Incorrect Blood Components Transfused (IBCT) n=280

Laboratory errors n=132
Clinical errors n=148

6

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Definitions:

Wrong component transfused (WCT)

Where a patient was transfused with a blood component of an incorrect blood group, or which was intended for another patient and was incompatible with the recipient, which was intended for another recipient but happened to be compatible with the recipient, or which was other than that prescribed e.g. platelets instead of red cells.

Specific requirements not met (SRNM)

Where a patient was transfused with a blood component that did not meet their specific transfusion requirements, for example irradiated components, human leucocyte antigen (HLA)-matched platelets when indicated, antigen-negative red cell units for a patient with known antibodies, red cells of extended phenotype for a patient with a specific clinical condition (e.g. haemoglobinopathy), or a component with neonatal specification where indicated. (This does not include cases where a clinical decision was taken to knowingly transfuse components not meeting the specification in view of clinical urgency).

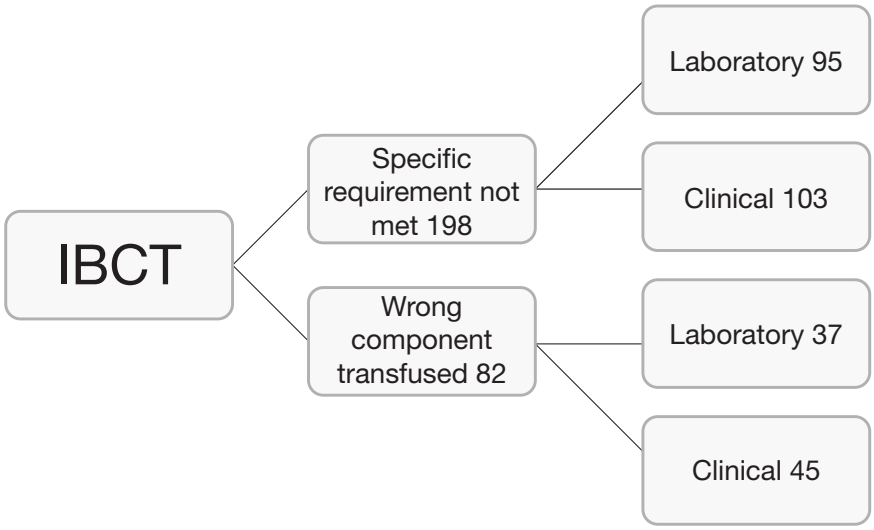


Figure 6.1: Overview of IBCT reports

ABO-incompatible red cell transfusions n=7 (1 death, 1 renal failure)

Never events n=7 (6 clinical and 1 laboratory case)

Unintentional transfusion of ABO-incompatible blood components is an National Health Service (NHS) 'Never Event' (NHS England 2015)

These cases do not include a further 6 cases where patients received red cell transfusions that were incompatible with their allograft haemopoietic stem cell transplants (HSCT) (see Chapter 23, Summary of Incidents Related to Transplant Cases).

Figure 6.2: Never events (red cells) ABO-incompatible red cell transfusions n=7

The **laboratory error** occurred during core hours and resulted from an error made by a biomedical scientist (BMS) who routinely works in transfusion. The non-compliant laboratory information management system (LIMS) permitted release of incompatible red cells.

Case 6.1: ABO-incompatible transfusion permitted by an electronic issue (EI) system which was not fit for purpose as it had not been validated

A 29 year old male in sickle crisis required transfusion of 3 units of red cells. The patient was known to be group O D-positive with no alloantibodies. The BMS selected 3 group B D-negative red cell units in error and proceeded to issue these electronically via the LIMS. Warnings stating the ABO discrepancy were displayed, but were overridden by the BMS by pressing a function key, because there was no requirement to enter text such as 'yes proceed'. During transfusion of the first unit, the patient felt unwell and transfusion was stopped. The unit was returned to the laboratory but rather than initiating an investigation, the unit was placed in quarantine until the day staff came on duty when the ABO discrepancy was noticed. Overnight, 2 further ABO-incompatible units were transfused to the patient.

The investigation identified one root cause for this incident. Following a LIMS software upgrade, validation of the system had not included a test of ABO incompatibility, meaning that the EI system was not fit for purpose. This should have been a fundamental part of the validation procedure to ensure the upgrade had not compromised the electronic issue computer logic rules. There were also inadequacies in clinical management. Standard transfusion observations had not been recorded and when the patient developed symptoms during the transfusion and called for staff, no qualified staff came to assist. The patient was later transferred to another hospital for a full exchange transfusion. He is not reported to have any long term damage as a result of this ABO-incompatible transfusion.

Good practice points*:* Several lessons were learned following the investigation:

- The LIMS had allowed EI of ABO-incompatible units because validation had not been performed in line with national and legislative guidance
- All other units that had been issued for the patient should have been recalled/quarantined at the same time as the unit implicated in the reaction; this would have prevented further transfusion of ABO-incompatible units

- Staff were able to override and ignore computer-generated warnings

The risk of human error must be minimised by using information technology (IT) systems which are fit for purpose. The blood group of the recipient should be printed on the grouping report and should be checked against the group on the component label.

