

Annual SHOT Report 2014 – Supplementary Information

Chapter 9: Incorrect Blood Component Transfused (IBCT)

DATA SUMMARY – IBCT-WCT							
Total number of cases: n=76							
Implicated components			Mortality/morbidity				
Red cells		51	Deaths <i>definitely</i> due to transfusion		0		
Fresh Frozen Plasma		8	Deaths <i>probably/likely</i> due to transfusion		0		
Platelets		12	Deaths <i>possibly</i> due to transfusion		0		
Cryoprecipitate		0	Major morbidity		1		
Granulocytes		0	Potential for major morbidity (<i>Anti-D or K only</i>)		4		
Anti-D Ig		0					
Multiple components		5					
Unknown		0					
Gender	Age		Emergency vs. routine and core hours vs. out of core hours		Where transfusion took place		
Male	45	≥ 18 years	64	Emergency	16	Emergency Department	4
Female	30	16 years to <18 years	0	Urgent	19	Theatre	5
Not known	1	1 year to <16 years	4	Routine	35	ITU/NNU/HDU/Recovery	11
		>28 days to <1 year	0	Not known	6	Wards	40
		Birth to ≤28 days	8	In core hours	39	Delivery Ward	0
		Not known	0	Out of core hours	15	Postnatal	0
				Not known/Not applicable	22	Medical Assessment Unit	2
						Community	1
						Outpatient/day unit	6
						Hospice	0
						Antenatal Clinic	0
						Obstetrics	0
						Other/Unknown	7

(ITU=Intensive therapy unit; NNU=Neonatal unit; HDU=High dependency unit)

DATA SUMMARY – IBCT-SRNM
Total number of cases: n=202

Implicated components		Mortality/morbidity	
Red cells	160	Deaths <i>definitely</i> due to transfusion	0
Fresh Frozen Plasma	7	Deaths <i>probably/likely</i> due to transfusion	0
Platelets	20	Deaths <i>possibly</i> due to transfusion	0
Cryoprecipitate	0	Major morbidity	3
Granulocytes	1	Potential for major morbidity (<i>Anti-D or K only</i>)	3
Anti-D Ig	0		
Multiple components	11		
Unknown	3		
Gender	Age	Emergency vs. routine and core hours vs. out of core hours	Where transfusion took place
Male 101	≥ 18 years 185	Emergency 15	Emergency Department 5
Female 98	16 years to <18 years 3	Urgent 36	Theatre 13
Not known 3	1 year to <16 years 9	Routine 131	ITU/NNU/HDU/Recovery 17
	>28 days to <1 year 2	Not known 20	Wards 114
	Birth to ≤28 days 3	In core hours 89	Delivery Ward 2
	Not known 0	Out of core hours 29	Postnatal 2
		Not known/Not applicable 84	Medical Assessment Unit 8
			Community 1
			Outpatient/day unit 18
			Hospice 1
			Antenatal Clinic 0
			Obstetrics 0
			Other/Unknown 21

(ITU=Intensive therapy unit; NNU=Neonatal unit; HDU=High dependency unit)

Incorrect Blood Component Transfused (IBCT) - Previous Recommendations

Year first made	Action	Recommendation
2013	Hospital Transfusion Teams	The majority of episodes resulting in an incorrect component transfusion result from multiple errors in the multidisciplinary transfusion process. All professional staff participating in transfusion must perform independent and careful checks. A simple 5-point aide memoire at the final step would remind staff to check for the correct patient identifiers, and the prescription for the correct component and confirmation of specific requirements
2012	Hospital Transfusion Teams, Royal College of Nursing, Royal College of Midwifery, General Medical Council (for all medical curricula)	It is essential that medical and nursing staff are educated to recognise and act on transfusion reactions as this might be the first sign of ABO incompatibility or anaphylaxis where prompt management may be lifesaving
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	<p>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.</p> <p>Haematologists are advised to confirm that there has been appropriate handover of information and to audit this process</p>
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, HTC 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; <ul style="list-style-type: none"> • 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.