Annual SHOT Report 2014 – Supplementary information

Chapter 12: Summary of Errors Related to Information Technology (IT)

Error	Reports	Right blood component	Wrong blood component	Component transfused when special requirements not met					Wrong group after HSCT	HSE	ADU
				Irradiated	CMV	VIP	Phenotyped	HLA matched			
Failure to consult or identify historical record	**36**	12		9	1		12		1	1	
Failure to link, merge or reconcile computer records	**14**	2		7			4				1
Wrong record selected on LIMS or PAS	**1**	1									
Warning flag in place but not heeded	**21**	2	3	5	1		2		6		2
Warning flag not updated or removed in error	**22**	3	1	6		2	4	1	5		
Failure to use flags and/or logic rules	**65**	1		55	4		4			1	
Computer or other IT systems failure	**5**	3									2
Errors related to computer system	**4**	1		1		2					
Errors related to electronic blood management system	**14**	1*	1							12	
Other equipment failure	**7**	3								2	2
Incorrect result or data entered or accessed manually	**37**	27	4					1			5
Discrepancy between LIMS and PAS	**8**	7									1
Blood issued against wrong patient ID (sample or request form)	**1**	1									
Electronic blood ordering/OBOS	**1**		1								
Total	**236**	**64**	**10**	**83**	**6**	**4**	**26**	**2**	**12**	**16**	**13**

**This report contained 273 RBRP incidents*

Errors Related to Information Technology (IT) - Previous Recommendations

Year first made	Action	Recommendation
2012	**Hospital Transfusion Laboratory Managers; Pathology Managers**	Hospital transfusion laboratories should be encouraged to participate in the national electronic access scheme for blood group and antibody information which is being developed by National Health Service Blood & Transplant (NHSBT) (called Sp-ICE), and equivalent systems in Wales, Scotland and Northern Ireland for patients with complex transfusion requirements, and as recommended by National Patient Safety Agency (NPSA) safer practice notice, to use the NHS or number
2011	**These recommendations will be included in the revised British Committee for Standards in Haematology (BCSH) IT Guidelines for Hospital Transfusion Laboratories**	Any future specification written for a laboratory information management systems (LIMS) must state that: - A direct check is required, within the LIMS, to ensure that the component selected meets the special requirement on record - If warning flags/alerts are overridden, which they may need to be in a clinical emergency, a positive response as to why they are being overridden must be entered. It should not be possible to simply 'escape' past a warning/alert - Warnings/alerts must be clear and appear on all relevant screens within the LIMS - Where possible all critical processes in the transfusion laboratory should be identified and, if possible, should be under the control of the Laboratory Information Management System - When new information technology (IT) systems are implemented, and existing systems upgraded, they should be validated using a wide range of scenarios to ensure they are working as intended
2011	**Transfusion Laboratory Managers, Pathology IT managers, LIMS Providers**	Where possible all critical processes in the transfusion laboratory should be under the control of the Laboratory Information Management System
2011	**Transfusion Laboratory Managers, Pathology IT managers, LIMS Providers**	When new IT systems are implemented, and existing systems upgraded, they should be validated using a wide range of scenarios to ensure they are working as intended
2010	**Lead BMS for hospital transfusion laboratories, transfusion laboratory managers**	The two key recommendations made in the 2009 SHOT report (namely the need to produce a post-transplant transfusion plan for each patient and to consult the patient's historical record on LIMS; see SHOT website) remain highly pertinent, especially in the light of increased reports of mis-selection of blood components of the appropriate group after allogeneic haemopoietic SCT and continuing failures to identify or heed historical records.

2010	**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
2009	**Lead BMS for hospital transfusion laboratories, transfusion laboratory managers**	Failure of laboratory staff to identify or heed the historical record on LIMS remains a significant cause of IBCT. There are a worrying number of cases reported to SHOT where laboratory staff are able to override a warning flag or a result on an automated analyser without clearly understanding the significance of their action or the potential for harm – a particular problem when blood is release by electronic issue. Lead BMSs for the transfusion laboratory, with appropriate support from senior management in the organisation, must ensure that all users of laboratory information management systems are trained and competency assessed before using laboratory IT systems or automated analysers.
2009	**Transplant teams, hospital transfusion laboratories, HTTs**	Selection of blood components of appropriate blood group after allogeneic stem cell transplantation can be complex. The recommendation is that transplant teams, in collaboration with the transfusion laboratory and/or transfusion centre, produce a post-transplant plan for each patient, ensure appropriate notes on the LIMS and the case record, and ensure that transfusion request forms indicate that the patient has had a transplant.
2008	**NBTC and equivalents in devolved administrations**	Standardisation of IT systems is required across the UK. A national minimum specification for hospital transfusion laboratory IT systems should be developed. This would then be used when working with individual suppliers of LIMS systems.
2008	**Trust CEOs, HTTs**	Chief Executive Officers of hospitals and Trusts must use the National Transfusion Laboratory Collaborative report as a basis for achieving the minimum standards recommended for staffing, skill mix, automation, training and competency in their hospital transfusion laboratories.
1998	**NBTC IT WG, NPSA/NBTC/SHOT initiative, CfH.**	IT as an aid to transfusion safety should be assessed and developed at national level.