- Although not the root cause, there was a delay in detection of the incident. The returned unit was not investigated immediately and the patient's underlying condition was thought to have masked evidence of the transfusion reaction

Once the clinical reaction was recognised however, there was prompt response with transfer of the patient for exchange transfusion at another hospital. The blood transfusion laboratory staff worked hard to recheck other red cell units which had been issued to ensure no other errors had been made. All critical processes within the laboratory were reviewed and revalidated.

Clinical errors resulting in ABO-incompatible transfusions n=6

Deaths n=1

Case 6.2: ABO-incompatible transfusion and death of the patient

This case occurred in 2014 and the Trust investigation is complete but the inquest has not yet taken place. An elderly man had urgent coronary artery bypass surgery and required postoperative transfusion. The wrong unit was collected from a remote issue refrigerator, and an error was made when checking the patient identification against the blood. The error was not realised until after the full unit had been transfused. The patient developed suspected cardiac tamponade and died after some hours of active intervention.

In many reported cases of ABO-incompatible transfusion **P**ositive **P**atient **Id**entification (**PPId**) was not conducted at the bedside. **PPId** at two of the critical steps in the transfusion process, **sampling and administration**, can help prevent **ALL** clinical wrong component transfusions but may not detect some laboratory errors e.g. selection and issue of a component of the wrong group.

Failure to conduct **PPId** puts patients at risk of ABO-incompatible component transfusion. This may result in serious complications including renal failure or death.

Recommendation:

Use a 5-point practice improvement tool (checklist) at the patient's side immediately prior to connection of the transfusion. Never do this away from the patient.

Action: Trust/Health Board Chief Executive Officers and Medical Directors responsible for all clinical staff

For further details see Chapter 4, Key Messages and Recommendations.

Case 6.3: Incorrect method of patient identification followed by failure to conduct bedside check

A patient had been 'identified' by two registered nurses against the transfusion chart at the nurses' station. The registered nurse on the night shift offered to start the transfusion because the ward was very busy and other patients were requiring attention. She was interrupted and distracted on her way to the patient.

The final bedside check was not done so the wrong patient was transfused with part of an ABO-incompatible red cell unit (1.5mL). A nurse practitioner quickly realised blood was being given to the wrong patient and stopped the transfusion. The patient recovered but had slight haematuria.

Comment: Despite the fact that the patient was thought to have only received a small amount of wrong blood, this was a serious failure in the final checks. If carried out correctly, these checks could

have stopped the wrong transfusion. The transfusion process was complicated by a shift change and interruptions and distractions due to the demands of the ward and the telephone (this case is discussed in more detail in the Error Reports: Human Factors section, Case 2).

There were also two cases of D mismatch; both were caused by a combination of collection and administration errors.

Learning points

For patients receiving a blood transfusion

- **ALL** must wear an identification band*
- **ALL** patients must be asked to state (unless unable) their full name and date of birth which must match details on the identification band*
- **ALL** core identifiers on the identification band* must match the details on the blood component label

**or risk-assessed equivalent (BCSH Harris et al. 2009, RCN 2013)*

These principles do not only apply to blood transfusion but to any patient intervention undertaken by all grades of staff. This is the most fail-safe way of ensuring the correct patient receives the correct care. Observations in Wales of a number of serious incidents related to failure of identification have resulted in the issue of a Patient Safety Notice (PSN026) on PPId in April 2016 (www.patientsafety.wales.nhs.uk).

Wrong blood in tube (WBIT) leading to wrong component transfused n=2

Definition of WBIT incidents:

- **Blood is taken from the wrong patient and is labelled with the intended patient's details**
- **Blood is taken from the intended patient, but labelled with another patient's details**

Case 6.4: Wrong group transfused

A 44 year old male was admitted for femoral vascular surgery and a sample was sent for group and crossmatch. The sample grouped as A D-positive and 2 units of A D-positive blood were crossmatched and issued. The patient was transfused the first unit without incident. The following day the second unit was commenced and the patient had a reaction within the first 10 minutes. The blood was stopped and a repeat sample sent for further crossmatch. At this point it was discovered that the patient was group B D-positive. This was confirmed by a third sample. Local investigations revealed that the junior doctor (foundation year 1) had not completed positive patient identification correctly at the bedside before taking the blood sample and as a consequence the wrong patient had been bled.

The second WBIT incident resulted in group A D-negative red cell transfusion to a very sick patient who was group A D-positive, so fortunately compatible, and was detected in laboratory testing post transfusion (mixed field D result).

Near miss WBIT potentially leading to IBCT n=778 (+ 2 avoidable, delayed or undertransfusion (ADU) n=780 WBITs in total)

Although only two instances of WBIT resulted in wrong components transfused there were 778 near miss events, with an increase year on year.

