged to contact Blood Services if they suspect PTP	
Hospital microbiology laboratories	Attention should be paid to the sampling and storage of implicated units or their residues to avoid sampling or environmental contamination of the pack	
HTTs, clinicians	Even if TTI is excluded in a case of ATR, the case should still be reported to SHOT as an ATR	
Clinicians, UK Blood Services	Clinicians investigating suspected viral TTIs should explore all possible risk exposures in parallel with the Blood Service investigations, in order to determine the patient's most likely source of infection. This includes checking records and testing samples taken prior to the implicated transfusion(s) to check that the recipient was not infected prior to transfusion.	
Cell salvage practitioners, blood conservation coordinators, HTCs	All ICS- and PCS-related adverse events and reactions should be reported to SHOT	

RTCs, HCTs, HTTs, Pharmacists	The 2009 SHOT recommendation on the need for local consideration of the design of prescription charts to facilitate the correct prescription of blood component volumes and rates for children is re-emphasised this year following ongoing SHOT reports in 2010 and the results of the 2010 NCA demonstrating frequent prescription of red cells for children in units as opposed to millilitres	
HTTs, hospital transfusion laboratories, consultant haematologists with responsibility for transfusion	Laboratory staff competency on the issues surrounding neonatal and infant pre-transfusion compatibility testing should be targeted during training, particularly given the relatively low frequency of paediatric work in many laboratories. The revised BCSH guidelines on compatibility testing will clarify the requirements for neonates	
Deaneries, clinical risk managers, HTTs	All Trusts must ensure that medical staff are trained and competency assessed for taking blood samples in accordance with the requirements of NPSA SPN 14	
HTTs	Education for staff involved in the transfusion process should include knowledge of the correct storage conditions for all blood components.	
HTCs	Each Trust should possess a policy and procedure for the transfer of blood components with a patient which reflects the guidance given by the NBTC and the NHSBT Appropriate Use of Blood Group.	