7 Near Miss Reporting (NM)

Author: Alison Watt

Definition:

A 'near miss' event refers to any error which if undetected, could result in the determination of a wrong blood group or transfusion of an incorrect component, but was recognised before the transfusion took place.

DATA SUMMARY Total number of cases: n=996							
Implicated components		**Mortality/morbidity**					
Red cells	0	Deaths definitely due to transfusion	0				
Fresh frozen plasma (FFP)	0	Deaths probably/likely due to transfusion	0				
Platelets	0	Deaths possibly due to transfusion	0				
Cryoprecipitate	0	Major morbidity	0				
Granulocytes	0	Potential for major morbidity (Anti-D or K only)	0				
Anti-D Ig	0						
Multiple components	0						
Unknown	996						
Gender		**Age**		**Emergency vs. routine and core hours vs. out of core hours**		**Location of near miss event**	
Male	365	≥18 years	858	Emergency	0	Emergency Department	96
Female	579	16 years to <18 years	3	Urgent	0	Theatre	14
Not known	52	1 year to <16 years	21	Routine	0	ITU/NNU/HDU/Recovery	20
		>28 days to <1 year	11	Not known	996	Wards	403
		Birth to ≤28 days	42			Delivery Ward	0
		Not known	61	In core hours	568	Postnatal	0
				Out of core hours	143	Medical Assessment Unit	17
				Not known/Not applicable	285	Community	2
						Outpatient/day unit	37
						Hospice	1
						Antenatal Clinic	37
						Hospital Transfusion Laboratory	190
						Obstetrics	75
						Other/Unknown	104

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

Near misses n=996

The total of 996 near misses in 2013 is similar to the total of 980 reported in 2012. However, there is a continuing large increase in reports of 'wrong blood in tube' incidents (WBIT), which have risen to 64.6% (643/996) of all near misses in 2013 from 41.9% (386/921) in 2010 (Figure 7.1). There has been a corresponding marked reduction in reports of near miss incidents other than WBIT. It is not known whether this is a true reduction of incidents, or a disinclination to report near miss incidents, other than the most serious WBIT cases. Continued reporting of near misses is strongly encouraged, as important lessons can be learnt from such errors.

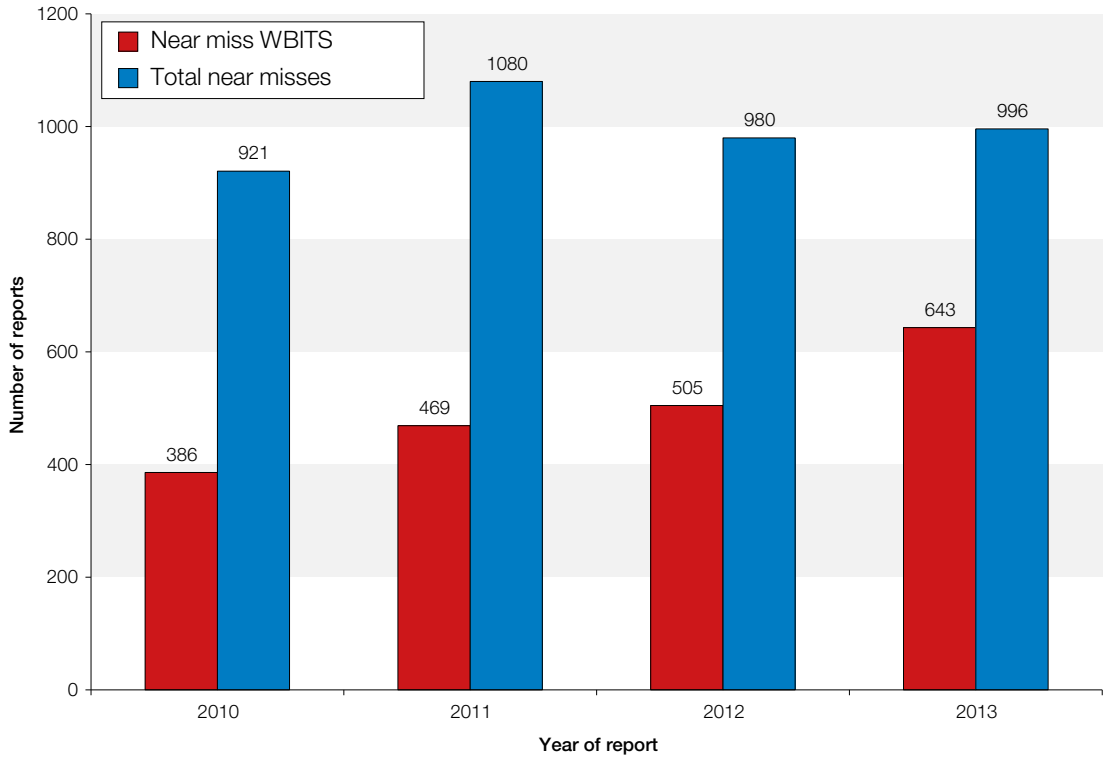

Figure 7.1: Increasing reports of near miss 'wrong blood in tube' cases compared to total near misses

Despite the increasing reports of WBIT incidents, it is likely that WBITs are still under-reported. A survey of the North East region of England in 2012 [20] showed 48 WBITs from a population of 2.6 million. The authors extrapolated that if figures are representative of the whole of the United Kingdom (UK), then over 1160 WBITs will occur each year nationwide.