Detection of WBIT incidents:

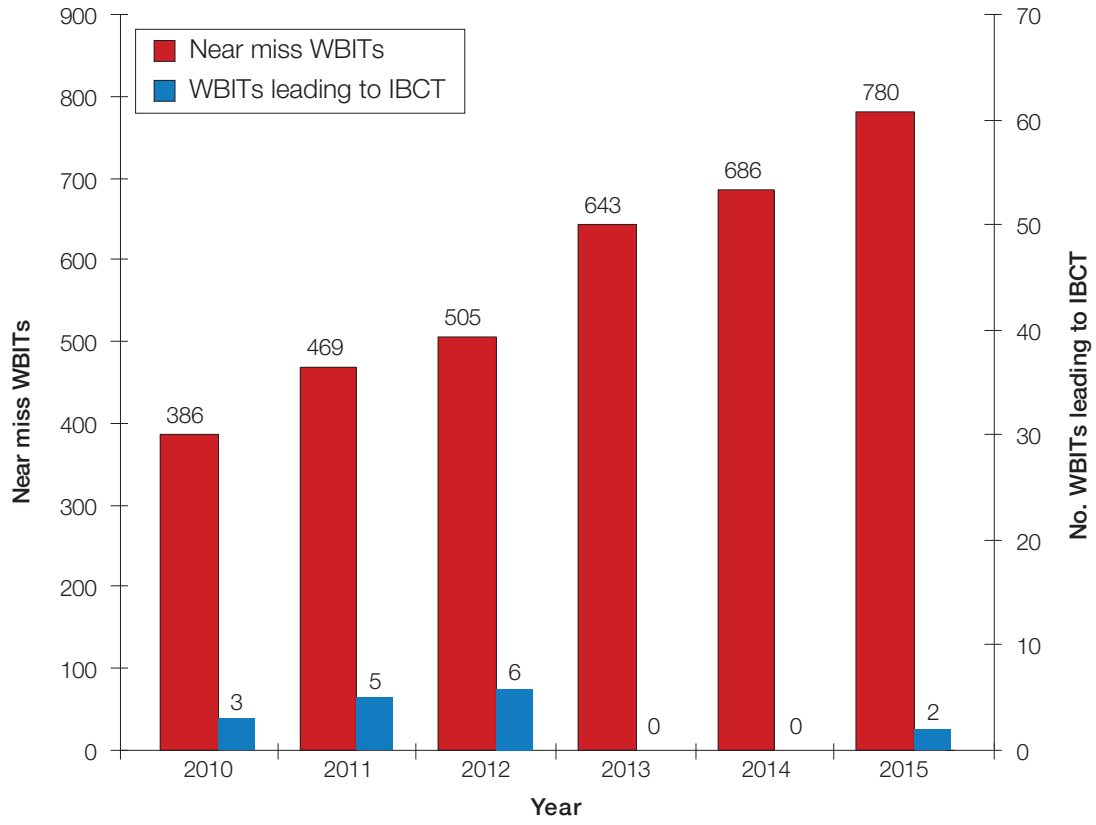


Figure 6.3: Cumulative comparison of near miss WBIT and those leading to IBCT

Laboratory processes, including the group-check policy, are critical in detecting WBIT, but laboratory testing and vigilance cannot always detect WBIT incidents. Patient safety relies on quality processes and checks undertaken by all staff involved in transfusion, especially clinical staff at the time of sampling.

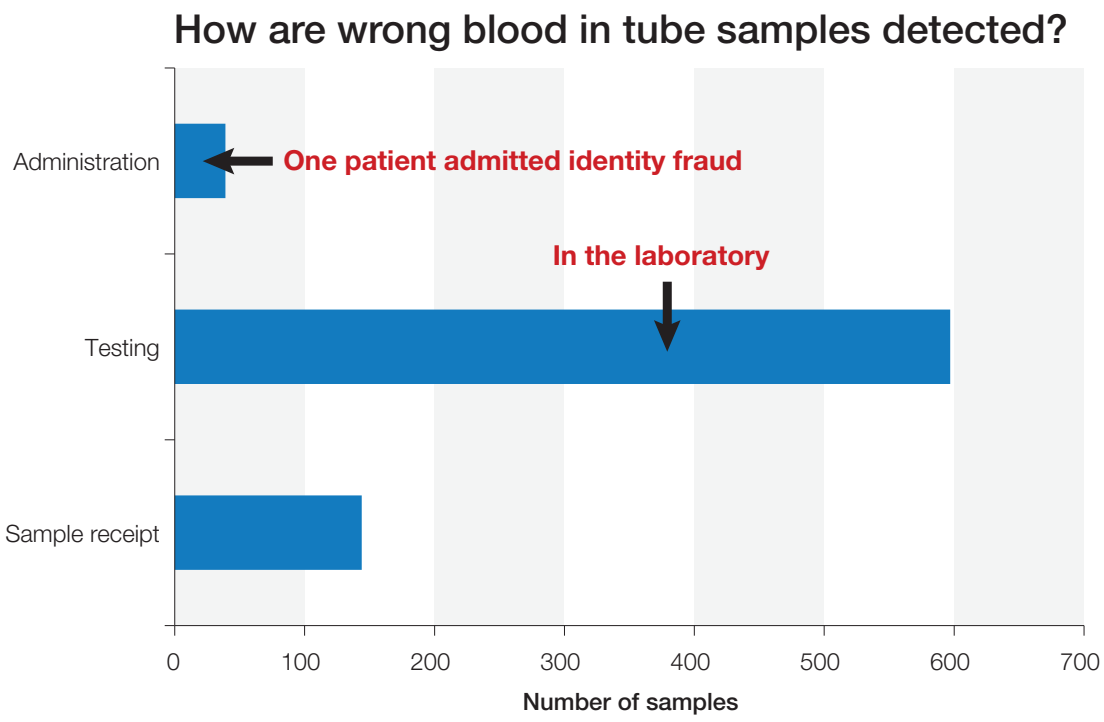


Figure 6.4: Point in the process where a wrong blood in tube incident was detected*

