Annual SHOT Report 2014 – Supplementary Information

Chapter 15: Haemolytic Transfusion Reaction (HTR)

DATA SUMMARY
Total number of cases: n=46

Implicated components	
Red cells	**45**
Fresh Frozen Plasma	**0**
Platelets	**0**
Cryoprecipitate	**0**
Granulocytes	**0**
Anti-D Ig	**0**
Multiple components	**0**
Unknown	**IVIg 1**

Mortality/morbidity	
Deaths *definitely* due to transfusion	**1**
Deaths *probably/likely* due to transfusion	**0**
Deaths *possibly* due to transfusion	**0**
Major morbidity	**5**
Potential for major morbidity *(Anti-D or K only)*	**0**

Gender	
Male	**14**
Female	**32**
Not known	**0**

Age	
≥ 18 years	**45**
16 years to <18 years	**0**
1 year to <16 years	**1**
>28 days to <1 year	**0**
Birth to ≤28 days	**0**
Not known	**0**

Emergency vs. routine and core hours vs. out of core hours	
Emergency	**6**
Urgent	**9**
Routine	**29**
Not known	**2**
In core hours	**28**
Out of core hours	**5**
Not known/Not applicable	**13**

Where transfusion took place	
Emergency Department	**5**
Theatre	**3**
ITU/NNU/HDU/Recovery	**5**
Wards	**19**
Delivery Ward	**0**
Postnatal	**0**
Medical Assessment Unit	**2**
Community	**0**
Outpatient/day unit	**5**
Hospice	**0**
Antenatal Clinic	**0**
Other	**7**
Unknown	**0**

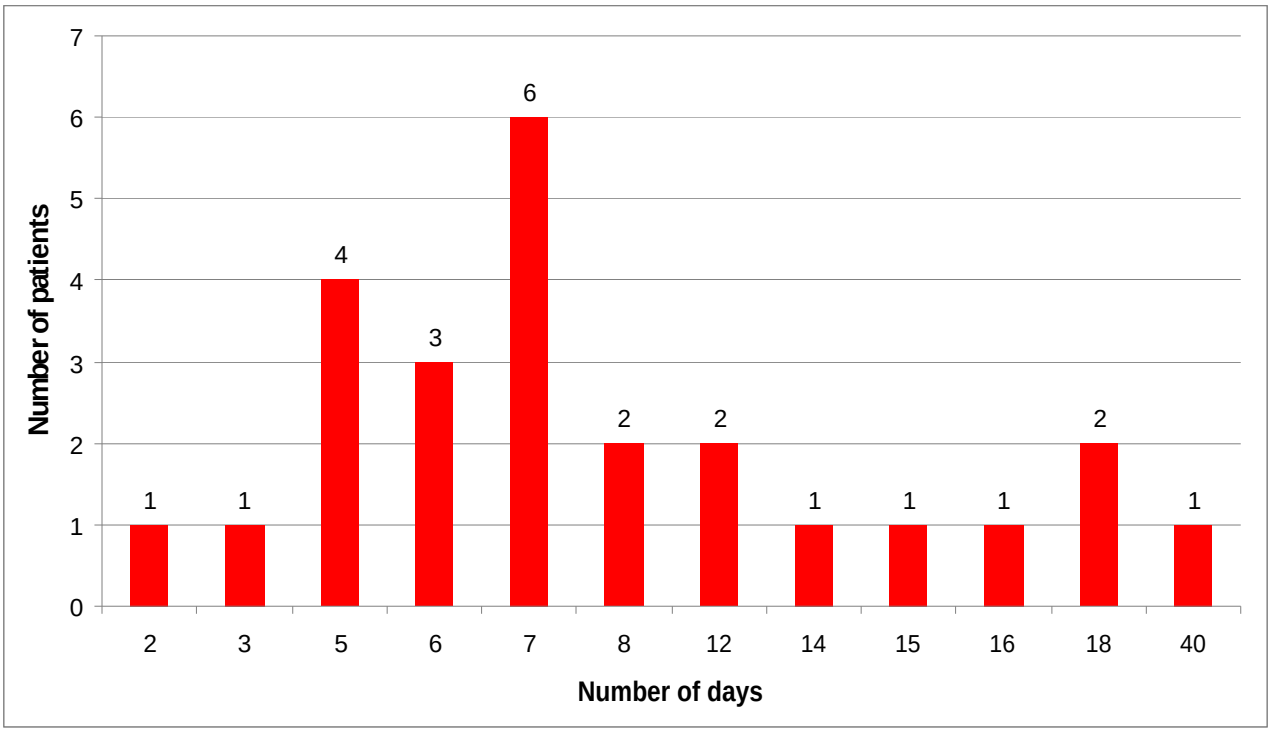
(ITU=Intensive therapy unit; NNU=Neonatal unit; HDU=High dependency unit)

