Annual SHOT Report 2012 – Supplementary Information

Chapter 9: Incorrect Blood Component Transfused (IBCT)

Additional Tables – not included in the main 2012 report

Chapter 9: 1.2

Table 1: Trends in laboratory based ABO grouping errors with causes

Year	ABO Errors	Causes of ABO grouping errors			Outcomes of ABO grouping errors	
		Wrong Sample Tested	Interpretation /Transcription Errors	Other	ABO-Incompatible Red Cell Transfusions	Sequelae
2012	6	1	4	1	0	No morbidity
2011	8	1	6	1	3	1 rigors
2010	3	1	1	1	1	No morbidity
2009	7	2	5	0	2	1 AHTR
2008	8	3	5	0	4	1 AHTR
2007	7	3	4	0	1	No morbidity
2006	6	2	3	1	0	No morbidity
2005	22	9	12	1	3	1 AHTR
2004	18	5	12	1	6	1 death 1 major morbidity
2003	17	8	9	0	6	2 major morbidity

AHTR = acute haemolytic transfusion reaction

Table 2: Trends in laboratory based RhD grouping errors with causes

Year	Total RhD grouping Errors	Causes of RhD grouping errors			Outcomes of RhD grouping errors	
		Wrong Sample Tested	Interpretation /Transcription Errors	Other	Transfusion of RhD positive to RhD negative individual	Sequelae
2012	9	0	2	7 All component selection errors	9	No morbidity
2011	13	1	10 (1 weak D)	1 testing error 1 old error not investigated	6	An 11 yr old female produced anti-D 3 other patients produced anti-D but were not of child bearing potential
2010	11	0	11 (3 weak D)	0	2	1 patient produced anti-D but was not of child bearing potential
2009	5	1	4	0	2	No morbidity
2008	11	0	11	0	10	3 patients produced anti-D but none were of child bearing potential
2007	4	1	3	0	3 (One 33 year old female)	No morbidity

Incorrect Blood Component Transfused (IBCT) - Previous Recommendations

Year first made	Action	Recommendation
2011	**Everyone**	Every person involved in the transfusion process must perform rigorous identity checks at each point and ensure that the component collected is the one prescribed
2011	**Trust/Hospital/Health Board CEOs, Transfusion Laboratory Managers, Accident and Emergency Medicine and Trauma departments**	Emergency numbering systems must be robust, and particularly in an emergency all patients must have wristbands issued with a unique ID. Emergency numbers should be ideally random numbers rather than sequential ones, and as much identification information as possible should be included e.g. sex, approximate age, and time of admission
2011	**Hospital Transfusion Team (HTT)**	Patients who require irradiated and other special products should be provided with an appropriate card as recommended by the British Committee for Standards in Haematology (BCSH)
2011	**HTTs, Consultant haematologists**	Patients with cards noting special requirements should be educated about their meaning and importance, in particular always to show these to clinical staff on admission to any hospital. Haematologists are advised to confirm that there has been appropriate handover of information and to audit this process
2011	**Hospital Transfusion Team (HTT)**	Suspected transfusion-transmitted cytomegalovirus (CMV) infection should continue to be reported to SHOT and the Medicines and Healthcare products Regulatory Agency (MHRA)
2011	**Hospital Transfusion Team (HTT)**	Patients with Sickle Cell Disease should be identified to the transfusion laboratory whenever admitted to hospital
2011	**Hospital Transfusion Team (HTT)**	All patients with irregular antibodies should be issued with antibody cards, and be educated about their importance. General practitioners can also note important transfusion requirements, and include these in any referral to hospital whether emergency or elective