**Includes 2 WBIT incidents that could have led to avoidable transfusions which are discussed in Chapter 7, Avoidable, Delayed or Undertransfusion (ADU).*

ABO-mismatched fresh frozen plasma (FFP) transfusions (2 laboratory cases): these are also 'never events'

In 2 cases ABO-incompatible FFP was given. A seriously ill baby required FFP out-of-hours. Because of the urgency, the FFP was requested before the patient's group had been confirmed. The BMS issued O D-negative red cells and subsequently mistakenly selected O D-negative FFP instead of group AB. This highlights basic requirements of training and resilience to be able to cope in stressful situations. This situation could have been prevented if laboratory staff understood that where a patient group is unknown, the correct group of FFP to select is AB (or A due to stock availability) and not group O. Unlike red cells group O plasma is not the universal group since it contains both anti-A and anti-B antibodies. A qualified BMS should know this.

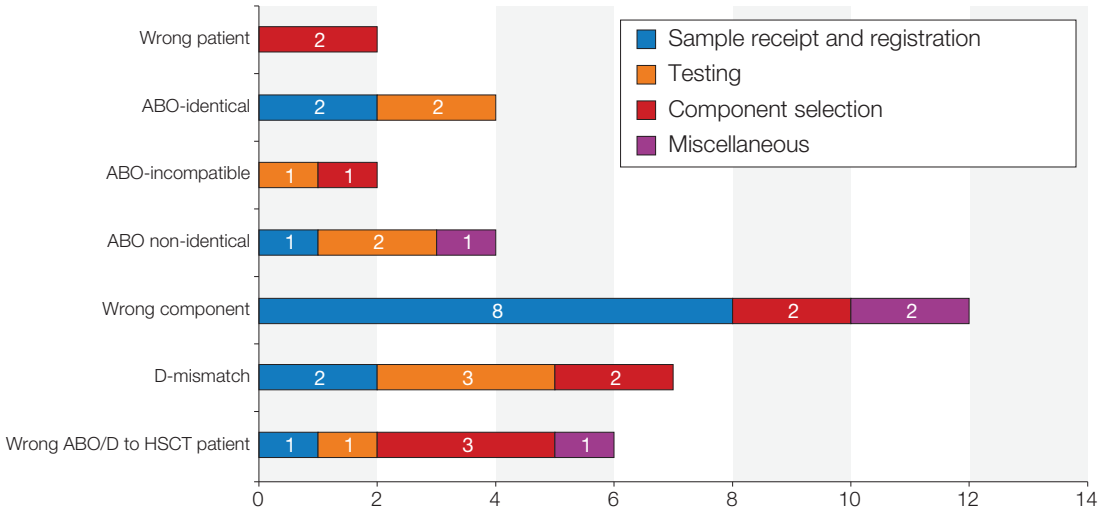
In the second instance a telephone request was received for 2 units of FFP for a 79 year old male patient of unknown weight. The BMS checked the patient's group on the LIMS but misread the group and selected 2 units of incorrect group for thawing. A second BMS issued the FFP without checking the group of the patient or FFP relying on the previous BMS. Due care and attention is required when reading patient's historical records. Similar cases are discussed in Chapter 5, Laboratory Errors. Additionally this was likely to be an inappropriately low dose, as the British Committee for Standards in Haematology (BCSH) guidelines on the use of FFP recommend a dose of FFP of 10-15mL/kg (BCSH O'Shaughnessy et al. 2004).

Other laboratory errors: Many incidents demonstrate failure to acknowledge or act on IT instructions such as not heeding or overriding warning flags. Most errors are due to human factors and are therefore potentially preventable with the correct infrastructure e.g. training, staffing (Chaffe et al. 2014).

Incorrect blood component transfused: wrong component transfused (WCT) n=82

Laboratory errors n=37

Figure 6.5: Wrong component transfusions - category of laboratory error



Major morbidity n=4

Four instances of major morbidity were reported. In one case red cells suspended in saline adenine glucose mannitol (SAGM) instead of citrate phosphate dextrose (CPD) were provided for an infant exchange transfusion. This case is noted in Chapter 14, Haemolytic Transfusion Reactions (HTR) and described in detail in Chapter 16, Paediatric Summary (Case 16.1). The other 3 cases were reports of D-positive red cell transfusions to D-negative female patients which all resulted in anti-D antibody formation. These could have been prevented by correct testing and selection of the correct component.

Case 6.5: Error in manual grouping discovered after investigation by another hospital years later

A transcription error after manual testing resulted in a 15 year old female, who was group O D-negative, being transfused 2 units of O D-positive red cells in relation to a spinal operation. The error was detected 14 years later when she presented at a maternity unit at another hospital where her booking bloods showed she was O D-negative with anti-C+D.

Good practice points

- The retention of documents, as required by the Blood Safety and Quality Regulations, meant that data could be retrieved from storage and the error was identified
- Monitor the expectant mother throughout her pregnancy as the fetus is at risk of haemolytic disease of the fetus and newborn (HDFN) (the consequences of failing to monitor such cases can be seen in Case 1 in the Error Reports: Human Factors section)
- Blood grouping should ideally be performed on an analyser with the results transmitted electronically to the laboratory information management system (LIMS)

Potential for major morbidity n=2

Two cases were reported where the incorrect component was selected for women of childbearing potential, however anti-D Ig was prescribed and given following the incorrect transfusion of D-positive red cells to D-negative women.