Additional table and figure – not included in the main 2014 report

Table 15.1: Delayed – specificity of antibody

Antibody specificity by blood group system and antigen		Number of cases	Number of cases where this was the sole new antibody
Kidd			
	Jk^a	7	5
	Jk^b	6	3
Rh			
	E	6	2
	c	3	1
	C	2	
Fy			
	Fy^a	3	
	Fy^b	2	1
Kell			
	K	2	
	Kp^a	1	
MNS			
	M	2	
	S	2	1
	N	1	

Figure 15.1: Number of days between transfusion and detection of DHTR



Haemolytic Transfusion Reactions (HTR) - Previous Recommendations

Year first made	Action	Recommendation
2013	**Hospital Transfusion Laboratory Managers**	A clotted sample should be requested for investigation of suspected hamolytic transfusion reaction (HTR) to allow identification of weak complement binding antibodies, particularly anti-Jk^{a} and anti-Jk^{b}
2013	**Hospital Transfusion Laboratory Managers**	Hospital transfusion laboratories should actively seek an antibody history when a sickle cell patient requires transfusion, using the NHS Blood & Transplant (NHSBT) Sp-ICE system where available (Specialist Services Electronic Reporting using Sunquest ICE)
2012	**Hospital Transfusion Laboratory Managers**	Hospital transfusion laboratories should ensure that an eluate is tested as part of the investigation of a haemolytic transfusion reaction; this may necessitate referring samples to a red cell reference laboratory
2011	**Hospital Transfusion Teams (HTTs)**	Plasma components should be considered as the potential cause of an acute haemolytic transfusion reaction (AHTR) even if the reaction occurs during a subsequent red cell transfusion
2011	**Hospital Transfusion Teams (HTTs)**	If platelets are thought to be the cause of an AHTR, this must be reported to the Blood Service for further investigation, whether or not they are labelled as high-titre negative
2010	**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
2010	**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.
2008	**Hospital blood transfusion laboratories**	Prior to transfusion, an antibody history and a transfusion history should be actively sought for previously unknown patients with sickle cell disease. This must include contacting the local blood service reference laboratory as well as any other hospitals the patient has attended.

2008	**UK Blood Services**	A national register of patients with antibodies, linked between the red cell reference laboratories, should be considered.
2005	**Hospital blood transfusion laboratories, Blood Service reference laboratories and the NBTC Transfusion Laboratory Managers Working Group**	All cases of suspected AHTR and DHTR should be appropriately investigated, and ideally referred to a reference laboratory. Referring hospitals should make it clear to reference laboratories that they are investigating an HTR to ensure that timely, appropriate tests are undertaken. Clinical details should be completed on the request forms and the donation numbers of the units transfused should be included, so that their phenotype can be determined.
2005	**Blood Service reference laboratories.**	Reference laboratories should ensure that investigation of DHTRs includes testing an eluate made from the patient's red cells when the DAT is positive.
2001/02	**The CMO's NBTC and its counterparts in Scotland, Wales, and Northern Ireland.**	Consideration should be given to issuing antibody cards or similar information to all patients with clinically significant red cell antibodies. These should be accompanied by patient information leaflets, explaining the significance of the antibody and impressing that the card should be shown in the event of a hospital admission or being crossmatched for surgery. Laboratories should be informed when patients carrying antibody cards are admitted.