2010	**Transfusion laboratories, HTTs, hospital transfusion committees (HTCs)**	Robust communication procedures are required both within the laboratory and to cover the laboratory/clinical interface.
2010	**Transfusion laboratories, HTTs, HTCs**	Easily interpreted flowcharts should be considered to clarify existing policies and procedures
2010	**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.
2009	**NBTC and counterparts in Scotland, Wales and Northern Ireland**	A transfusion checklist should be developed, perhaps with an accompanying transfusion record section, in a similar style to the WHO surgical checklist. This is a proven aid to patient safety and could prevent omission of critical steps in the process.
2009	**NBTCs, NEQAS, SHOT**	All point of care testing devices for Hb estimation must be fully validated and internal quality control and participation in external quality assurance schemes must be ensured. Currently this is not the case for calculated Hb estimates from blood gas analysers. A study to evaluate the utility of these devices for Hb measurement should be undertaken and guidance and recommendations issued.
2009	**CEOs, HTCs and HTTs**	All staff must take full professional responsibility for their part in the transfusion process. Personnel involved at the point of component administration must understand that this is the final opportunity to check for errors earlier in the chain, and the sole remaining opportunity to be certain of the recipient's identity
2009	**CEOs, HTCs**	The existence, and the importance, of special transfusion requirements must be taught to junior doctors in all hospital specialities. Local mechanisms for ordering and prescribing components need to facilitate correct ordering, and remind clinical and laboratory personnel where possible.
2009	**HTCs, HTTs**	Hospitals must ensure that they have protocols and documentation systems for; • Transportation of blood components accompanying patients transferring to other sites • Administration to patients who may be permitted to receive blood components at home. • Ongoing information transfer between hospitals when patients have shared care at two or more sites.
2009	**HTTs**	Many hopes of error reduction have been pinned on extending automation and IT. An emerging theme from this year's report is that frequently it is still up to well trained staff, with underpinning knowledge, to interpret and heed warnings and flags and, unless appropriate actions are taken, errors will continue to occur.

2009	**Manufacturers of blood grouping equipment, IT working group of the NBTC**	There is a requirement for manufacturers to provide affordable, secure automation for smaller laboratories that bridges the gap between manual methods and large 'walk away' analysers.
2009	**HTTs**	The number of errors in the Special Requirements Not Met (SRNM) category has remained high for a number of years. Laboratories must make a concerted effort to tackle this problem. This should be done at a local level as there will be different root causes in different Trusts.
2009	**UK Blood Services**	Blood services should review the packaging of components that look similar, to assess whether they could be more easily identified, particularly when those components are often used in emergency situations.
2009	**HTTs, Manufacturers of blood grouping equipment, IT working group of the NBTC**	The IT system should be configured to flag a component discrepancy between that ordered and that issued, and this should be fully validated. If this is not possible locally then these development requirements must be raised with the LIMS suppliers.
2008	**Clinical risk managers, HTTs**	Competency-assessment of staff involved in the transfusion process must be relevant to the person's core role and knowledge requirements. This must be carried out in accordance with NPSA SPN 14.
2008	**Clinical risk managers, HTTs**	All staff must be trained (and competency-assessed) in recognising the different blood components and their labels.
2008	**Transfusion laboratory managers**	Laboratory procedures should be validated in line with the BSQR and should be revisited following an error as part of Corrective and Preventative Actions.
2008	**Transfusion laboratory managers**	Competency-assessment in laboratories must be linked to process. BMS staff must be competent in performing the test but must also have a thorough understanding of the context in which the test is being performed, i.e. the test in relation to a specific patient and the clinical information. Basing competency-assessment on National Occupational Standards (NOSs) will enable this, as NOSs have both 'Performance' criteria and 'Knowledge and Understanding' criteria.
2008	**CEOs, Pathology managers**	The UK Transfusion Laboratory Collaborative has recommended minimum standards for hospital transfusion laboratories in terms of staffing, technology, training and competence. This document has been widely disseminated and should form the basis for future laboratory planning.

2008	**NBTC, RTCs**	Shared care discharge notification, giving tick-box options for special requirements, with reasons, should be completed by the referring clinicians and forwarded to the receiving hospital through the laboratory network.
2007	**NBTC, Royal Colleges, GMC**	Education of doctors and nurses involved in transfusion must continue beyond basic competency to a level where the rationale behind protocols and practices is understood. Transfusion medicine needs to be a core part of the curriculum.
2007	**GMC, NMC, IBMS, professional insurance schemes**	Staff involved in blood component transfusion must be aware of their professional accountability and responsibility.