Miscellaneous laboratory cases n=4

There were 4 cases (3 below and one with major morbidity is described above)

- **Failure to review patient records correctly:** A haemopoietic stem cell transplant (HSCT) patient's system flags had been entered incorrectly. The patient's group was B D-positive and the donor A D-positive. The flag incorrectly stated that group B high-titre negative (HT-) red cells should be given when it should be group O HT- red cells. As a result of this the incorrect blood group was issued over a 6 month period
- **Lack of understanding of LIMS:** The confirmed group of the patient was changed from B D-negative to O D-negative in error following a large transfusion of O D-negative red cells, resulting in O D-negative components being issued and labelled with the patient group shown as O D-negative. The root cause was failure to take note of warning messages showing that the cardinal group would be changed
- **Communication error and failure to heed prescription:** A consultant haematologist requested platelets and FFP for a patient. A request form for platelets was sent to the laboratory. On review a second haematology consultant decided not to proceed with the platelet transfusion but failed to communicate this to the laboratory. A porter came to the laboratory with a collection slip for FFP but was also collecting platelets for another patient and inadvertently asked for platelets for both patients. The platelets were delivered to the ward where the nurse mistook them for FFP and they were transfused to the patient

Clinical errors n=45

Additional examples of WBIT and sample labelling errors are reported in the avoidable, delayed and undertransfusion (ADU) category and the near miss category, including both group and screen and full blood count samples (Chapter 7, Avoidable, Delayed or Undertransfusion (ADU)).

Incorrect component type collected and administered n=18

In **12/18** cases emergency O D-negative adult units were given to neonates.

In **6/18** further cases adult patients were also transfused with an incorrect component. This included a paediatric emergency O D-negative unit being collected and transfused to an adult obstetric patient when adult emergency units were readily available.

– 4/6 the wrong component type was collected from the storage site

– 2/6 related to communication failure at handover and during a telephone request

Case 6.6: Adult red cells transfused to a neonate

A preterm neonate required emergency transfusion following massive pulmonary haemorrhage. An adult unit of emergency O D-negative red cells was collected from storage instead of the paediatric emergency O D-negative red cells that were also available for collection. This was complicated by the usual emergency blood refrigerator being out of action. The nurse who was collecting the unit did not realise that paediatric units were also available from the alternative location. The attending clinicians decided to continue with the transfusion of the adult red cells rather than delay the transfusion further.

Corrective action: Following a review of this incident, major haemorrhage drills for neonatal intensive care were planned. A protocol was introduced to inform staff what to do when the satellite refrigerator was out of action.

Learning point

Know your components

- It is important that hospital staff, who must be trained and competency assessed to collect blood components, are also aware of specific requirements, the different component types, their appearance, storage conditions, and locations

Figure 6.6: What's special about red cell units prepared for neonates?

What's special about red cell units prepared for neonates?

They are selected to be:

- Free from clinically significant red cell antibodies and high titre negative
- CMV negative
- HbS screen negative
- Prepared from blood donated by donors who have given at least one previous donation within the past 2 years

Transplant cases n=8 (clinical)

There were 8 cases where transplant patients received incorrect components (including one ABO-mismatch and two cases of D-mismatch). These resulted from communication failures between clinicians and the laboratory staff and are discussed in Chapter 23, Summary of Incidents Related to Transplant Cases.

Near miss IBCT cases

Point in the process	Type of error made	Number of cases	Percentage of cases
Request error	Request for incorrect patient	5	0.7%
	HSCT group error when requesting	3	
Sample taking	Wrong blood in tube (WBIT)*	778	87.7%
Sample receipt	Entered to incorrect patient record	3	0.5%
	Incorrect patient administration system (PAS)/LIMS merge	1	
Testing	Misinterpretation	1	0.9%
	Incomplete testing prior to issue	1	
	Manual group error	3	
	Equipment failure	3	
Component selection	D+ issued to D- patient	14	2.7%
	Incorrect component type	2	
	Wrong ABO group selected	8	
Component labelling	Transposition of labels between patients	4	0.5%
Collection	Collection of incorrect unit	34	4.8%
	Wrong details on collection slip	1	
	Wrong units sent to ward	8	
Prescription	Not prescribed	1	0.1%
Administration	Attempted administration to the wrong patient	19	2.1%
Total		**889**	**100%**

Table 6.1: Near misses that could have led to IBCT n=889

** 2 other near miss WBIT incidents could have led to avoidable transfusions and are shown in Table 7.4 in Chapter 7, Avoidable, Delayed or Undertransfusion (ADU).*

Incorrect blood component transfused: specific requirements not met (SRNM) n=198

Lack of knowledge of specific requirements is a recurring theme every year.