Discussion of near miss errors in other chapters

In order to highlight the importance of continuing to report and learn from near miss incidents, discussions of these cases are incorporated into each relevant chapter according to the likely outcome if the near misses had progressed to full incidents and components had actually been transfused.

Categorisation of all near misses according to SHOT definitions		Discussed in	Number of cases	Percentage of cases
Incorrect blood component transfused (IBCT)	Wrong component transfused (WCT)	Chapter 8	715	71.8%
	Specific requirements not met (SRNM)	Chapter 8	72	7.2%
Right blood right patient (RBRP)		Chapter 12	97	9.8%
Handling and storage errors (HSE)		Chapter 13	62	6.2%
Anti-D immunoglobulin errors (Anti-D Ig)		Chapter 14	35	3.5%
Avoidable, delayed or undertransfusion (ADU)		Chapter 11	15	1.5%
Total			**996**	**100%**

Table 7.1: Categorisation of all near misses according to SHOT definitions

Importance of quality management systems

Good quality management systems (QMS) can detect many near miss incidents before the transfusion takes place, so a robust QMS is essential. The British Committee for Standards in Haematology (BCSH) guidelines for pre-transfusion compatibility procedures [19] state 'the transfusion laboratory must have an operational and documented Quality Management System, clearly defining the organisational structure, procedures, processes and resources necessary to meet the requirements of its users, to accepted standards of good practice.' The BCSH guidelines also include a key recommendation that 'the laboratory must identify all critical control points in pre-transfusion testing and build in security at these points.' The National Health Service (NHS) Operational Impact Group produced a specification

for a hospital transfusion laboratory QMS, which can be found in the Regulations and Implementation section of the JPAC website:
http://www.transfusionguidelines.org.uk/regulations/toolkit/mhra-process/qms-specification.

Learning point

- Quality management system (QMS) procedures should be robust and strict adherence should be promoted to ensure there is every opportunity to detect a potentially serious hazard before the transfusion actually takes place

Analysis of SHOT near miss cases shows that an error is often detected by accident, rather than by the QMS.

Case 1: Patient realises blood was not irradiated

The consultant haematologist had discussed the need for irradiated blood with the team caring for the patient and the patient himself. Non-irradiated blood was erroneously prescribed by the team and was collected for transfusion. The blood was not given, because the patient reminded staff that he needed irradiated blood.

Table 7.2: Near miss detected by quality management system or by accident (good luck)

Near miss detection	Number of cases	Percentage of cases
Error detected by quality management system (QMS)	253	25.4%
Detected by QMS, but good luck that ABO/RhD group differed	415	41.7%
Accidental detection, QMS would not have detected the error	321	32.2%
Unknown	7	0.7%
Total	**996**	**100%**

Further analysis of total near miss errors n=996

Table 7.3: Numbers of near misses originating in clinical or laboratory areas

Category of incidents	Number of cases	Percentage of cases
Clinical errors	742	74.5%
Laboratory errors	251	25.2%
Blood Establishment errors	3	0.3%
Total	**996**	**100%**

Tables showing the sub-categorisation of near miss errors consistent with those in previous SHOT Reports (2010-2012 [3, 21, 22]) are available in the 2013 Annual SHOT Report Supplement located on the SHOT website, www.shotuk.org under SHOT Annual Reports and Summaries, Report, Summary and Supplement 2013.

COMMENTARY

The importance of following all QMS procedures is demonstrated, because over a quarter of near miss incidents (253/996, 25.4%) were detected purely by the QMS. These quality processes were also involved in revealing when grouping anomalies were detectable in WBIT samples (415/996, 41.7% of all near misses and 415/643, 64.5% of all WBIT incidents).

It could be said that luck played a part in a total of 736 cases, which were either detected by accident (321/996, 32.2%) or were WBIT samples detected only because of a different ABO or RhD group on a previous or subsequent sample (415/996, 41.7%). Testing for ABO and RhD on every sample and, where known, comparing it to a historical group should always part of an effective QMS. However, these WBIT incidents could not have been detected if there had never been a historical or subsequent sample to show a differing group or if the patients involved happened to be of the same group. Further discussion on WBIT incidents is in Chapter 8, Incorrect Blood Component Transfused (IBCT).

A near miss is defined as an error which was recognised before the transfusion took place, but it can be difficult to define exactly the point at which a transfusion has started. SHOT has used the International Society of Blood Transfusion (ISBT) definition, which considers transfusion to have started when the unit is spiked. That means a few cases in this and previous Annual SHOT Reports are categorised as full rather than near miss incidents, even though the reporters are quite clear that no part of the component was given to the patient. Following a discussion at the SHOT Working Expert Group in February 2014, it was decided that in future such cases should be categorised according to how the unit was fated. Therefore, from 2014 incidents will be categorised as near miss if the spiked unit is fated as wasted, rather than transfused (see also further discussion in Chapter 8, Incorrect Blood Component Transfused (IBCT)).

Recommendations

No new recommendations for this year

Recommendations still active from previous years are available in the 2013 Annual SHOT Report Supplement located on the SHOT website, www.shotuk.org under SHOT Annual Reports and Summaries, Report, Summary and Supplement 2013.