# 2024 Annual SHOT Report – Supplementary information

# Chapter 17: Laboratory Errors

Additional data tables and analysis not included in the main 2024 Annual SHOT Report.

## Miscellaneous cases

There were 4 cases in 2024, where the transfusion step was classed as ‘miscellaneous’.

In the first case, there was miscommunication between the hospital transfusion laboratory and the blood services reference laboratory for a patient with pan-reactive autoantibody. The patient had a history of anti-S present on a legacy IT system within the hospital. This was communicated via phone but misinterpreted by the receiving biomedical scientist (BMS) and was not documented on the referral form. Red cells which were crossmatched for the patient, and subsequently transfused were not S antigen negative.

In the second case, a BMS gave incorrect advice to clinical staff regarding storage of blood components. They stated that red cells that had been kept in a ward refrigerator could be transfused as they had been stored within 30 minutes of collection.

In the third case, a patient’s transfusion was delayed as the BMS gave incorrect advice reading sample validity. The patient had to return to the hospital the following day for their transfusion.

In the fourth case, there was a delay in transfusion due to an inability to contact the blood transfusion laboratory to activate the major haemorrhage protocol. This was found to be due to the lone-working BMS leaving the telephone in the transfusion laboratory when they went to the haematology laboratory to receive a shift handover. An additional BMS was scheduled to be working at this time but was running late and did not arrive at the laboratory in time for the start of the shift.

# Near miss (n=268)

**Table 17.2: Categorisation and subcategories of laboratory near miss (NM) reports accepted in 2024 (n=268)**

| Category | Number of errors |
|---|---|
| **NM avoidable transfusion** | **2** |
| **NM delayed transfusion** | 3 |
| **NM prothrombin complex concentrates** | **1** |
| **NM undertransfusion** | **1** |
| **NM anti-D Ig errors** | **21** |
| **D-negative infant** | 4 |
| **Given to D-positive woman/birthing person** | 2 |
| **Anti-D Ig handling and storage error** | 2 |
| **Given to woman/birthing person with allo anti-D** | 4 |
| **Miscellaneous** | 1 |
| **Omission or late administration** | 5 |
| **Wrong woman/birthing person** | 3 |
| **NM handling and storage errors** | **31** |
| **Cold chain error** | 6 |
| **Expired unit transfused** | 22 |
| **Incorrectly prepared by laboratory** | 1 |
| **Labelling error** | 1 |
| **Reservation period exceeded** | 1 |
| **NM incorrect blood component transfused (IBCT) -specific requirements not met** | **44** |
| **Incomplete testing** | 1 |
| **Invalid sample** | 1 |
| **K-positive components given to patient of childbearing potential** | 3 |
| **Not haemoglobin S-negative** | 1 |
| **Not cytomegalovirus-negative** | 7 |
| **Not human leukocyte antigen-matched** | 3 |
| **Not irradiated** | 26 |
| **Not phenotyped antigen-negative** | 2 |
| **NM IBCT - wrong component transfused** | **59** |
| **Crossmatch-incompatible** | 1 |
| **Wrong component** | 4 |
| **Wrong group** | 26 |
| **Wrong patient** | 29 |
| **Right blood right patient** | **106** |
| **Labelling error** | 77 |
| **Patient identification error** | 28 |
| **Total** | **268** |

# Red cell immunohematology (RCI) assist

The following information has been provided by The Transfusion 2024 team regarding the RCI assist tool.

*Author: Helen Thom, RCI Development Lead – Transfusion 2024*

The Transfusion 2024 strategy outlined key priorities for clinical and laboratory transfusion practice across the NHS with an urgent need to strengthen support for Hospital Transfusion Laboratories (HTL) to ensure safe provision of care for patients in need of transfusion. There was an action to provide a pathway between HTL and NHS Blood and Transplant Red Cell Immunohaematology (RCI) laboratories. The pathway would define decision points for further serological investigation, reduces costs, improve hospital staff confidence and enable faster patient results.  A referral support tool, 'RCI Assist', was developed for HTL staff when processing samples for pre-transfusion testing.

Available as an online tool which is accessed via Specialist Services Integrated Clinical Environment (Sp-ICE) or the Online Blood Ordering Service (OBOS) users move through the pathways by selecting the 'yes' or 'no' options next to the question boxes, each answer moving to the next prompt until a decision point is reached. Pop-ups provide supporting information so that users can learn more about a topic. Additionally, links to information relating to pre-transfusion testing are contained within the tool, so the user has a wide range of information to hand to support the investigation and increase user confidence.

By standardising the referral process, reducing unnecessary investigations, and improving workflow efficiency, RCI Assist enhances laboratory practice and supports safe patient care. It is hoped that the adoption of RCI Assist into routine HTL practice may lead to a reduction in delayed transfusion events reported to SHOT, aligning with national transfusion safety goals.