Type of specific requirement	Number of clinical cases	Number of laboratory cases
Irradiated	88	13
Phenotyped units	9	35
CMV-negative	3	3
Blood warmer	2	-
HLA-matched	1	1
Pathogen-inactivated components	0	18
Other	0	25*
Total	**103**	**95**

Table 6.2: Specific requirements not met in 2015 n=198

*CMV: cytomegalovirus HLA: human leucocyte antigen *see Figure 6.7 for further analysis of laboratory cases*

Laboratory cases n=95

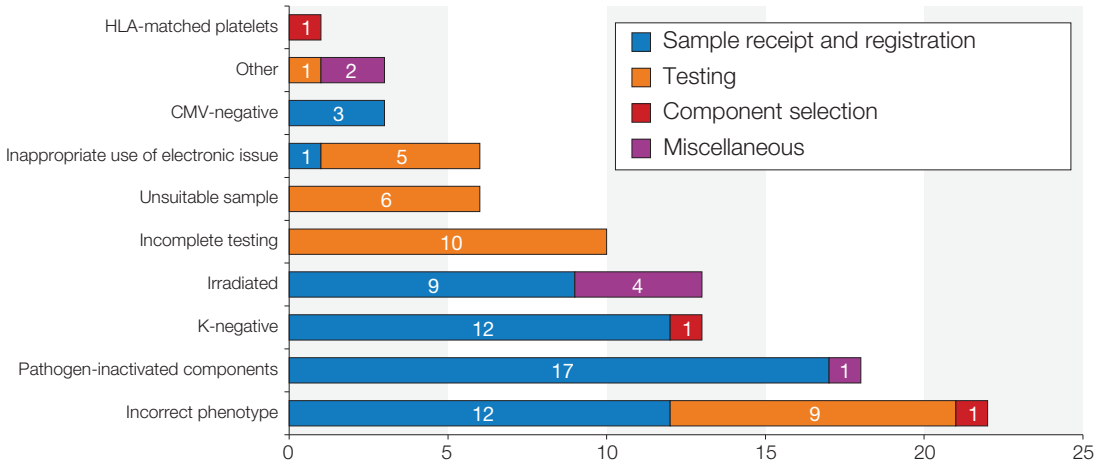


Figure 6.7: Specific requirements not met due to laboratory errors divided by category of error

Major morbidity n=5

In 5 cases women of childbearing potential were given K-positive (K+) red cells, and all developed anti-K. These could have been prevented if the BMS had checked the patient's age and gender when reviewing the patient's historical records and selecting the component.

There were 7 additional potentially sensitising events due to transfusion of K+ red cells to women of childbearing potential however alloimmunisation did not occur in 3 cases, and the outcome was unknown in the other 4.

Case 6.7: Unclear nomenclature for K and k leads to a woman of childbearing potential being transfused a K-positive unit of red cells

An emergency unit which was not K-negative was selected from the laboratory stock. This was transfused to a 39 year old female. The investigation identified that the BMS knew of the requirement but had mistaken the labelling on the blood pack of k-negative for K-negative. The unit has 2 different nomenclatures on the same pack (Figure 6.8). Although the labelling was ambiguous and contributed to the error, the electronic despatch note (EDN) showing the donor phenotypes could be sent electronically to the hospital LIMS and that could have alerted the BMS of the incorrect selection.

Good practice points:

- Laboratories must ensure sufficient O D-negative red cell units of the correct phenotype (C-negative, E-negative, K-negative) are available for use in emergency situations
- If the extended phenotype is confusing or not understood by the BMS then the red cells should not be used (although there were two different nomenclatures the attached label does show 'K+ k-')
- Hospital blood transfusion laboratories should consider using the NHSBT electronic despatch note (see above). The Scottish and Welsh blood transfusion services do not add additional labels and do not overscore lower case antigen letters

Miscellaneous cases n=7

- Failure to provide irradiated components occurred in 4 cases because patient records were not maintained or updated on LIMS appropriately
- Failure to provide methylene blue-treated cryoprecipitate (MB-cryo) (1 case). In this case the BMS did not know that patients born after 1st January 1996 require imported pathogen-inactivated plasma components (BCSH O'Shaughnessy et al. 2004)

- Washed platelets were ordered on the online blood ordering system (OBOS) with the incorrect date required for transfusion therefore platelets were not available for the time of transfusion. Random platelets were transfused under clinical supervision
- Laboratory staff failed to add instructions for clinical staff to use a blood warmer on every one of 4 units that were being transfused to a patient with cold agglutinins. Instructions were only placed on the 1st unit however the clinical staff collected the 4th unit first which did not display these instructions. Generally units are to be used in expiry date order, and so the instructions were attached to the unit the laboratory assumed would be transfused first

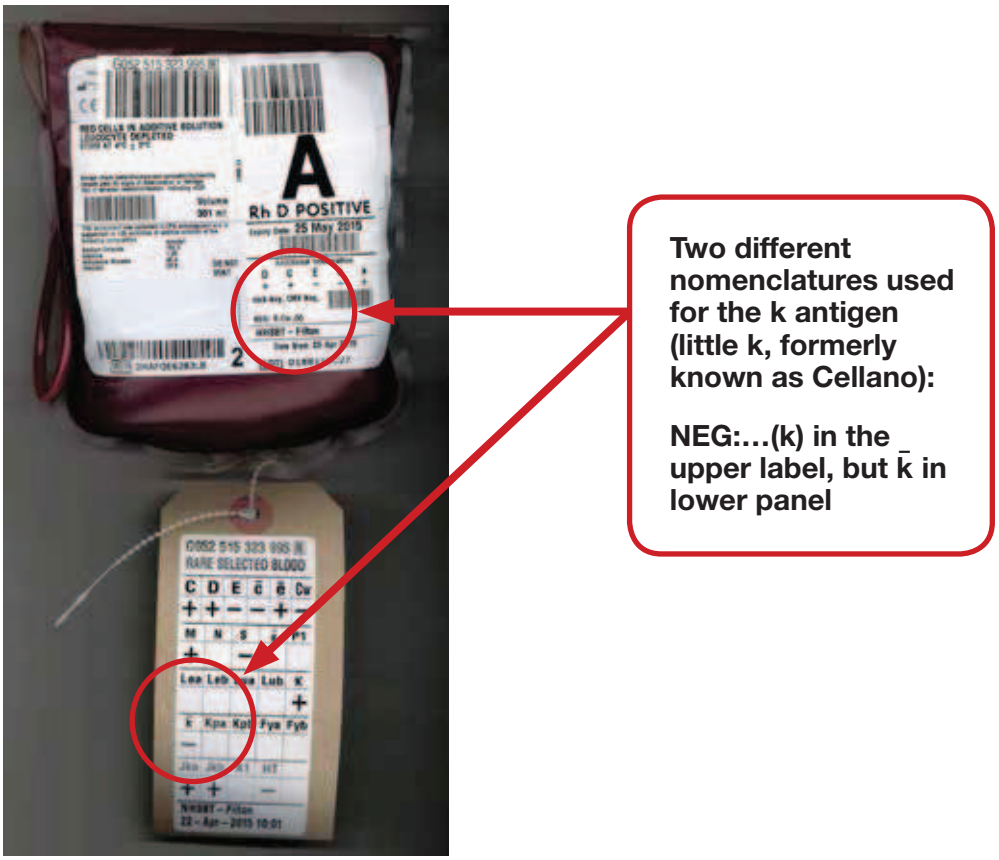


Figure 6.8: Double and confusing nomenclature for K and k

Case 6.8: A combination of laboratory and clinical errors result in failure to provide irradiated red cells

A 5 year old child with DiGeorge syndrome was admitted for cardiac surgery and irradiated red cells were requested by the clinical team and provided by the laboratory. The surgery was cancelled and the units returned to stock. When the surgery proceeded 2 days later, irradiated red cells were not requested as the nurse in theatre was unaware they were required. The laboratory had failed to update the LIMS with this patient's requirement. The patient was transfused non-irradiated units. This case shows that communication between laboratory and clinical areas is vital.

Good practice points:

- When laboratory staff accept telephone requests then in addition they should ask the requestor if there are any specific requirements. If the requestor is unsure then the order should be delayed until a clear component specification is provided
- Electronic requesting with fields forcing information from the requestor (mandatory field) should be developed within Trusts/Health Boards

Clinical errors n=103

In 88 clinical cases of failures to transfuse irradiated components, 14 patients had a current or previous diagnosis of Hodgkin lymphoma. In all 3 cases where CMV-negative components were missed, the clinical area had failed to inform the laboratory of the specific requirement for their pregnant patients.

Case 6.9: Failure to communicate or acknowledge specific requirements

A telephone request for red cells was received in the transfusion laboratory for a 39 year old lymphoma patient who was being worked up for haemopoietic stem cell transplant (HSCT) but specific requirements were not discussed. The BMS was distracted by a number of complex telephone queries at the time and did not complete the appropriate checks with the requestor. The specific requirements were documented on the 2nd comments page on the LIMS but were missed and non-irradiated red cells were issued. The patient asked not to be disturbed while he was on a work-related conference call but agreed the nurse could start the transfusion. The bedside check was compromised to minimise interruptions and the nurse failed to notice the specific requirements on the prescription. The patient notified the nurse that the blood was not irradiated when he saw there was no irradiation sticker on the unit. The blood transfusion was stopped.

Case 6.10: Failure to request irradiated units

An 11 year old patient with thalassaemia major required hypertransfusion in preparation for HSCT. A verbal request for red cells was made 2 days prior to the planned transfusion; there was no mention of any specific requirements. The decision to transfuse irradiated components was made on the morning of transfusion but non-irradiated red cells had already been prescribed, crossmatched and issued. The transfusion laboratory was informed of the error 13 days post transfusion.

Local investigation: The clinical area did not inform the laboratory of the decision to administer irradiated components. Specific requirements were not noted on the prescription chart. The transfusion laboratory staff were aware that the patient was scheduled to have HSCT and the critical notes had been updated but the standard operating procedure (SOP) did not confirm the need for irradiated components.

Learning point

- A robust procedure should be in place for the receipt of verbal telephone requests (BCSH Milkins et al. 2013). This can be used as an additional opportunity to check any specific requirements the patient may have

Case 6.11: O D-negative units are incompatible

An 81 year old patient developed acute blood loss during colorectal surgery (03:50). The patient had known anti-E and anti-c. A unit of emergency O D-negative red cells was removed from a ward-based remote issue refrigerator and transfused to the patient. This would, by definition, be incompatible with anti-c. The clinical staff did not discuss the use of the emergency blood with the transfusion laboratory and did not wait for crossmatched blood to be supplied. There was no known adverse outcome for the patient.

Comment: Effective communication between departments is fundamental to ensure excellent patient care, clearly demonstrated by this case. Discussion with the transfusion laboratory staff enables clinicians to make an informed decision on which components to use. If the clinical situation does not allow time to obtain crossmatched blood, the BMS can select uncrossmatched but appropriate antigen-negative units from stock (E-negative, c-negative in this case).

Case 6.12: Missed specific phenotype for patient with sickle cell disease

A 30 year old patient had a group and screen sample taken in a preoperative assessment clinic. The doctor completing the request failed to tell the laboratory that the patient had received a transfusion in the previous week and also that the patient had sickle cell disease and so required phenotype-matched units. Blood was requested and issued for theatre, again with no indication of the specific requirements and 1 unit was transfused. A consultant then informed the laboratory that the patient had sickle cell disease.

In 8 cases the patients themselves identified that their specific requirements were not met and in one further case the patient's relative alerted staff to the error. Regularly transfused patients are usually well informed about their underlying diagnosis and specific transfusion requirements, but these should become apparent if the correct questions are asked when taking the patient's medical history on admission to hospital.

Learning point

- The use of patient information leaflets or a similar alert system to inform patients of their specific requirements can help avoid these types of errors

New specific requirement: Hepatitis E

Hepatitis E (HEV) can be transmitted by blood components although it is more commonly acquired from the diet. The Advisory Committee on the Safety of Blood, Tissues and Organs (SaBTO) has issued guidance that HEV-screened components should be provided to patients undergoing solid organ transplants and allogeneic HSCT (SaBTO 2016). These recommendations will be reviewed by SaBTO in September 2016. Failure to meet this recommendation became a new missed specific requirement from Spring 2016 (dates of provision of HEV-screened components varied between the four Blood Services; Wales 25th January, England and Scotland 14th March and Northern Ireland on 16th May 2016).

Near miss SRNM cases n=97

Near miss incidents related to patients' specific requirements show similar learning points to the full incidents which led to a transfusion of components where specific requirements were not met.

Table 6.3: Near misses that could have led to IBCT-SRNM n=97

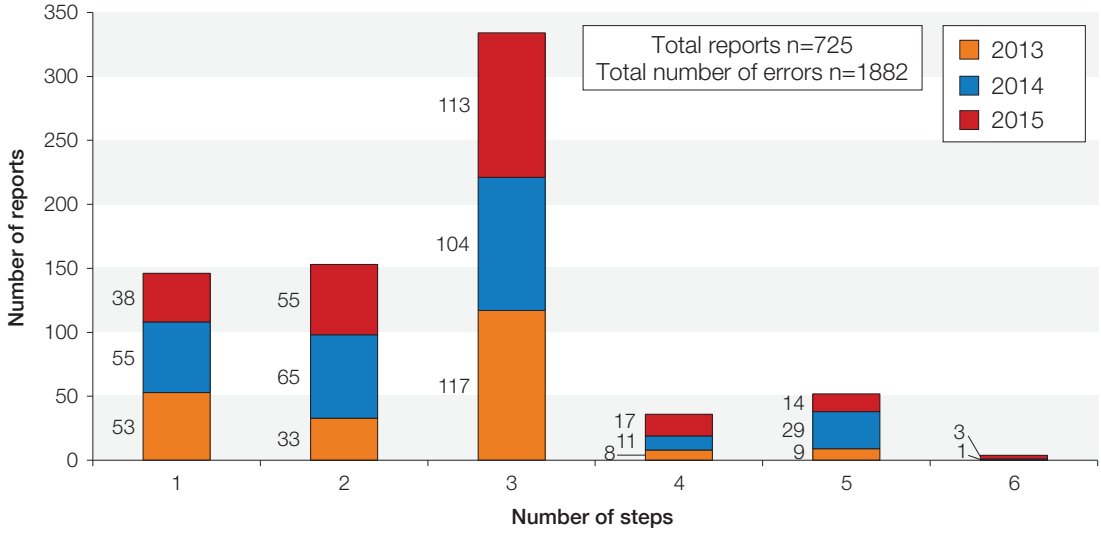
Point in the process	Type of error made	Number of cases	Percentage of cases
Request	Failure to request irradiated	29	34.0%
	Failure to request CMV-negative	2	
	Insufficient information for phenotyping	1	
	Failure to request pathogen-inactivated components	1	
Sample labelling	Sample tube out of date	1	1.0%
Sample receipt	Failure to notice request for irradiated/CMV-negative	7	7.2%
Testing	Incomplete testing prior to issue	12	16.5%
	Sample validity	4	
Component selection	Failure to issue irradiated	17	40.2%
	Failure to issue appropriate red cell phenotype	11	
	Failure to issue CMV-negative	6	
	Failure to issue pathogen-inactivated FFP	4	
	Failure to issue washed cells	1	
Component labelling	Component mislabelled	1	1.0%
Total		**97**	**100%**

Incorrect blood components transfused: multiple errors n=240 (combined laboratory and clinical)

All reports analysed in this category have preventable errors. The critical steps of the transfusion process (Bolton-Maggs, Poles et al. 2014) provide 'check points' in both laboratory and clinical areas which help prevent wrong transfusions. However, SHOT continues to receive a number of reports related to transfusion of wrong components including ABO-incompatible red cell transfusions. It is everyone's responsibility to ensure they complete their part of the process fully and with care, and use it as an opportunity to detect earlier errors and thus prevent a wrong transfusion.

The pattern and median number of clinical errors (median 3, range 1-6) is comparable to previous years with the majority resulting in failure to transfuse irradiated components.

Figure 6.9: Multiple errors 2013–2015 n=725 reports (240 in 2015)



Miscellaneous n=40

These reports are not due to failure at a particular point in the process. As in previous years, the clinical cases (29/40) were mainly due to communication failures particularly in shared care.

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